



Missouri's  
*Pandemic*  
**INFLUENZA RESPONSE**  
*Plan*

Missouri Department of Health and Senior Services  
Emergency Response Plan

Updated March 2020





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## **\*\*\*\*\*Technical Support Annexes\*\*\*\*\***

Pandemic Influenza Surveillance  
Laboratory Preparedness  
Healthcare Systems Readiness  
Vaccine Storage and Distribution  
Antiviral Medication Distribution and  
Dispensing Community Mitigation  
Mass Fatality Management  
Psychosocial Services Preparedness  
Public Communications



# Introduction

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The Missouri Department of Health and Senior Services (DHSS) previously published pandemic preparedness plans in 2008, 2011, and 2018. In order to incorporate new guidance that has become available from the Centers for Disease Control and Prevention (CDC), as well as take into consideration changes that have occurred in relevant program areas at DHSS and other Missouri state agencies, DHSS is updating its Pandemic Influenza Plan. This updated plan will build on the recognition that pandemic preparedness requires involvement of not only the public health and the health care sector, but the whole of society, including a variety of relevant agencies and the public.

Preparing for, responding to, and recovering from pandemic influenza will require a strategy with many similarities to other disease outbreaks, be they naturally occurring or resulting from terrorist action. The time-honored public health activities to lessen the impact on morbidity and mortality such as education, vaccination, prophylaxis, isolation/quarantine and the closure of public facilities are common to all, despite the particular disease of concern. In addition, clear, concise communication with the public, within DHSS, and with other agencies remains a critical component, as does the ability of the involved agencies to achieve collaboration and coordination. By its very nature, an influenza pandemic, once started, will not be stopped until it has run its course. This course can be shortened and weakened by many things, with vaccination being the gold standard for protecting the population. In addition, and especially before a vaccine becomes available, non-pharmaceutical interventions (NPIs) can be used in conjunction with available pharmaceutical interventions (antiviral medications) to help slow transmission of the virus in communities. This plan, therefore, is not intended to describe the processes for stopping a pandemic, but rather to describe strategies of preparedness, response, and recovery to attempt to decrease illnesses and deaths during the pandemic period to manageable levels (i.e., to levels that do not overwhelm the critical infrastructures of the state), and to promote community resiliency and rapid recovery.

DHSS has emergency response plans in place, internally, and as part of the state response through the Missouri State Emergency Operations Plan (SEOP) that have been tried, tested and exercised for all aspects of response and recovery, including those mentioned above relating to disease surveillance, investigation, and control. Where necessary, details or public information templates unique to pandemic influenza have been added. This plan gives background information related to pandemic influenza, outlines the DHSS concept of operations for response, lists primary and support functional areas, and provides technical support annexes outlining the available resources (i.e., “tools”) available to temper the pandemic and promote community resiliency and recovery. A broad, diverse, and geographically dispersed group of agencies and organizations, representing the length, breadth, and interests of the state collaborated with DHSS in completing earlier versions of the annexes of this plan. With committees organized under the umbrella of the Missouri Homeland Security Council, over four hundred representatives from hospitals, livestock corporations, local public health agencies (LPHAs), other state agencies, funeral homes, laboratories, financial institutions, fire departments, local and state governments, school boards, utility companies, universities, nursing homes and coroner’s offices, among others, engaged with DHSS providing input and expertise to produce a meaningful plan.

DHSS has primary responsibility to safeguard the health of the people of the state and all its subdivisions, and will respond in the event of pandemic influenza to attempt to limit the impact on public health by reducing morbidity and mortality. These actions may also limit the impact on the social and economic infrastructure of the state. DHSS will serve to support the LPHAs in this effort, and lead the state-level response of a coordinated group of federal, state, and private organizations and agencies. DHSS reserves the flexibility to modify the plan during the pandemic in response to the actual behavior of the disease and the effectiveness of the ongoing response. Lessons learned from previous waves the pandemic will be incorporated going forward and modifications in planning may be made across all sectors to meet the key goals in public health and critical infrastructure support. Such changes will be rapidly and effectively communicated from DHSS to all partnered agencies and organizations according to the communications plan to ensure best practices are consistently implemented statewide.

The following pages outline the concept of operations that DHSS and coordinated agencies and organizations will employ during the pandemic response.

For an organizational chart of the DHSS, go to page 11 of *DHSS Overview*, found at:  
<https://health.mo.gov/about/pdf/dhss-overview.pdf>

For a description of DHSS divisions, go to:  
<https://health.mo.gov/about/divisions.php>

# Purpose of the Plan and the Guiding Principles

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**The purpose of the DHSS pandemic influenza plan is to assist public health officials and health care providers in preparing for and responding rapidly and effectively to an influenza pandemic.** The current plan has been updated in accordance with the federal guidance documents issued since 2011.

This plan is designed primarily to guide the operational portion of the state response to pandemic influenza in Missouri, though segments of information contained within the plan will prove useful to guide activities of planners at the local level and to the general public. The plan is intended to provide the processes and informational resources for an effective DHSS response to pandemic influenza. An effective response will reduce the impact on public health (i.e., reduce illness and save lives) and maintain essential services while minimizing economic loss.

The plan outlines general responsibilities for functional components and describes the concept of operations. The plan is intended to be further supplemented by other more detailed plans and guidance relative to the functional components, much of which is found in the technical support annexes, and can be deviated from as needed if better evidence and direction becomes apparent. This plan for pandemic influenza response integrates with the current DHSS Emergency Response Plan and the SEOP which would direct these activities into National Incident Management System (NIMS) compliant Incident Command System (ICS) as needed and as further described in the “Concept of Operations” section.

## Guiding Principles

DHSS will be guided by the following principles in initiating and directing its response activities:

- 1) DHSS will follow the guidance and direction of the U.S. Department of Health and Human Services (HHS) Pandemic Influenza Response Plan.
- 2) DHSS will follow the concepts and principles of the National Response Plan and NIMS in planning and response.
- 3) DHSS will work to build a flexible response system determined, in addition to the above, by the epidemiological features of the virus and the course of the pandemic.
- 4) DHSS will provide honest, accurate, and timely information to the public.
- 5) In advance of an influenza pandemic, DHSS will work with federal, state and local government partners, and the private sector to coordinate pandemic influenza preparedness activities to achieve interoperable response capabilities.
- 6) In advance of an influenza pandemic, DHSS will encourage all Missourians to be active partners in preparing local communities, workplaces, and homes for pandemic influenza, and will emphasize that a pandemic will require Missourians to make difficult choices.
- 7) DHSS will strive to ensure that preparations made for an influenza pandemic will benefit overall preparedness for any public health emergency or disease outbreak, and serve to build capability to protect the health of all Missourians.
- 8) In advance of an influenza pandemic, DHSS, in concert with federal, state, and local partners, will work to achieve statewide reliable, efficient, and rapid distribution mechanisms for vaccine and antiviral drugs through the Strategic National Stockpile (SNS).

- 9) DHSS will work with the federal government to procure vaccine and distribute it to LPHAs for pre-determined priority groups, based on pre-approved local plans, or as the epidemiology of the pandemic dictates.
- 10) DHSS, in collaboration with federal and local partners, will distribute antiviral drugs from the SNS to LPHAs for final disposition at healthcare facilities to treat ill patients and for dispensing to front-line health care workers.

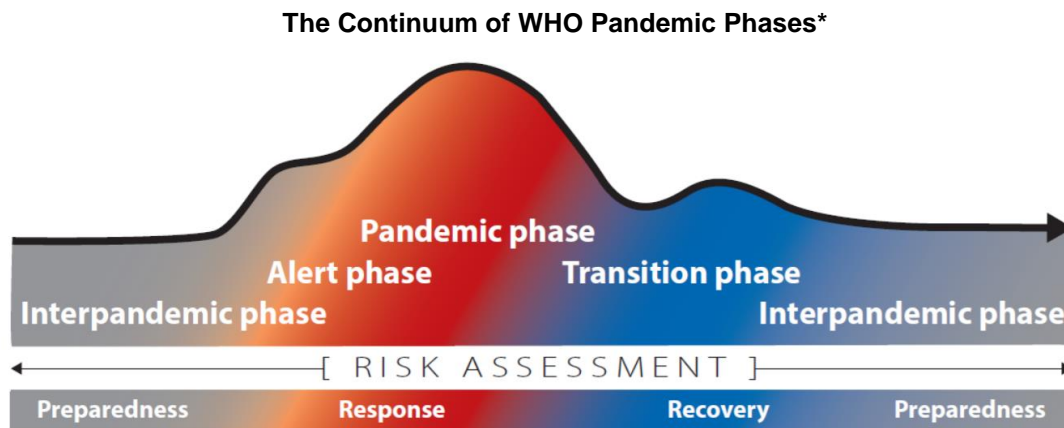


# Pandemic Phases and Stages

A **pandemic** is a global disease outbreak. A **flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity and for which there is no vaccine.** The disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in a very short time. In all previous pandemics, the outbreak spread throughout the world within a year of its initial detection. With the increase in global transport, as well as urbanization and overcrowded conditions in some areas, epidemics due to a new influenza virus are likely to take hold around the world, and become a pandemic faster than before. The spread of the 2009 pandemic (H1N1) was very rapid due to the high mobility and interconnectedness of modern societies. Within six weeks of first being described, it had affected all six World Health Organization (WHO) regions resulting in the declaration of a pandemic. Pandemics can be either mild or severe in the illness and death they cause, and the severity of a pandemic can change over the course of that pandemic.

## WHO Pandemic Phases

In 2013 in response to lessons learned from the influenza A(H1N1) 2009 pandemic, WHO developed a revised approach to global phases for pandemic influenza. The phases, which are based on virological, epidemiological, and clinical data, are to be used for describing the spread of a new influenza subtype around the world, taking account of the disease it causes.



The pandemic influenza phases – interpandemic, alert, pandemic, and transition – reflect WHO’s risk assessment of the global situation regarding each influenza virus with pandemic potential that is infecting humans. These assessments are made initially when such viruses are identified and are updated based on evolving virological, epidemiological, and clinical data. The phases provide a high-level, global view of the evolving picture. They will be used by WHO to communicate the global situation.

**Interpandemic phase:** This is the period between influenza pandemics.

**Alert phase:** 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.

**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.

**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.

## **Seasonal influenza**

Influenza is an acute respiratory disease caused by influenza type A or B viruses. The typical features of seasonal influenza include abrupt onset of fever and respiratory symptoms such as cough, sore throat, and coryza, as well as headache, muscle ache, and fatigue. For seasonal influenza, the incubation period ranges from 1 to 4 days. The clinical severity of infection can range from asymptomatic infection to primary viral pneumonia and death. The symptoms of pandemic (H1N1) 2009 influenza in people were similar to those of seasonal influenza. Illness in most cases was mild, but there were cases of severe disease requiring hospitalization and a number of deaths.

Yearly seasonal influenza remains a significant disease in the United States and Missouri, and seasonal epidemics can result in high morbidity and mortality, as well as create strains on the health care system and in communities. If a severe seasonal epidemic should occur, parts of the pandemic flu plan, if needed, would be implemented to minimize the outbreak. The parts implemented would depend upon the specifics of the outbreak and would be determined in consultation with CDC, DHSS experts, LPHAs and state elected officials.

## **Avian Influenza A (H5N1)**

Unlike influenza viruses that have achieved ongoing transmission in humans, the sporadic human infections with avian A (H5N1) viruses are far more severe with high mortality. Initial symptoms include a high fever and other influenza-like symptoms. Diarrhea, vomiting, abdominal pain, chest pain, and bleeding from the nose and gums have also been reported. Watery diarrhea without blood appears to be more common in H5N1 influenza than in normal seasonal influenza. The disease often manifests as a rapid progression of pneumonia with respiratory failure ensuing over several days. It also appears that the incubation period in humans may be longer for avian (H5N1) viruses, ranging from 2 to 8 days, and possibly as long as 17 days.

# Pandemic H1N1 Experience

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The 2009 H1N1 pandemic in United States resulted in approximately 43 million to 89 million cases, 195,000 to 403,000 hospitalizations, and 8,900 to 18,300 deaths, including 910 to 1,880 deaths among children.

The pH1N1 influenza virus contained a combination of gene segments that had not been previously reported in animals or humans. The early serologic data suggested that many older adults had some cross-reactive immunity to the pH1N1 due to prior infection with antigenically related strains, while children and most young adults were immunologically naive.

In the United States, the pandemic was characterized by two distinct waves: first, April through July 2009, and the second, from August 2009 to February 2010. Within 1 week of the recognition of the nation's first case, 10 cases had been confirmed in 3 states signaling onset of a first wave. Consistent with early serological data, the majority of reported cases were in people  $\leq 24$  years of age, and only 1 % of cases were in individuals  $\geq 65$  years of age.

The signs and symptoms reported among the pH1N1 cases were similar to those observed in patients with seasonal influenza, with the exception of diarrhea which was more common in pandemic patients. Unlike seasonal influenza when hospitalizations are more common among persons over 65 years of age, the majority (>70%) of pH1N1 hospitalizations were in people younger than 50 years of age, with hospitalization rates highest in 0-4-year-old group. The majority of adults and children hospitalized with pH1N1 infections had at least 1 underlying medical condition, and 20-25% of all hospitalized people required intensive care unit (ICU) admission.

The age distribution of laboratory-confirmed pH1N1 influenza-associated death rate was also markedly different from that seen in typical influenza seasons. In contrast to typical influenza seasons, when 90% of deaths occur in the elderly population, over 80% of reported pH1N1 deaths were in persons younger than 65 years of age. Reported pediatric deaths from the pH1N1 were almost 4 times higher compared to death rate during the seasonal influenza. Pregnant women were more than 4 times more likely to be hospitalized with pH1N1; estimated 5.8% of all deaths from pH1N1 were in pregnant women even though they comprise only 1% of the total population.

Epidemiological studies indicated that the virus was at the low end of transmissibility, compared with the strains that caused the 1918 pandemic, and was comparable to or slightly less transmissible than the strains that caused the 1957 and 1968 pandemics. On average, there were 1.5 secondary cases per one person with pH1N1.

The CDC estimated that, from April 2009 through March 2010, pH1N1 virus was associated with about 60 million cases, 270,000 hospitalizations, and 12,270 deaths in the United States. This estimate represents a cumulative pH1N1 attack rate in the United States of approximately 20%.

In conclusion, the H1N1 pandemic experience showed that disease estimates were substantially lower than envisioned in the pandemic preparedness planning assumptions. Although the overall health impact was less than predicted in the elderly population, the impact of pH1N1 virus infection in children, young adults, and pregnant women was substantial.

# Assumptions in Planning

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Innate variability of influenza viruses and diverse features of the previous pandemics make pandemic planning assumptions destined to some degree of uncertainty. As pH1N1 experience showed, some assumptions made in the pre-pandemic planning, such as expected epidemiology of the pandemic virus, disease burden, and the vaccine development process, turned out not to be relevant to the pH1N1. The assumptions in the current plan are based on the synthesis of the previous and most recent pandemic experiences. The plan does not make predictions; rather, it reflects historical circumstances and current developments. These assumptions are necessary for scaling the plan to some workable format. However, adjustments may be made within the response if some of the assumptions prove to be false or otherwise inadequate.

## Assumptions

- A new pandemic strain could emerge anywhere, including Missouri.
- If the pandemic starts outside the United States, the first United States cases are likely to occur within four weeks or less following recognition, assuming no effective intervention took place.
- Pandemic virus could be introduced to Missouri from a variety of sources.
- A new pandemic will be due to a new subtype of influenza A.
- The virulence and infectivity of a pandemic virus are likely to be uncertain in the initial stages.
- The incubation period of the pandemic infection is likely to be about 2 days, or more.
- The pandemic can start during any season of the year.
- Enhanced public health measures are likely to delay the appearance of a statewide epidemic by several weeks and reduce the overall rate of morbidity and mortality.
- More than one wave of pandemic influenza, each lasting from weeks to months, are likely to occur across the country.
- The population's susceptibility will depend on the origin of the pandemic virus, but is likely to be universal.
- Up to 30% of the general population could become ill with influenza, of which 60% will seek outpatient medical care.
- The proportion of ill people who die (case-fatality rate, CFR) may be up to 2%, or higher. (According to one estimate, the CFR among people with symptomatic pH1N1 infection was about 0.05%.)
- Some infected people will not have apparent symptoms but will develop immunity to subsequent infection; they will be able to transmit infection to others, but at rates probably lower than those for people with full symptoms.
- Illness rates will be highest among children.
- Highest risk groups for severe and fatal infection are likely to include infants, the elderly, pregnant women, and people with chronic medical conditions.
- In a severe pandemic, absenteeism attributable to illness, to the need to care for ill family members, and to fear of infection may reach 40% during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak.

- Community mitigation strategies, if implemented effectively, will reduce the infection attack rate.
- People who become ill will shed the virus and transmit infection briefly before the apparent onset of illness. Viral shedding and the risk of transmission will be greatest during the height of clinical symptoms. Children typically shed the greatest amount of virus, and therefore are likely to pose the greatest risk for disease transmission.
- Infection is likely to spread primarily by respiratory droplets, by hand-to-face contact with contaminated surfaces, and possibly with some generated aerosols.
- An infected person will transmit infection to approximately 1.3 to 2 other people during the initial period before sufficient immunity develops in the community.
- Increased public anxiety will cause increased psychogenic and stress-related illness.
- The initial responsibility for a pandemic response rests with state and local authorities.
- Antivirals and/or vaccine may be limited or unavailable during an influenza pandemic.
- A pandemic will increase the demand for public services.
- Social and economic disruption may limit public health's ability to provide services.
- Public health services will be reduced to those services determined to be life-saving, mission-essential, or life-sustaining.
- Antiviral drugs
  - Initially, antiviral drug availability will be limited to what has been stockpiled before the pandemic.
  - Missouri will receive population based (pro-rata) treatment courses of antiviral medications from the SNS.
  - These antiviral medications will be designated for treatment of the sick based on priority groups established by federal guidelines from CDC.
- Vaccine
  - When the pandemic occurs, vaccine will not be available or will be in short supply. Vaccine will be allocated to states in proportion to the size of its population in predefined priority groups (pro-rata) and will be administered according to Tiered 1-5 Priority Groups established by the CDC.
  - Vaccine for pandemic influenza may not be available for four to six months or even longer after the pandemic begins. Once the vaccine is produced, it will be available incrementally, based on production capability.
  - People identified for vaccination may need more than one dose of vaccine to achieve necessary antibody response.

# Assumptions Concerning Response to a Pandemic

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## **Pandemic Planning Guidance**

The pandemic severity and measures of response needed will most likely be different in each and every political subdivision in the state. Local jurisdictions will lead the response and implement measures as needed to minimize morbidity and mortality, and maintain critical infrastructure services. DHSS will support this local response through established emergency protocols and systems. The following planning guidance outlines anticipated degrees of impact and response needed per level of pandemic severity based on historical evidence and modeling, but should in no way be construed as predictive of what will actually occur during a pandemic. Local jurisdictions should consider regional planning to assure a uniform response. Based on the pH1N1 experience, different local jurisdictions handled the dispensing of vaccine differently. This caused confusion for citizens, especially those who lived in one jurisdiction, worked in another jurisdiction, and received health care in a third jurisdiction. The differing strategies for distribution lead to frustration for the citizens, and also harmed the credibility of the public health system.

*(NOTE: The planning assumptions outlined below are for planning and informational purposes only as response activities will be dictated by on the ground information, and decisions on the level of response needed by DHSS will be made as per the Concept of Operations.)*

## **Mild Pandemics:**

### **Impacts and Response Structure:**

Mild pandemics (mortality and morbidity rates about the same to one and a half times seasonal influenza) on the order of the 1968 pandemic, will likely mimic the effects and impacts of seasonal influenza, perhaps with the addition of targeting some population groups not normally as susceptible to seasonal influenza. Mild pandemics will likely be able to be managed much as seasonal influenza is managed. LPHAs and health care organizations will likely be able to continue to function and provide response without moving into emergency response mode (i.e., without the activation of Emergency Operations Centers (EOCs) and the utilization of ICS), though there may be some brief surge of activity in some areas of the state necessitating increased resource support and the activation of EOCs. Significant prolonged support from emergency response, public safety, and other support agencies and organizations will likely not be needed. Community functions and economic and social patterns should not be significantly disrupted, though there may be localized school closures and other interruptions of community social events due to isolated hotspots of disease. Public anxiety, with proper risk communications, should be able to be minimized. Without a good communication and marketing plan, public anxiety may run high and disrupt planning assumptions.

### **Goals in Response:**

As critical infrastructure is not anticipated to be greatly impacted and essential services will continue, the goal of the response during a mild pandemic will be to reduce illnesses and deaths in those populations most at risk from the disease. Therefore, available resources, messaging, and response activities should be directed toward these targeted populations in order to prevent as many illnesses and save as many lives as possible.

## Anticipated Activities:

- **Communications**
  - Basic public health messages - good handwashing, cough hygiene, sanitation, self-isolation if ill, etc. through routine distribution channels.
  - Some targeted messaging toward those most at risk.
  - Public communications on vaccination.
  - Information and messaging directed toward health care providers to provide them with relevant and correct information.
  
- **Community Containment**
  - **Non-pharmaceutical** - Intensive control efforts (such as case contact investigations, quarantine and isolation, and movement restrictions) may be utilized at the first emergence of the disease to slow rates of transmission, but become ineffective after the pandemic is widespread and should not continue to be utilized.
    - ❖ Basic public health measures widely encouraged (personal hygiene, sanitation, handwashing, etc.).
    - ❖ No emphasis on more widespread community containment messages (i.e., no call for school or childcare closures, restriction of public gatherings, etc.).
    - ❖ Strong emphasis on personal actions and accountability (stay home if ill messaging).
  - **Pharmaceutical**
    - ❖ Antivirals targeted toward treatment of those most likely to develop severe illness.
    - ❖ SNS supplies may or may not be needed depending on the time of year and the initial manifestation of the pandemic.
  
- **Vaccination**
  - Vaccine will be targeted toward, and prioritized for, the most susceptible populations for illness and death first, as well as also the most critical front-line essential services personnel (health care, emergency medical services (EMS) and public health) will be provided vaccine, with the eventual goal of providing it to all who desire to be vaccinated. LPHA's manage priority prophylaxis lists and identify numbers of front-line critical healthcare and mission critical personnel, to include EMS, fire and law enforcement.
  
- **Surveillance**
  - Intensive use of available passive surveillance systems to ensure the pandemic is adequately monitored and characterized to provide situational awareness.
  - Targeted epidemiological studies done as needed to investigate unusual cases, clusters, or fatalities.
  - Laboratory support (Missouri State Public Health Laboratory [MSPHL]) essential to provide confirmation of the virus upon first emergence in the state, and to support Sentinel Providers and epidemiological investigations of unusual cases thereafter.
  
- **Health Care Systems Sustainment**
  - The majority of health care systems will be expected to have the capability and capacity to manage the medical surge of a mild pandemic.

- Close monitoring of the healthcare system will occur through collaboration with the regional healthcare coalitions and respective members, as well as relevant healthcare associations (e.g., Missouri Hospital Association [MHA]; Missouri Primary Care Association) and through EMResource<sup>®</sup> queries designed to detect any areas with gaps in or loss of health care services.
- Close coordination with key partners such as the regional healthcare coalitions and MHA is essential for information flow, situational awareness and the coordination of any mitigation strategies.
- Priority will be to direct state resources to, and provide support to maintain these services in, the most impacted areas.
- It is anticipated that the majority of shortages would be of a level that could be managed within the state without requesting federal resources or the assistance of the State Emergency Operations Center (SEOC).
- It is not anticipated that emergency medical services or mortuary services would be compromised.

## **Moderate Pandemics:**

### **Impacts and Response Structure:**

Moderate pandemics on the order of the 1957-58 pandemic will be characterized by a two to three-fold increase in mortality over a typical seasonal influenza year and also have increases in the overall number of illnesses and hospitalizations. A pandemic of this magnitude will have increased likelihood of exceeding the surge capacity of health care and mortuary systems, and it is expected that there would be a number of communities that would need state and federal support, perhaps over a few weeks period, to sustain these essential services. 9-1-1 call centers (Public Safety Answering Points) and emergency medical services could exceed capacity in some areas. Jurisdictions not needing state or federal assistance would need to be very well prepared and be taking community mitigation and educational steps to slow transmission rates and increase the capacities of essential services. Broader impact on critical infrastructure (power, water, fire, law enforcement, etc.) is expected to be minor and these services would largely be expected to remain intact, though there could be some spot disruptions of services for short duration, depending on community preparedness and capacity levels and on the particular epidemiology of the disease (i.e., which age groups—for example working age adults—are most impacted). Public anxiety may be heightened during a moderate pandemic, and there would be increased concerns over public unrest in circumstances where the demand is high for certain services or products (such as vaccine, medications, and hospital beds) that may not be available in sufficient quantity to meet the public's expectations. Economic activity and social functions could see some disruptions, but these would be expected to be short-lived and occur only during the height of outbreaks in communities, and would be addressed through individual actions rather than comprehensive government actions. Health and medical EOCs and ICS processes would need to be utilized, on an as-needed basis, to effectively manage the response. The SEOC would most likely be at least partially activated to assist in the response, particularly if federal support is needed.

### **Goals in Response:**

The goals in response to moderate pandemics are twofold. The primary objective remains to protect public health (i.e., reduce illness and death), but on occasion the primary objective may best be met through the sustainment of critical infrastructure, in particular the health care system. Efforts would therefore be focused on directing services and resources to those most impacted by the disease, and on assuring that the systems that care for the sick continue to function. This may



mean prioritizing available medications and vaccine to health care and emergency medical services (EMS) workers so they can continue to provide services.

## **Anticipated Activities:**

- **Communications**
  - Public health messaging to public, including information on vaccine.
  - Information provided to health care workers.
  - Increased need for calming and informative messages to the public as disruptions in services occur.
  - Messages may need to be further coordinated through emergency management organizations, with the possible formation of joint information centers (JICs).
  
- **Community Containment**
  - **Non-pharmaceutical**
    - ❖ Individual actions as stressed in activities for “mild” pandemics continue.
    - ❖ Greater emphasis and reliance on broad-scope community containment measures to slow the rate of spread including:
      - School and childcare closures.
      - Closure of places of public assembly.
      - Possible closures of events.
  - **Pharmaceutical**
    - ❖ Antivirals targeted towards treatment of those most ill.
    - ❖ Possible use of antivirals for post exposure prophylaxis for outbreak settings of high-risk populations.
    - ❖ Consideration of prophylactic antiviral usage in certain critical occupational settings for maintenance of essential functions.
  - **Vaccination**
    - ❖ Vaccine will be allocated and administered according to tiers where all groups designated for vaccination within a tier have equal priority for vaccination. Tier 1 is the highest priority group to receive vaccination if there is limited vaccine supply for any pandemic severity.
      - Tier 1 includes population groups: public health personnel; inpatient healthcare providers; outpatient and home health providers; healthcare providers in long-term care facilities; pharmacists and pharmacy technicians; EMS; pregnant women; and infants and toddlers 6 to 35 months old.
      - Tiers are identified at [https://www.cdc.gov/flu/pandemic-resources/national-strategy/planning-guidance/guidance\\_508.html#table-1](https://www.cdc.gov/flu/pandemic-resources/national-strategy/planning-guidance/guidance_508.html#table-1)
  
- **Surveillance**
  - Intensive use of available passive surveillance systems to ensure the pandemic is adequately monitored and characterized to provide situational awareness.
  - Targeted epidemiological studies done as needed to investigate unusual cases, clusters, or fatalities.
  - Laboratory support (MSPHL) essential to provide confirmation of the virus upon first emergence in the state, and to support Sentinel Providers and epidemiological investigations of unusual cases thereafter.

- Active targeted surveillance conducted as needed to provide specific information on disease spread and virulence.
- **Health Care Systems Sustainment**
  - Many of the health care systems in the state will be beyond capacity for extended periods.
  - Health care systems may wish to consider strategies to manage surge to include cancellation of elective surgeries and discharging patients to their home or other healthcare environment.
  - There will likely be marked shortages in some areas, including ICU capacities for pediatrics, available ventilators, and some types of personal protective equipment (PPE).
  - MHA may consider activation of the State-wide Hospital Mutual Aid agreement for sharing of resources including staff.
  - The regional healthcare coalitions will be active in assuring communication and coordination of resources among healthcare partners, as well as with DHSS.
  - Waiting times to primary care physicians, clinics, and hospital emergency departments may become very lengthy in some areas.
  - The state and federal governments will be heavily relied upon to backfill shortages in resources and staff.
  - Cooperation and communication with key partners will be essential to share resources and maintain continuity of operations.
  - EOCs (federal, state, local and hospital-based) will likely need to be opened and maintained for lengthy periods to manage the response.
  - EMS may be severely strained in some areas.
  - Mortuary systems may have to make adjustments in operations to maintain services.

## **Severe Pandemics:**

### **Impacts and Response Structure:**

Severe pandemics (e.g., 1918) are marked by a several order increase in mortality over a typical seasonal influenza year, will see a significant escalation in overall illness and hospitalization, and will likely severely impact segments of the population (such as school-age children or young adults) not typically as affected by seasonal influenza. A severe influenza pandemic will likely affect all segments of society, and could overwhelm or disrupt health care and mortuary systems and other essential services. It would also have the potential to severely disrupt commerce and economic activity, breakdown normal societal patterns, and cause psychosocial trauma. With proper planning, and with strong public health, emergency management, and health care systems, pandemics that in the past would have been “severe” may be mitigated to the “moderate” or “mild” categories. Local, state, and federal EOCs would need to be activated, most likely for extended periods, to manage the response and to sustain critical services and functions.

### **Goals in Response:**

The goals in response to a severe pandemic remain two-fold, first to protect public health, and second to maintain essential services. In a severe pandemic, with the degree of impact on critical infrastructure expected, the focus will likely be on the maintenance of essential services to best protect public health.

## Anticipated Activities:

- **Communications**
  - Public health messaging to the public, including information on vaccine.
  - Information provided to health care workers.
  - Calming and informative messages to the public as disruptions in services occur.
  - Messages coordinated through emergency management organizations, expected formation of JICs.
  - Trusted state and community leaders used to deliver messages to the public and critical infrastructure service workers to maintain order.
  
- **Community Containment**
  - **Non-pharmaceutical**
    - ❖ Individual actions as stressed in activities for “mild” and “moderate” pandemics continue.
    - ❖ Broad-scope community containment measures utilized to slow the rate of spread including:
      - School and childcare closures.
      - Closure of places of public assembly.
      - Closures of events.
  
  - **Pharmaceutical**
    - ❖ Antivirals are effective for both treatment and prophylaxis and may be used as a strategy for managing influenza.
    - ❖ Antivirals continue to be targeted to those ill and at highest risk for negative outcomes.
    - ❖ If vaccine shortages occur, antivirals may need to be targeted toward priority prophylaxis groups as defined by CDC.
  
- **Vaccination**
  - Targeted to critical infrastructure workers first.
  - Protection of high-risk groups second.
  - Coverage for general population third.
  
- **Surveillance**
  - Intensive use of available passive surveillance systems to ensure the pandemic is adequately monitored and characterized to provide situational awareness.
  - Targeted epidemiological studies done as needed to investigate unusual cases, clusters, or fatalities.
  - Laboratory support (MSPHL) essential to provide confirmation of the virus upon first emergence in the state and to support Sentinel Providers and epidemiological investigations of unusual cases thereafter.
  - Active targeted surveillance conducted as needed to provide specific information on disease spread and virulence.

- **Health Care Systems Sustainment**

- The demand for services from all aspects of the health care system (e.g., primary care, EMS, tertiary care, etc.) will exceed its capacity for an extended period of time.
- There will be marked shortages of staff and resources in some areas of the state, including intensive care unit (ICU) capacities for pediatrics, available ventilators, and some types of PPE.
- Access to primary care physicians, clinics, and hospital emergency departments may become impossible in some areas.
- Health care systems should consider strategies to manage surge to include cancellation of elective surgeries and discharging patients to their home or other healthcare environment.
- MHA may consider activation of the State-wide Hospital Mutual Aid agreement for sharing of resources including staff.
- The regional healthcare coalitions will be active in assuring communication and coordination of resources among healthcare partners, as well as with DHSS.
- The state and federal governments will be heavily relied upon to backfill shortages in resources and staff.
- Cooperation and communication with key partners will be essential to share resources and maintain continuity of operations.
- EOCs (federal, state, local and hospital-based) will need to be opened and maintained for lengthy periods to manage the response.
- EMS may be overwhelmed in some areas.
- Mortuary systems may be overwhelmed in some areas and rely on state and federal assistance.
- It will be essential for DHSS to
  - ❖ Monitor/track bed capacity of hospitals and long-term care facilities in the state.
  - ❖ Monitor/track ICU capacities in tertiary care centers statewide.
  - ❖ Monitor/track ventilator capacity and availability for effective distribution of state reserves.
  - ❖ Monitor/track primary care practitioners to evaluate populations' access to primary and preventive health care services, including immunizations.
  - ❖ Activate and deploy medical volunteers and medical reserve corps to alleviate severe health care practitioner shortages.
  - ❖ Request federal health care resources as available.
  - ❖ Activate and deploy state and (when available) federal emergency mortuary systems.
  - ❖ Assure communication and cooperation with key partners (health care providers, EMS, local and federal agencies) to control distribution of scarce resources and maintain continuity of operations.

# Roles and Responsibilities of the Missouri Department of Health and Senior Services

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The checklists below reflect broad categories of actions, roles, and responsibilities that may be needed during a pandemic, dependent on the severity. In a mild pandemic, many of these actions will never be needed. They serve as a reminder of possible activities, and of roles and responsibilities, for those engaged in the response, but do not replace specific job action sheets that may be needed nor dictate the response, which will be managed as outlined in the “Concept of Operations” section of this plan. If DHSS’ Emergency Response Center (ERC) and/or the SEOC are activated, these activities will be managed from within the ICS structure, with the listed subdivisions responsible for filling needed positions with persons of appropriate expertise.

## Director’s Office – Department of Health and Senior Services

### Throughout the Pandemic Period:

- Will be notified by the Director or Deputy Director of the Division of Community and Public Health (DCPH) of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Consult with key staff and direct appropriate actions (as necessary, directly or through delegation):
  - Notify Governor’s Office to provide awareness of the situation.
  - Notify LPHAs to:
    - Implement their pandemic influenza plans.
    - Communicate updates.
  - Communicate status and key recommendations to DHSS staff.
  - Determine need and consider activating the ERC in conjunction with key staff and the Office of Emergency Coordination (OEC).
  - Communicate with the Directors of other state agencies.
  - Communicate with the Region VII Federal Official in Charge, the Association of State and Territorial Health Officials, CDC, and other key federal partners.
  - Declare a public health emergency, if situation warrants.
  - Request Division Directors to identify staff not working on pandemic flu, reassign staff, and develop work schedule, if needed.
  - Have Division Directors reduce programmatic functions to maintenance operations and designate available staff to assist in data entry, surveillance, vaccinations, medication distribution, etc., if situation warrants.
  - Implement the DHSS Pandemic Continuity of Operations/Continuity of Government (COOP/COG) plan, when needed.
  - Request assistance through SEOC, when needed.
  - Request the Governor to provide waivers or declare a state of emergency, when needed.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Office of General Counsel

### Throughout the Pandemic Period:

- Will be notified by the DCPH Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Provide legal counsel.
  - Assist in updating documents as needed.
  - Serve as a liaison to other agencies' legal staff.
  - Provide guidance and direction as needed.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Office of Public Information

### Throughout the Pandemic Period:

- Will be notified by the DCPH Director or Deputy Director, of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Coordinate and manage public information.
    - Develop key messages for media and general public.
    - Key message development and release should be coordinated with local public health information officers.
  - Develop new messages in accordance with changes in the outbreak. This includes social media messages with graphics. DHSS currently has Facebook, Twitter, YouTube, Flickr, LinkedIn, and Instagram.
  - Coordinate messages with the Office of the Governor.
  - Coordinate messages with Missouri State Emergency Management Agency (SEMA) and be prepared for the activation of a JIC, if needed.
  - Coordinate messaging related to local Point of Dispensing (POD) Operations with public health agencies taking into consideration access and functional needs populations and individuals with limited English proficiency.
  - Communicate availability of both Poison Control Center Ready-Line for medical providers and the Central Registry Unit Hotline (CRU – Elderly Abuse/Neglect Hotline) for clients/providers.
  - Reexamine prepared media releases. Update media releases if necessary.
  - Review and be prepared to use Public Information Emergency Communications Plan.
  - Check for availability of key spokespeople.
  - Brief key spokespeople as necessary.
  - Finalize communications strategy with key response staff.
  - Consult with DHSS subject matter experts if necessary.
  - Prepare for media and public inquiries.
  - Participate in/arrange media release and press briefings.
  - Ensure web site information is updated routinely.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Director's Office – Division of Community and Public Health

### Throughout the Pandemic Period:

- Will be notified by the DCPH Director or Deputy Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing, the DCPH Director or Deputy Director will, as appropriate:
  - Direct DCPH staff to assess situation and prepare response.
  - Notify key response staff that includes: DHSS Director and Deputy Director, Office of Emergency Coordination (OEC), Missouri State Public Health Laboratory (MSPHL), Division of Regulation and Licensure (DRL), Division of Senior and Disability Services (DSDS), Center for Local Public Health Services (CLPHS), Section for Disease Prevention (SDP), Section for Environmental Public Health (SEPH), Office of Public Information (OPI), Bureau of Immunizations (BI), Bureau of Communicable Disease Control and Prevention (BCDCP), Office of General Counsel, medical advisors, State Epidemiologist, and other experts and advisors as may be needed, both within the department and with other agencies.
  - Lead briefing discussions, as needed, to provide situational updates to key response staff. (*Briefing will be set up by ERC staff.*)
  - Provide overview of ongoing DHSS activities with key response staff.
  - Project effects of the novel influenza outbreak.
  - Discuss major elements of enhanced surveillance. Discuss vaccine/antiviral plan.
  - Recommend priority vaccination and antiviral dispensing.
  - Discuss communication strategies for LPHAs, hospitals, and the public.
  - Discuss situational reports, and provide recommendations for response strategies and actions to support local response and maintain critical infrastructure.

### Program Coordinator, Health Care Systems Preparedness

- Provide consultation to the ERC command staff and work stations, as requested.
- Monitor healthcare systems capacity and continuity strategies, to include availability of resources through EMResource<sup>®</sup> queries and communication with regional healthcare coalitions.
- Participate in briefings at the state and regional healthcare coalition levels.
- Participate on the DHSS team to evaluate requests for PPE and other supplies.
- Discuss situational awareness reports and provide recommendations for response strategies, as appropriate. (e.g., mobilization of mobile medical resources, SNS, or Emergency Management Assistance Compact [EMAC] requests)

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*



## Office of Emergency Coordination

### Throughout the Pandemic Period:

- Will be notified by the DCPH Director or Deputy Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Set-up briefing of key staff, as needed, for DCPH Director.
  - Communicate with external organizations by issuing a Health Alert.
  - Maintain communications with the Missouri State Emergency Management Agency (SEMA) and other external public safety and emergency response agencies, as needed.
  - Stand-up ERC when directed by the DHSS Director.

### ERC Coordinator

- If SEOC and/or the ERC are activated, refer to SEOC/ERC flowchart to establish initial team roster and notify necessary internal and external partners.
- Make certain that all equipment and redundant communication systems are in working order at all times.
- Assist the ERC Safety Officer in monitoring fatigue of the Duty Officers and team members.
- Confirm that all emergency response teams and ERC staff have necessary resources.
- Coordinate activation of Missouri Poison Center Ready-Line.
- Notify the Central Registry Unit Hotline (CRU – Elderly Abuse/Neglect Hotline) that the ERC is being activated, and that guidelines will be sent as soon as possible for potential worried well calls from clients/providers.
- Forward approved Health Alerts, Advisories, and Updates to external organizations as requested.
- Assist the ERC Branch Director in determining if staffing in the ERC should be scaled up or down dependent upon the current needs of the event.
- Follow-up with the Finance/Administration team upon deactivation to determine cost of activation and potential for federal reimbursement.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section of Epidemiology for Public Health Practice

### Bureau of Vital Records

- Coordinate the management of death certificates related to pandemic influenza with the LPHAs and local coroners, medical examiners, and funeral directors.
- Provide information and updates as needed to LPHAs, local coroners, medical examiners, and funeral directors on pandemic influenza mortality information.
- In conjunction with the Bureau of Vital Statistics team, track mortalities related to pandemic influenza and publish such results as needed.
- Coordinate the management of mass fatalities, if needed, with the State Pandemic Influenza Coordinator, SEMA, the Missouri Funeral Directors and Embalmers Association Disaster Response Team (MFDEA-DRT) and local authorities.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section for Disease Prevention

### Throughout the Pandemic Period:

In early pandemic phase when a novel influenza virus develops sustained human-to-human transmission, the Section for Disease Prevention (SDP) will be notified by CDC of the emergence of a potential pandemic virus.

- Notify the DCPH Director and other key response staff of the emergence of a pandemic virus, and provide updates (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- Activate Missouri Pandemic Influenza Plan
- Participate in briefings.
- Provide analysis and recommendations for the management of the pandemic related to the situational updates.
- Carry out normal duties as they apply to outbreaks.
- Monitor bulletins and events related to influenza and engage in vigorous proactive communications with CDC related to the novel influenza virus.
- Monitor bulletins from CDC regarding virologic, epidemiologic, and clinical findings associated with new influenza virus variants isolated within and/or outside of the United States.
- Monitor, in conjunction with the Bureau of Reportable Disease Informatics (BRDI), statewide surveillance systems to ensure that data is being analyzed properly and in a timely fashion.
- Work with BCDCP to assure coordinated effort among regional staff and with the local public health agencies (LPHAs) in monitoring, tracking, and studying the disease.
- Conduct epidemiological investigations of any outbreaks, cases, or fatalities from the novel virus, and collaborate with CDC as needed.
- Maintain communications and coordinate response to novel influenza cases with other states.
- After receiving instructions from the DCPH Director, will:
  - Instruct BCDCP to:
    - Coordinate response with the State Epidemiologist and the ERC.
    - Utilizing all available surveillance tools, provide a situational awareness report, as needed or on a regular basis, to the DCPH Director. Describe ongoing trends and impacts of the disease across the state, capturing such information as school closures, outbreaks, percentages of visits to emergency rooms for influenza like illnesses (ILI), percentage of hospitalizations for ILI, pediatric deaths, laboratory testing results, trends of over-the-counter drug utilization, and other information and data to assist key response staff in making informed decisions on response actions and resource allocations.
    - Evaluate resources and prioritize staffing for pandemic response.
    - Work with the ERC in the preparation of Health Alerts, Advisories, and Updates.
    - Coordinate with MSPHL on testing.
    - Coordinate with BI.
    - Coordinate with BRDI.
  - Evaluate resources available to sustain operations during the pandemic.
  - Instruct BRDI to:
    - Analyze regional and state data from statewide surveillance systems in conjunction with the State Epidemiologist and the ERC.

- Utilizing all available surveillance tools, provide a situational awareness data, as needed or on a regular basis, to the BCDCP staff. Describe ongoing trends and impacts of the disease across the state, capturing such information such as percentages of visits to emergency rooms for ILI, percentage of hospitalizations for ILI, pediatric deaths, laboratory testing results, and other information and data to assist key response staff in making informed decisions on response actions and resource allocations.
- Instruct BI to:
  - Coordinate with the SNS Program Coordinator.
  - Review vaccination plan.
  - Finalize establishment of priority groups in each community statewide in accordance with CDC guidance for priority prophylaxis groups.
  - Coordinate with LPHAs, hospitals, and BCDCP on vaccination sites.
  - Provide vaccination guidance and technical assistance to LPHAs.
  - Coordinate with US Department of Health and Human Services (HHS) on vaccine implementation strategies.
  - Monitor staffing/workload gaps.
- Brief the regional senior epidemiologists with instructions to:
  - Participate in briefings.
  - Carry out normal duties as they apply to outbreaks.
  - Monitor bulletins and events related to influenza.
  - Work with regional and county staff in assigned area to implement vaccine administration plans.
  - Work with OEC to assure coordinated effort among regional staff.
  - Coordinate with state emergency response planners to evaluate resources available to manage the outbreak and provide vaccinations within assigned area.
  - Instruct the local epidemiologists to:
    - Review local plans (e.g., surveillance and vaccination/drug plans).
    - Meet with other regional staff to assure consistency in planning and message.
    - Initiate heightened surveillance. Include additional tools such as surveillance of intensive care admissions due to influenza, inpatient mortality from respiratory illness, etc.
    - Assure that all newly diagnosed cases are entered into the appropriate data surveillance system in a timely manner to provide current data for analysis.
    - Assist assigned counties as needed.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Missouri State Public Health Laboratory

### **Throughout the Pandemic Period (or until the virus is substantially characterized):**

- Will be notified by the DCPH Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Enhance surveillance for the novel virus throughout the state by supplying such information on sample submission and protocols as necessary to Laboratory Response Network (LRN) laboratories using Health Alerts, Advisories, and Updates created in cooperation with BCDCP and OEC, and by other communication means if necessary.
  - Increase communications with CDC to ensure the best information regarding strain typing, reagent specifics, and other such information related to the novel virus is available to MSPHL and its associated network of partners.
  - Redirect laboratory staffing, inspect equipment, monitor supplies, and take other such steps as needed in preparation for testing the novel virus.
  - Communicate expeditiously to DCPH any confirmation of the novel virus within the state.
  - Coordinate with LPHAs in providing technical consultation, necessary sampling kits, and other assistance as may be needed for surveillance of the novel virus.
  - Update, in conjunction with SDP and OEC, Health Alerts, Advisories, and Updates modifying (by prioritization of regions, details of sample submission, etc.) the enhanced surveillance effort for the novel virus.
  - Communicate expeditiously to DCPH trends and movement of the novel virus within the state.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Center for Local Public Health Services

### Throughout the Pandemic Period:

- Will be notified by the DCPH Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Maintain communication with the SDP Administrator.
  - Maintain communication with the ERC (once activated).
  - Maintain communication with LPHA Administrators.
  - Coordinate with the BI Chief and SNS Program Coordinator on vaccine and antiviral information. Interpret DHSS guidance for LPHAs, provide advice, maintain relationships, answer questions, and make referrals.
  - Assist in the assessment of capacities and capabilities of LPHAs.
  - Serve as a conduit for information between DHSS and LPHAs.
  - Redirect staff and resources within CLPHS as necessary.
  - Maintain knowledge of the deployment level of the LPHA workforce.
  - Recommend LPHA representatives to provide local input.
  - Work with DCPH Director to consider easing routine contract work of LPHAs to free staff for the pandemic effort.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Division of Senior and Disability Services

### Throughout the Pandemic period:

- Will be notified by the DCPH Director or Deputy Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing will, as appropriate:
  - Advise management staff of the situation, including all updates.
  - Facilitate ongoing communication with regional division staff.
  - Maintain ongoing communication with all partners, including Area Agencies on Aging (AAAs), Home and Community Based Services (HCBS) providers, Centers for Independent Living, home care industry, and other entities.
  - Handle issues/problems encountered by HCBS providers/vendors implementing service plans for priority clients during periods of high or extended absenteeism.
  - Track incident impact to DSDS clients via the Central Registry Unit.
  - Redirect staff and resources as necessary to support DSDS and DHSS operations.
- Will coordinate response activities through the ERC when activated.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Division of Regulation and Licensure

Within the Division of Regulation and Licensure (DRL), the Director's Office oversees the following:

- Section for Health Standards and Licensure (HSL)
- Section for Long Term Care (SLCR)
- Section for Child Care Regulation (SCCR)
- Section for Medical Marijuana Regulation (SMMR)
- Certificate of Need (CON)
- Family Care Safety Registry (FCSR)
- The Board of Nursing Home Administrators (BNHA) staff liaison
- Financial Support Staff Unit (FSSU)

### Throughout the Pandemic Period

- Will be notified by the DCPH Director or Deputy Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing, the DRL Director (or designee) will, as appropriate:
  - Communicate status of phase shifts and other updates/briefings with key division staff, including Section Administrators.
  - Consult with key DHSS staff, including DRL staff, and direct appropriate actions.
  - Monitor staffing/workload and continuously assess gaps and resources, and prioritize staffing for pandemic response.
  - Establish joint communication with the DHSS Director's office to:
    - Provide updated information to the DHSS Director's Office about status of licensees and division's current regulatory function capabilities.
    - Evaluate situational reports and provide recommendations for response strategies and actions to support local response and maintain essential functions.
    - Identify staff available who are not working on pandemic-related activities to support other DRL or DHSS functions, and redirect as necessary.
    - Report status of reassigned DRL personnel.
    - Provide situational awareness information about licensees/registrants.
  - Continue to refine the division's Pandemic COOP/COG plan based on emerging information and best practices.
  - Work with OPI to create and direct the release of communications and/or educational material with key messaging for both internal and external stakeholders.
  - Ensure that public website information related to DRL functions is routinely updated.
  - Ensure each program has a mechanism in place such that consultation and/or technical assistance for licensees is readily available.
  - Review and direct the implementation of the DHSS COOP/COG plan.
  - Direct staff concerning the receipt of priority prophylaxis based on DHSS and CDC guidance.
  - Issue directive that regulated entities be polled for assessment and capability.
  - Ensure that mental health-specific services can be accessed by deployed DRL staff.
  - Maintain a pre-designated telephone line for providing updated resources for DRL staff.
  - Maintain updated online resources for staff through dedicated SharePoint site for DRL staff.



- Provide guidance to DRL staff for communicating with the media.
  - Ensure DRL staff implement a method to capture information necessary to update desk reference handbooks that describe how to carry out DRL's essential functions.
- Will coordinate response activities through the ERC when activated.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section for Health Standards and Licensure

*Within the DRL, HSL oversees the following Bureaus:*

- *Bureau of Hospital Standards (BHS)*
- *Bureau of Diagnostic Services (BDS)*
- *Bureau of Ambulatory Care (BAC)*
- *Bureau of Home Care and Rehabilitative Standards (BHCRS)*
- *Bureau of Narcotics and Dangerous Drugs (BNDD)*
- *Bureau of Emergency Medical Services (BEMS)*

### **Throughout the Pandemic Period**

- Will be notified by Director of DRL or designee of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing, the HSL Section Administrator or designee will:
  - Provide direction to subordinate staff to carry out assigned duties unique to the situation based on division priorities (e.g., provide consultation, disseminate educational materials, conduct investigations, and handle media inquiries).
  - Approve the release of communication media to internal and external stakeholders.
  - Monitor staffing/workload and continuously assess gaps and resources, and prioritize staffing for pandemic response within HSL.
- Establish two-way communication with the DRL Director at regular intervals to:
  - Provide information about staffing and status of HSL's regulatory and licensure functions.
  - Provide situational awareness information about facilities, including availability of critical equipment, space, and medicines.
  - Recommend redirection of available specialized staff (such as nursing or clinical laboratory staff) to support patient care activities, including mass prophylaxis or other essential functions for DHSS.
  - Provide suggestions for updates to HSL's online information.
- Direct staff to capture information to use for updating desk reference handbooks post-pandemic.
- Issue a directive to activate local response plans.
- Brief new employees assigned to work in HSL during pandemic.
- Provide reassigned staff with a desk reference manual for any position required to handle an essential function.
- Assure that communication with key stakeholders (SEMA, LPHA's, and Point of Dispensing sites) and staff occur regularly with the most up-to-date information available.
- Poll licensees to update availability of critical equipment, space, and medicines.
- Implement phases of reduced programmatic functions, and designate staff to participate in maintenance of essential functions, including adequate staffing levels for the medical surge desk.
- Encourage deployed staff in affected regions to take advantage of mental health services.
- Handle triaged complaints based on available staff.
- Implement altered standards.
- Provide specialized pandemic-related consultation and technical assistance to licensees/registrants.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section for Long Term Care Regulation

*Within the DRL, the Section for Long Term Care Regulation (SLCR) oversees the following Units:*

- *Quality Assurance and Education*
- *Regulation and Compliance*
- *Licensure and Certification*
- *Regions 1–7*

### **Throughout the Pandemic Period:**

- Will be notified by the Director of DRL or designee of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing, the SLCR Section Administrator or designee will, as appropriate:
  - Provide direction to subordinate staff to carry out assigned duties unique to the situation based on division priorities (e.g., provide consultation, disseminate educational materials, conduct investigations, and handle media inquiries).
  - Approve the release of communication media to internal and external stakeholders.
  - Monitor staffing/workload and continuously assess gaps and resources, and prioritize staffing for pandemic response within SLTC.
- Establish two-way communication with the DRL Director at regular intervals to:
  - Provide information about staffing and status of SLCR's regulatory and licensure functions.
  - Provide situational awareness information about facilities, including location and number of high-risk residents, and locations for ancillary medical treatment.
  - Recommend redirection of available specialized staff, such as nurses to support patient care activities, including mass prophylaxis or other essential functions for the DHSS.
  - Provide suggestions for updates of SLCR's online information.
- Brief new employees assigned to work in SLCR during pandemic.
- Provide reassigned staff with a desk reference manual for any position required to handle an essential function.
- Assure communications with key stakeholders and staff occur regularly with the most up-to-date information available.
- Poll licensees to update availability of critical equipment, space, and medicines.
- Implement phases of reduced programmatic functions, and designate staff to participate in maintenance of essential functions, including adequate staffing levels for hotlines.
- Handle triaged complaints based on available staff.
- Provide specialized pandemic-related information to licensees/registrants.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section for Child Care Regulation

*Within DRL, the Section for Child Care Regulation (SCCR) oversees staff in seven regional offices, including staff who telecommute from their home offices.*

### **Throughout the pandemic period:**

- Will be notified by the DRL Director of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After briefing, SCCR Section Administrator or designee will:
  - Provide direction to subordinate staff to carry out assigned duties unique to the situation based on division priorities (e.g., provide consultation, disseminate educational materials, conduct investigations, and handle media inquiries).
  - Approve the release of communication media to internal and external stakeholders.
  - Monitor staffing/workload, continuously assess gaps and resources, and prioritize staffing for pandemic response within SCCR.
  - Establish two-way communication with the DRL Director at regular intervals to:
    - Provide information about staffing and status of SCCR's regulatory and licensure functions.
    - Provide situational awareness information about facilities, including location, limitations, and capacity.
    - Recommend redirection of available staff to support other essential DHSS functions.
    - Provide suggestions for updates to SCCR's online information.
  - Direct staff to capture information to use for updating desk reference handbooks post- pandemic.
  - Brief new employees assigned to work in SCCR during the pandemic.
  - Provide reassigned staff with a desk reference manual for any position required to handle an essential function.
  - Assure that communications with key stakeholders and staff occur regularly with the most up-to-date information available.
  - Poll licensees to update availability of space and limitations.
  - Implement phases of reduced programmatic functions, and designate staff to participate in maintenance of essential functions.
  - Encourage deployed staff in affected regions to take advantage of mental health services.
  - Handle triaged complaints based on available staff.
  - Implement altered standards.
  - Provide specialized pandemic-related consultation and technical assistance to licensees.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

## Section for Medical Marijuana Regulation

Within the DRL, the Section for Medical Marijuana Regulation (SMMR) oversees the following units:

- Facility Licensing and Compliance Unit
- Patient Services Unit
- Operations Unit

### Throughout the Pandemic Period

- Will be notified by Director of DRL or designee of the emergence of a novel influenza virus and receive regular briefings (in person or through written situational reports) of subsequent significant changes in the status and spread of the virus.
- After each briefing, the SMMR Director or designee will:
  - Provide direction to subordinate staff to carry out assigned duties unique to the situation based on division priorities (e.g., provide consultation, disseminate educational materials, conduct investigations, and handle media inquiries).
  - Approve the release of communication media to internal and external stakeholders.
  - Monitor staffing/workload and continuously assess gaps and resources, and prioritize staffing for pandemic response within SMMR.
- Establish two-way communication with the DRL Director at regular intervals to:
  - Provide information about staffing and status of SMMR's regulatory and licensure functions.
  - Provide situational awareness information about facilities and patients.
- Direct staff to capture information to use for updating desk reference handbooks post-pandemic.
- Assure that communications with key stakeholders and all licensed facilities and staff occur regularly with the most up-to-date information available.
- Implement contingency plans for conducting essential functions offsite as necessary.
- Implement phases of reduced programmatic functions.
- Provide specialized pandemic-related consultation and technical assistance to licensees and patients.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*

# Roles and Responsibilities of the Selected Programs Outside the Missouri Department of Health and Senior Services

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Certain programs within other Missouri state agencies, whose activities impact the health of the public, would play crucial roles in the response to an influenza pandemic affecting the state. Listed below for each of these programs is a checklist (similar to the checklists in the previous section) setting out actions, roles, and responsibilities that these programs might perform during a pandemic, dependent on the severity. In a mild pandemic, many of these actions will never be needed. If DHSS' ERC and/or the SEOC are activated, these activities will be managed from within the ICS structure.

## Medical Countermeasures Program –SEMA

- Activate the SNS distribution plan as needed.
- Coordinate inventory management of SNS assets held in receiving, staging and storage (RSS) sites.
- Coordinate pro-rata allocation of SNS assets to LPHAs, hospitals, other health care partners, and state agencies.
- Develop and train local community partners on how to order SNS assets through WebEOC.
- Facilitate the ordering, picking, and distribution (Missouri is a pull state) of assets to local communities.
- Use evidence-based decision making for requests for additional SNS assets. Review and submit supporting documentation to CDC for additional asset requests.
- Ensure all state agencies have access to the SNS program personnel through contact with the ERC during a public health emergency.
- Monitor POD shortages and pro-actively communicate with public health community to meet needs.
- Activate SNS team members as needed to receive, store, and distribute SNS assets from RSS sites.
- Communicate with the Missouri Board of Pharmacy so that it maintains situational awareness of SNS drugs.
- Ensure latest U. S. Food and Drug Administration (FDA)/CDC Guidance on emergency use authorization (EUA) and Emergency Use Instructions (EUI) and patient fact sheets are available for SNS asset disposition at time of event.
- Maintain LPHA secure website with latest guidance documents, tools, and references.
- Assure DHSS leadership receives information in a timely manner regarding receipt and disposition of SNS assets.

## Office of Disaster Services (ODS) – Missouri Department of Mental Health (DMH)

### Throughout the pandemic period:

- Upon emergence of the novel influenza virus and notification by OEC:
  - Evaluate mental health assets and anticipated resources required to meet the current and anticipated future threats posed by the virus.
  - Notify mental health experts and other partners to be ready for possible activation in response to a public health emergency.

- Provide *ad hoc* training and orientation for those mental health professionals who may be deployed to support emergency-related public health response efforts (mass prophylaxis sites, local hospitals, alternate care facilities, etc.).
  - Provide consultation to local mental health providers in adapting their response for special populations (hospital and health care workers, children, older adults, ethnic communities, first responders, homebound persons, etc.).
  - Provide consultation and training for frontline public health workers, such as DHSS and LPHA staff, physicians, nurses, medical technicians, and others in anticipating and responding to pandemic-related mental health behaviors such as stress reactions, misattribution of normal arousal symptoms, and panic.
  - Disseminate to various populations disaster behavioral health educational materials addressing the mental health impact of the pandemic event, as well as information on strategies for coping with fear and anxiety, and how to access to mental health services. Information will be posted online to be downloaded as needed.
  - Conduct mental health-specific needs assessments and rapid identification of vulnerable populations and gaps in mental health services that may exacerbate the psychosocial response to the event.
- Upon sustained transmission of the novel virus in the state will, as needed:
- Be notified of the change in status by OEC.
  - Continue with the above. In addition, will:
    - Utilize existing relationships with Voluntary Organizations Active in Disasters (VOAD) and faith-based organizations in coordinating and unifying mental health messages and strategies.
    - Work with public information officers from DMH, DHSS, and/or SEMA or other PIOs to craft public service mental health messages in support of the overall emergency public health response.
    - Deploy DMH crisis counseling cadre staff, as needed, to provide community-based crisis counseling and psycho-education in rural and otherwise difficult to reach communities.
    - Update and modify online mental health/pandemic-related websites.
    - Deploy counselors to deliver multi-lingual, multi-cultural mental health support services directed at all critical outbreak-related functional areas (SNS receiving, staging and storage (RSS) sites, POD sites, public health facilities, EMS bases of operation, etc.).
    - Provide stress management services and training for those public health personnel working in high-demand settings.
    - Deploy staff (life safety issues notwithstanding), to high-emotion locations (morgues, funeral homes, hospitals, pediatric units, pharmacies, etc.) to work to reduce agitation among individuals who are upset.
    - Coordinate with other crisis counseling programs (American Red Cross, county prosecutor's victims' advocates, etc.) to ensure the interoperability of counseling services at all points within the community.
    - Deliver (life safety issues notwithstanding) support services to schools and other institutions to assist staff, students/residents, etc., with grief and bereavement issues and the cumulative stresses related to a protracted health emergency.
    - Offer ongoing stress management activities for crisis counselors and other mental health workers engaged in any outbreak-related efforts.

- Offer ongoing stress management services to personnel within the incident command and control structure of the emergency management system.
- Deliver specialized mental health support services to medical professionals, first responders, and public health workers to address stress management concerns to reduce the potential for adverse psychological reactions within their workforces.
- Between pandemic waves (and after the end of the pandemic) will, as needed:
  - Continue with the above. In addition will:
    - Provide ongoing support for clergy, morticians, and funeral workers.
    - Promote the development of grass roots, community self-help groups to address the long-term emotional consequences of the pandemic.
    - Promote and offer technical assistance and peer-support programs to first responders to address the potential long-term emotional impact of the event.
    - Deliver debriefing and other post-event psychological services for first responders, public health, and other professionals involved in the event.
    - Work with community mental health provider agencies, academic institutions, and other specialists to develop treatment models to address the lingering or long-term emotional consequences of the pandemic event.
    - Maintain a telephone help-line providing tele-counseling, updated resources, and facilitated referrals for behavioral health services, as well as online resources.
    - Maintain online disaster behavioral health educational and resource/referral websites developed during earlier phases.

*DHSS will direct response per the Concept of Operations. These checklists serve as reminders of broad categories of roles and responsibilities for pandemic influenza response.*



# Concept of Operations

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## Objectives

1. Describe command structure and decision-making process.
2. Outline roles and responsibilities of DHSS and other agencies.

## A. Command and Control

Response to pandemic influenza will use the same command and control system developed for other public health emergencies in Missouri. This section highlights activities specific to pandemic influenza response and the role of DHSS in this response.

### **1. Authority for Direction of Control**

The overall authority for direction and control of the response to a pandemic influenza situation within Missouri rests with the Governor. The Missouri Constitution identifies the officers next in line of succession in the following order: Lieutenant Governor, President Pro Tempore of the Senate, Speaker of the House, Secretary of State, State Auditor, State Treasurer or the Attorney General.

The Governor is assisted in the exercise of direction and control activities by the staff of the Governor's office and in the coordination of response activities by the Missouri Department of Public Safety and SEMA.

SEMA coordinates federal, state, local, and private resources throughout the State during any disaster and emergency. SEMA maintains and operates the SEOC which monitors for emergencies statewide 24 hours a day, 7 days a week. The SEOC serves as the command and control center for the state during an emergency. Fully activated, the SEOC is staffed according to 16 Emergency Support Functions (ESFs). DHSS heads ESF #8 "Health and Medical".

Activation of the SEOC:

- a) improves communication between and among various agencies,
- b) facilitates communication with other states, the federal government, and local public and private entities, and
- c) enables the capacity to deploy assets, support operations to ESFs, and ensure timely and appropriate response to the emergency.

Outlined within the SEOP are policies, concepts of operations, organizational structures, and federal-state-local interfaces. The SEOP contains specific language pertaining to the provision of health and medical services (ESF #8, under the primary responsibility of DHSS) in response to emergencies and disasters. The ESF #8 section in the SEOP identifies roles and responsibilities of DHSS, and of all support agencies, should a disaster or emergency (including an influenza pandemic) overburden or overwhelm local capacities. This plan will be followed should the SEOP and SEOC require activation to support the local response.

DHSS is a lead agency in Missouri's response to pandemic influenza. Overall authority for direction and control of the resources of DHSS that respond to a pandemic influenza situation is the DHSS Director. The line of succession for the DHSS Director is the Deputy Department Director. The DHSS Director is assisted in the coordination of pandemic influenza response activities by the DCPH, OEC, and other designated staff. The DHSS Director will evaluate the need for activation of DHSS' ERC, or to request activation of the SEOC, based on situational information during the pandemic.

## **2. Command and Control Process**

The strategic direction and control for Missouri's response to a public health emergency is a coordinated function of DHSS through the ERC and the SEOC, dependent upon the level of activation needed. During emergencies, DHSS will coordinate response activities using an incident management system (IMS), superimposed over the regular programmatic chain of command. The ERC will manage the traditional functions of ICS (Command, Planning, Operations, Logistics, Finance and Administration) within DHSS's existing systems to facilitate an integrated and comprehensive response.

Several staff may be identified for each incident command role for the anticipated length of the pandemic period.

It is expected that LPHAs will also direct their response activities using IMS, which is included in the locally-developed Emergency Operations Plan. If the magnitude of a pandemic influenza crisis exceeds the capabilities and resources of the local incident management system, or when the efforts of multiple jurisdictions are required in order to resolve a crisis situation, the ICS command function will likely evolve into a ***Unified Command*** (UC). Under UC, a multiagency command post will be established, incorporating officials from agencies with jurisdictional responsibility at the incident scene. Multiple agency resources and personnel will then be integrated into the ICS as the single overall response management structure at the incident scene.

At a local government's request and during the period of a large-scale pandemic influenza emergency, state agencies will mobilize and deploy resources to the affected area to assist local governments, and coordinate the delivery of services from the federal government. The affected local government(s) will be responsible for identifying and communicating response priorities and state resource requirements to the SEOC through the Area Command, if activated. If the SEOC is not activated, LPHAs should direct resource requests through the ERC, and these requests should come through the local EOC, if activated.

For health care organizations, the standards of the Joint Commission on the Accreditation of Healthcare Organizations (EC.1.4 and EC.2.4) require accredited healthcare organizations to identify a community command structure and define an all-hazard command structure within their organization that links to the community structure.

### **3. DHSS' ERC**

The ERC is located on the main DHSS campus in Jefferson City, and serves as the strategic coordination point for public health and medical operations.

The ERC has functional ability to operate as a command and control center in the event of a public health emergency. Routine situational status updates, and current information on the spread and impact of the pandemic influenza virus, will be provided for informed decision making. The DHSS Director will evaluate the situation and make a determination whether activation of the ERC should occur, and if so, what level of activation is recommended. Additionally, if SEOC is activated, the ERC will serve as the support coordination point for the ESF #8 (Health and Medical) team assigned to the SEOC. The ERC will distribute Health Alerts, Advisories, and Updates to medical providers, LPHAs, health care entities, and other partners, and will establish and maintain communications with these entities to address the public health needs of Missourians.

The ERC ICS organization chart is shown on the next page.

The ERC maintains a toll-free emergency number which is answered 24/7/365 (800-392-0272).

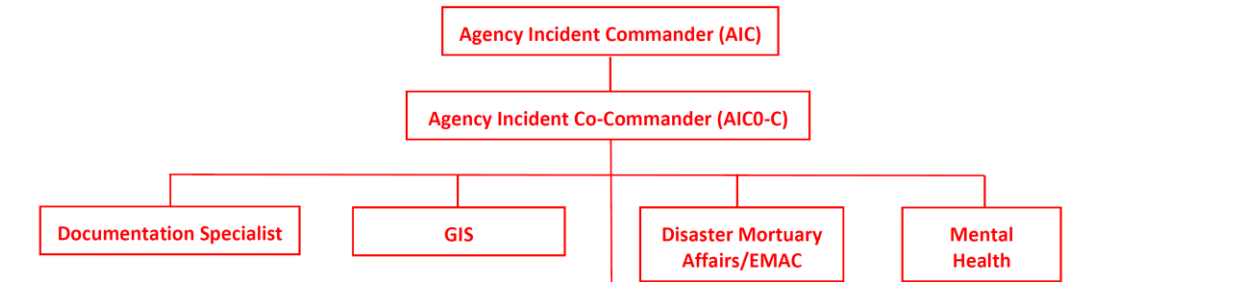
### **4. Joint Information Center (JIC)**

The purpose of a JIC is to coordinate the flow of information about the pandemic and related response issues among agencies, and to provide a single information source for the media, business community, and general public. The JIC is an element of the SEOC (where the emergency response is coordinated). The establishment of a JIC will be necessary under one or more of the following circumstances:

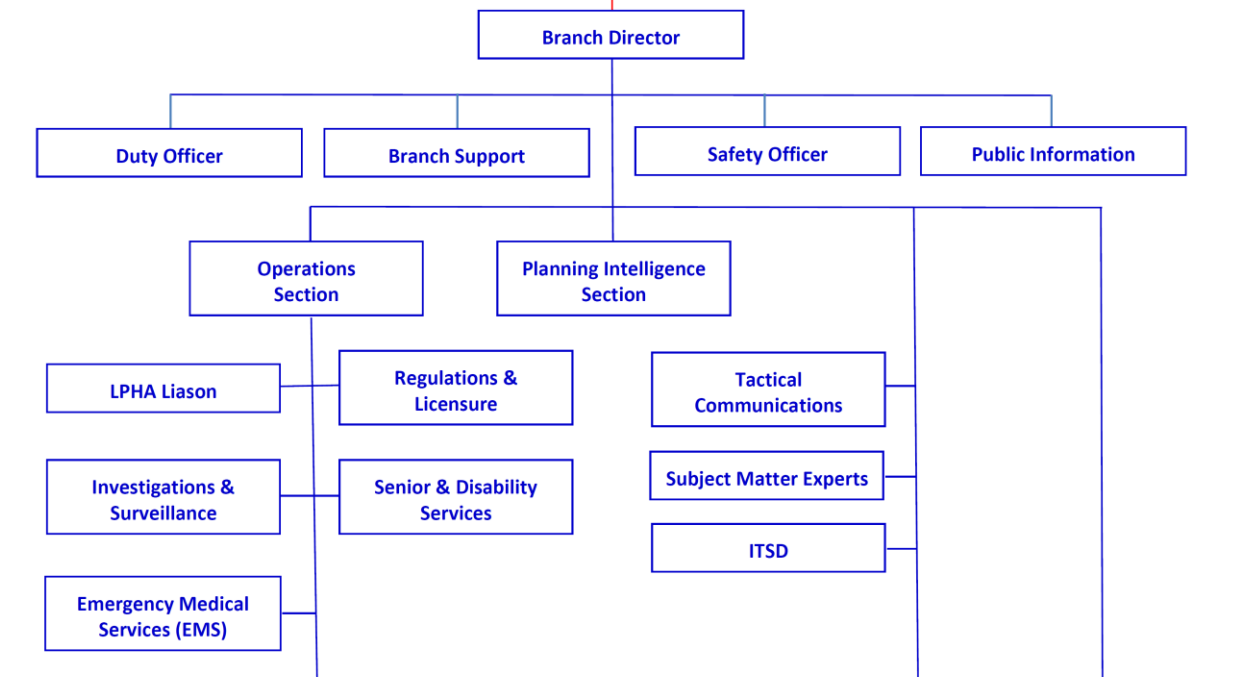
- a) The DHSS Director in consultation with the Missouri Department of Public Safety and the Governor's Office determines if the need exists for the activation of the SEOC and the JIC.
- b) Multiple local, state, and federal agencies are involved in information dissemination concerning the emergency situation (i.e., influenza pandemic) and the release and management of this information has become disjointed and fragmented, leading to public confusion and concern.
- c) The volume of media inquiries appears to overwhelm the capabilities of the public information officers within the ERC.

# ERC ICS Organization Chart

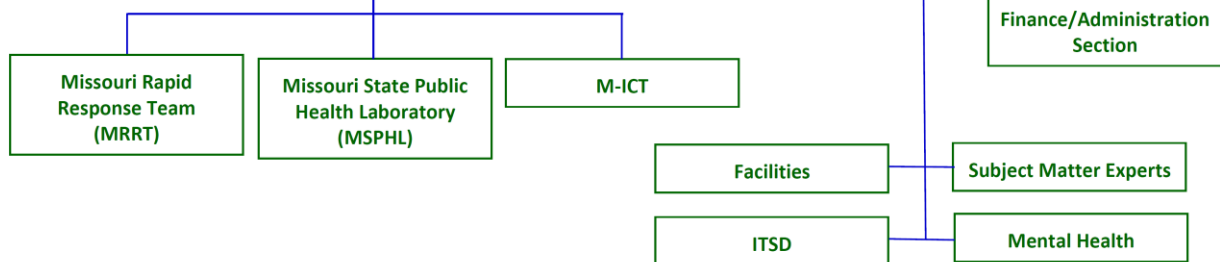
## State Emergency Operations Center (SEOC)



## DHSS Emergency Response Center (ERC)



## Off Site



## **B. Agencies and Responsibilities**

### **1. Primary Agency**

DHSS:

- Serves as the lead agency for pandemic influenza preparedness and response. Once the Governor declares a public health emergency, DHSS oversees the uniform exercise of the Emergency Health Powers Act (EHPA). Local boards of health are subject to the department's exercise of this authority.
- Provides subject matter expertise (e.g., surveillance, laboratory diagnostics, infection control, clinical guidelines).
- Provides accurate and timely medical and health information to stakeholders and the public.
- Provides epidemiological guidance for response activities. Plans for statewide prophylaxis and vaccination.
- Works with LPHAs to guide coordinated planning and response.
- Provides planning guidance to healthcare entities (e.g., hospitals, long-term care facilities [LTCFs], home health agencies, hospice agencies, EMS, primary care centers, private health professionals, alternate care sites).

### **2. Support Agencies**

LPHAs:

- Develop and implement plans in coordination with DHSS and acute care hospitals, LTCFs, and other health care entities in their jurisdictions.

Missouri Hospital Association (MHA)

- Works with its members, develops pandemic influenza response plans that include appropriate infection control, surge capacity, and cross-training of staff
- Complies with DHSS-issued guidance

Acute Care Hospitals

- Develop and implement pandemic influenza plans that include appropriate infection control and surge capacity.
- Train staff and exercise pandemic response plans.
- Comply with DHSS-issued guidance.

Long Term Care Facilities (LTCFs)

- Collaborate with their area hospitals' requests regarding surge capacity plans.
- Train staff and exercise pandemic response plans.
- Comply with DHSS guidance.

Rehabilitation hospitals, long-term acute care hospitals, and other specialty hospitals

- Collaborate with their area hospitals' requests regarding surge capacity plans.
- Train staff and exercise pandemic response plans.
- Comply with DHSS guidance.

Home Care Associations

- Provide pandemic influenza-related guidance (infection control, voluntary isolation and quarantine) to agency members.

Home Health Agencies and Hospice Agencies

- Provide information and education to staff.
- Provide pandemic influenza-related guidance (infection control, voluntary isolation and quarantine) to patients in the home.

Federally Qualified Health Centers (FQHCs)

- Plan to serve as screening, triage, and treatment centers.
- Train staff.
- Exercise pandemic response plans.

Professional Medical Associations in Missouri

- Provide pandemic influenza-related guidance to members.

## **C. Activities by Pandemic Interval**

### **1. Pre-pandemic Intervals**

DHSS activates Department's Pandemic Influenza Preparedness Committee.

DHSS and LPHAs

- Identify and establish relationships with partner organizations including regional healthcare coalitions and maintain lists of partners, resources, and facilities.
- Identify and resolve gaps in infrastructure and resources, and in laws and/or statutes, which may interfere with an effective pandemic response.
- Coordinate planning activities with bordering jurisdictions.
- Ensure that unique population and special care needs are addressed. Discuss plans with partner agencies.
- Review, exercise, and modify pandemic response plan on a periodic basis. Ensure that pandemic plans are developed, either as a supplement to the All Hazard Emergency Operations Plans, or as stand-alone plans.

### **2. Pandemic Intervals**

DHSS

- Activate enhanced surveillance and communications plans. Review and modify pandemic plan as necessary.
- Fully activate pandemic influenza preparedness plan. Coordinate plan activation with

- partners and stakeholders.
- Communicate with appropriate counterparts at the national level (CDC, Council of State and Territorial Epidemiologists [CSTE], etc.). Participate in HHS/CDC public information briefings.
- Interface with the JIC.

#### DHSS and LPHAs

- Meet with partners and stakeholders including regional healthcare coalitions and review pandemic response plan. Make response plan modifications as needed.
- Coordinate with other counties, states, federal agencies, and bordering jurisdictions as appropriate.
- Confirm availability of facilities for mass vaccination, mass casualty, etc.
- Track and document expenses of pandemic response, and notify appropriate agencies and officials of need for additional resources, if necessary.
- Increase public awareness of pandemic influenza and educate about appropriate behaviors for infection risk reduction.
- Hold internal, partner, and media briefings as necessary to update information and discuss response activities.
- Activate call centers and implement targeted strategies to reach different audiences.
- Monitor staffing needs.

## D. Legal Authorities

The Missouri Revised Statutes and the Code of State Regulations provides DHSS with the authority to safeguard the health of the people of the state and all its subdivisions. DHSS and local public health authorities are authorized to investigate the causes of dangerously contagious or infectious diseases, especially when existing in epidemic form, and to take measures to restrict and suppress the same. Whenever such disease becomes or threatens to become epidemic and the local public health authority neglects or refuses to perform these duties, DHSS is responsible to provide measures to control the outbreak. Moreover, DHSS is able to issue orders for the administration of vaccines, medications, or other treatments to persons as necessary to prevent the probable spread of a dangerously contagious or infectious disease. DHSS and local public health authorities also have the authority to order quarantine and isolation, and to close private or public schools and places of public or private assembly, to contain disease spread.

Under Section 192.020, RSMo, DHSS may make and enforce adequate orders, findings, rules, and regulations to prevent the entrance and spread of infectious, contagious, and communicable diseases and to determine the prevalence of such diseases within the state.

The local health authority, the director of DHSS, or the director's designated representative may establish and maintain quarantine, isolation or other measures as required, which may include isolation, quarantine, disinfection, immunization, closure of establishments, and other measures considered appropriate by medical experts for the protection of public health. Control measures implemented by the local health authority must be at least as stringent as those established by the director of DHSS and are subject to review and alteration by the director. If the local health authority fails to carry out appropriate control measures, the

director or his/her designated representative shall take steps necessary to protect the public health (19 CSR 20-20.040).

Under 19 CSR 20-20.050, a local health authority, the director of DHSS or the director's designated representative may close any public or private school when necessary to protect the public health. During a statewide pandemic, only the director of DHSS or the director's designated representative may close any public or private school when necessary to protect the public health.



# Definitions

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**Antigenic drift** - The gradual alteration by point mutations of the haemagglutinin (HA) and neuraminidase (NA) proteins within a type or subtype which results in the inability of antibodies to previous strains to neutralize the mutant virus. Antigenic drift occurs in both influenza A and B viruses and causes periodic epidemics.

**Antigenic shift** - The appearance in the human population of an influenza A virus containing a novel HA protein with or without a novel NA protein that are immunologically different from those of isolates circulating previously. Antigenic shift is responsible for worldwide pandemics.

**Antivirals** - Drugs used for the treatment, and in some instances, prevention of viral infections including those caused by influenza viruses. Two classes of antiviral drugs have been used for treatment and prevention of influenza: the neuraminidase inhibitors (Tamiflu<sup>®</sup> and Relenza<sup>®</sup>) and the adamantanes (amantadine and rimantadine).

**Avian Influenza** - All known avian flu viruses belong to the species of virus called influenza A virus. All subtypes of influenza A virus are adapted to birds, which is why for many purposes avian flu virus *is* the influenza A virus.

**Disease surveillance** - The systematic, continuing assessment of the health of a community, based on the collection, interpretation and use of health data. Surveillance provides information necessary for public health decision-making.

**Epidemiology** - The study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.

**Influenza epidemic** - An outbreak of influenza caused by influenza A or B viruses that have undergone antigenic drift. The terms “influenza epidemic” and “influenza outbreak” have the same meaning, and may occur locally or in many parts of the world during the same season.

**Influenza pandemic** - By convention, worldwide outbreaks of influenza caused by influenza A viruses that have undergone antigenic shift. However, as recently demonstrated, an antigenically novel virus of an existing subtype is capable of pandemic spread.

**Health Alert** - Notices provided by government and/or health-related organizations concerning **relevant** information related to the health and safety of the public. These may include notices of travel restrictions, information concerning sites of novel outbreaks around the world, notification of WHO phase shifts etc.

**Influenza Like Illness (ILI)** - ILI is defined as documented fever >100.4°F (38.0°C) **and** cough, sore throat or shortness of breath.

**Isolation** - The separation for the period of communicability of infected individuals from other individuals, in places and under conditions as will prevent the direct or indirect transmission of the infectious agent from infected individuals to other individuals who are susceptible or who may spread the agent to others. Isolation may be voluntary or enforced.

**Novel Influenza Virus** - Virus that has never been reported in the past to cause human illness or a virus that has not circulated in many years and therefore is novel to the human population and has inherent immune resistance.

**Points of Dispensing** - Sites used for dispensing prophylactic medications (e.g., antibiotics or antivirals) and/or vaccine to asymptomatic persons who potentially have been or will be exposed to an infectious agent.

**Priority Groups** - Those groups identified to be in the greatest need of a service, such as vaccination or antiviral treatment or scarce medical resources or care, in the event of a pandemic influenza outbreak.

**Providers** - Those individuals providing services directly to the community. Examples include physicians, nurses, hospitals, etc.

**Public Health Emergency** - Emergency health threats, including pandemic influenza, that require exercise of essential government functions to ensure the safety of their residents. By declaring an emergency, officials are enabled to enact plans that have been designed to best serve their people while acknowledging the threat of this event requires the attention of various state organizations.

**Quarantine** - A period of detention for persons who may have been exposed to a reportable disease. The period of time will not be longer than the longest period of communicability of the disease. The purpose of quarantine is to prevent effective contact with the general population. Quarantine may be voluntary or enforced.

**Sentinel Providers** - Missouri physicians of any specialty who, in agreement with DHSS, report the total number of patient ambulatory visits each week, as well as the number of patient visits for ILI.

**Situational Awareness** - The ability to generate actionable knowledge through the use of timely and accurate information. This ability is critical, to have and maintain, during a pandemic to create a “common operating picture” so important decisions on response actions and resource allocations can be quickly and correctly made.

**Strain Typing** - Laboratory analysis of isolates collected from infected individuals to determine the subtype of influenza virus responsible for the infection and resulting illness.

**Strategic National Stockpile** - CDC's SNS has large quantities of medicine and medical supplies to protect the American public if there is a public health emergency severe enough to cause local supplies to run out. Once federal and local authorities agree that the SNS is needed, medicines will be delivered to any state in the United States within 12 hours

**Virological surveillance** - The ongoing and systematic collection and analysis of viruses in order to monitor their characteristics.

## Selected Acronyms

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AAAs.....	Area Agencies on Aging
AIC.....	Agency Incident Commander
AICO-C.....	Agency Incident Co-Commander
ACIP.....	Advisory Committee on Immunization Practices
APHIS.....	Animal and Plant Health Inspection Service
APHL.....	Association of Public Health Laboratories
ARC.....	American Red Cross
ASPR.....	Office of the Assistant Secretary for Preparedness and Response
BAC.....	Bureau of Ambulatory Care
BCDCP.....	Bureau of Communicable Disease Control and Prevention
BDS.....	Bureau of Diagnostic Services
BEMS.....	Bureau of Emergency Medical Services
BHCRS.....	Bureau of Home Care and Rehabilitative Standards
BHPP.....	Bioterrorism Hospital Preparedness Program
BHS.....	Bureau of Hospital Standards
BI.....	Bureau of Immunizations
BNDD.....	Bureau of Narcotics and Dangerous Drugs
BNHA.....	Board of Nursing Home Administrators
BRDI.....	Bureau of Reportable Disease Informatics
BSL-3.....	Biosafety Level 3
CAP.....	College of American Pathologists
CBRN.....	Chemical, biological, radiological, and nuclear
CCP.....	Crisis Counseling Program
CDC.....	Centers of Disease Control and Prevention
CFR.....	Case-fatality rate
CFRP.....	Child Fatality Review Panel
CICP.....	Countermeasures Injury Compensation Program
CIDRAP.....	Center for Infectious Disease Research and Policy
CLIA.....	Clinical Laboratory Improvement Amendments
CLPHS.....	Center for Local Public Health Services
CMHC.....	Community Mental Health Centers
CMHS.....	Center for Mental Health Services
COG.....	Continuity of Government
CON.....	Certificate of Need
COOP.....	Continuity of Operations
CRA.....	Countermeasures Response Administration
CRU.....	Central Registry Unit Hotline
CSTE.....	Council of State and Territorial Epidemiologists
DCPH.....	Division of Community and Public Health
DESE.....	Missouri Department of Secondary and Elementary Education
DHSS.....	Missouri Department of Health and Senior Services
DMH.....	Missouri Department of Mental Health
DNHPP.....	Division of National Healthcare Preparedness Programs
DPS.....	Missouri Department of Public Safety
DRL.....	Division of Regulation and Licensure
DSDS.....	Division of Senior and Disability Services
EAP.....	Employee Assistance Plan

EAS	Emergency Alert System
ED	Emergency Department
EDOCS	Expeditional Deployable Oxygen Concentration System
EHPA	Emergency Health Powers Act
EMAC	Emergency Management Assistance Compact
EMD	Emergency Medical Departments
EMS	Emergency Medical Services
EOC	Emergency Operation Centers
EPA	U. S. Environmental Protection Agency
ERC	Missouri Department of Health and Senior Services' Emergency Response Center
ERIP	Emergency Response and Information Plan
ESAR-VHP	Missouri's Emergency System for Advance Registration of Volunteer Health Professionals (Show-Me Response)
ESF	Emergency Support Function
ESSENCE	Biosense and Electronic Surveillance System for the Early Notification of Community-Based Epidemics
EUA	Emergency Use Authorization
EUI	Emergency Use Instructions
FCSR	Family Care Safety Registry
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FERPA	Family Educational Rights and Privacy Act
FMLA	Family Medical Leave Act
FQHCs	Federally Qualified Health Centers
FSSU	Financial Support Staff Unit
GIS	Geographic Information System
HA	Haemagglutinin
HAN	Health Alert Network
HBV	Hepatitis B Virus
HCBS	Home and Community Based Services
HCF	Health Care Facility
HCV	Hepatitis C Virus
HEES	Hospital Electronic Syndromic Surveillance
HEOC	Health Emergency Operations Centers
HHS	U.S. Department of Health and Human Services
HIV	Human Immunodeficiency Virus
HPP	Hospital Preparedness Program
HRSA	Health Resource Services Administration
HSL	Section for Health Standards and Licensure
IBA	Immediate Bed Availability
ICS	Incident Command System
ICU	Intensive Care Unit
IF	Immuno-fluorescence
ILI	Influenza-like illness
ILINET	Influenza-like illness Surveillance Network
IMS	Incident management system
IRAT	Influenza Risk Assessment Tool
IRR	International Reagent Resource
ITSD	Information Technology Services Division
JIC	Joint Information Center
LASS	Local Active Surveillance System

LEOC .....Local Emergency Operations Center  
 LIMS .....Laboratory Information Management System  
 LPHA .....Local Public Health Agency  
 LRN.....Laboratory Response Network  
 LTCF.....Long-term care facility  
 M-ICT .....Medical Incident Coordination Team  
 MAA .....Mutual AID Agreement  
 MARC.....Mid-America Regional Council  
 MASN .....Missouri Association of School Nurses  
 ME .....Medical examiner  
 MERC .....Mortuary Enhanced Remains Cooling  
 MERS-CoV .....Middle Eastern Syndrome Coronavirus  
 MFDEA-DRT.....Missouri Funeral Directors and Embalmers Association Disaster Response Team  
 MHA .....Missouri Hospital Association  
 MICA .....Missouri Information for Community Assessment  
 MMH.....Mobile Medical Hospital  
 MO DMAT-1 .....Missouri-1 Disaster Medical Assistance Team  
 MO MORT 1.....Missouri Mortuary Operations Response Team  
 MOA .....Memorandum of Agreement  
 MoEVR .....Missouri Electronic Vital Records  
 MOLRN .....Missouri Laboratory Response Network  
 MOSCOPE.....Missouri System Concept of Operational Planning for Emergencies  
 MOSWIN .....Missouri Statewide Wireless Interoperable Network  
 MOU/A .....Memoranda of Understanding/Agreement  
 MRC.....Medical Reserve Corps  
 MRRT .....Missouri Rapid Response Team  
 MSBA .....Missouri School Board Association  
 MSCC.....Medical surge capacity and capability model  
 MSHP.....Missouri State Highway Patrol  
 MSPHL .....Missouri State Public Health Laboratory  
 NA .....Neuraminidase  
 NEDSS .....National Electronic Disease Surveillance System  
 NIH.....National Institute of Health  
 NIMS.....National Incident Management System  
 NNDSS.....National Notifiable Disease Surveillance System  
 NOVA .....National Organization of Victim Assistance  
 NPI .....Non-pharmaceutical intervention  
 NREVSS .....National Respiratory and Enteric Virus Surveillance System  
 ODS.....Office of Disaster Services  
 OEC.....Office of Emergency Coordination  
 OPEO .....Office of Preparedness and Emergency Operations  
 OPI .....Office of Public Information  
 OSHA.....Occupational Safety and Health Administration  
 P&L .....Pneumonia and influenza  
 PCR .....Polymerase chain reaction  
 PFA .....Psychological first aid  
 PHLIP.....Public Health Laboratory Interoperability Project  
 PIO .....Public Information Officer  
 POD.....Points of dispensing  
 PPE.....Personal Protective Equipment  
 PREP .....Public Readiness and Emergency Preparedness

PSAF .....Pandemic Severity Assessment Framework  
 PSS .....Post-Secondary Schools  
 PTSD .....Post Traumatic Stress Disorder  
 rRT-PCR.....Real-time reverse transcriptase polymerase chain reaction  
 RSS.....Receiving, staging and storage  
 RT-PCR.....Real-time polymerase chain reaction  
 SAMHSA .....Substance Abuse and Mental Health Services Administration  
 SARS-CoV-2.....Severe Acute Respiratory Syndrome Coronavirus  
 SCCR.....Section for Child Care Regulation  
 SDP .....Section for Disease Prevention  
 SEMA.....Missouri State Emergency Management Agency  
 SEOC.....State Emergency Operations Center  
 SEOP .....Missouri State Emergency Operations Plan  
 SEPH .....Section for Environmental Public Health  
 SLCR.....Section for Long Term Care Regulation  
 SMMR.....Section for Medical Marijuana Regulation  
 SNS .....Strategic National Stockpile  
 SOG.....Standard Operating Guideline  
 SPN .....Sentinel Provider Network  
 STARRS.....St. Louis Area Regional Response System  
 TCAD.....Taney County Ambulance District  
 UAC .....Unified Area Command  
 UC .....Unified Command  
 USDA.....U.S. Department of Agriculture  
 USDI .....U.S. Department of Interior  
 VAERS.....Vaccine Adverse Event Reporting System  
 VFC .....Vaccines for Children  
 VIC.....Victim Information Center  
 VIS .....Vaccine Information Statement  
 VOAD .....Volunteer Organizations Active in Disaster  
 WHO .....World Health Organization

# Pandemic Influenza Plan - Pandemic Influenza Surveillance

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## INTRODUCTION

The rapidity with which the pandemic (H1N1) 2009 virus spread highlighted the need for timely and effective surveillance systems to detect emerging viruses with pandemic potential, and the need for data sharing and dissemination.

## OBJECTIVES

- Early detection of cases of respiratory infections due to novel influenza virus or an avian influenza virus.
- Timely, complete and consistent reporting of influenza cases.
- Monitor changes in the circulating pandemic virus and other co-circulating respiratory viruses.
- Ongoing assessment of the morbidity and mortality in the affected communities.

## PLANNING ASSUMPTIONS

- It is unlikely, but not impossible, that the first cases will arise in the United States or even in Missouri.
- The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) will coordinate surveillance at the international and national level.
- The types and level of surveillance will depend on the global, regional, and local epidemiology of an influenza pandemic.
- Surveillance actions will differ if infections due to a novel influenza virus occur in the United States or in another country or if person-to person spread is slow, limited or widespread.
- The Missouri Department of Health and Senior Services (DHSS) will provide updated surveillance guidance to medical providers and local health departments on an ongoing basis and will ensure consistency with recommendations from the CDC and WHO.
- Influenza surveillance will need to be conducted throughout the year.
- As the pandemic progresses in Missouri, disease surveillance systems may be overwhelmed.
- Illness, disruption and death could result in significant reductions in the personnel available to perform these tasks at the very time the workload is greatest.
- Despite the potential barriers to the efficient operation of our surveillance systems, the information gathered by those systems will be of vital importance for informing the public about the progress of the pandemic and its health impact.
- As the pandemic progresses further in Missouri, surveillance activities will shift away from individual case identification and toward identifying impact on communities and defining overall pandemic trend in the state.
- Influenza surveillance needs to be a flexible system, so that it can adapt to the pertinent epidemiology of the novel viruses.
- Activities outlined below will be contingent on local, national and international pandemic influenza activity at the time and may change as a pandemic evolves.

## Reporting rules for influenza in Missouri

The rules regarding the reporting of communicable diseases are set out in Title 19, Chapter 20 of the Missouri Code of State Regulations (19 CSR 20).

**19 CSR 20-20.010** (29) defines an outbreak as “the occurrence in a community or region of an illness(es) similar in nature, clearly in excess of normal expectancy....”,

**19 CSR 20-20.020** sets out the details of what shall be reported, by whom and under what circumstances.

- **Section 6** sets out those who are required to report by stating, “A physician, physician’s assistant, nurse, hospital, clinic, or other private or public institution providing diagnostic testing, screening or care to any person with any disease... shall make a case report to the local health authority or the Missouri Department of Health and Senior Services.”
- **Section 1, C** states that “Instances, clusters, or outbreaks of unusual, novel, and/or emerging diseases or findings not otherwise named in this rule, appearing to be naturally occurring, but posing a substantial risk to public health and/or social and economic stability due to their ease of dissemination or transmittal, associated mortality rates, or the need for special public health actions to control.” and shall be reported to the local health authority or to the Missouri Department of Health and Senior Services immediately upon knowledge or suspicion by telephone, facsimile or other rapid communication.
- **Section 2, A** states that “Influenza-associated mortality, influenza-associated public and/or private school closures, Novel Influenza A virus infections, human and outbreaks (including nosocomial) or epidemics of any illness, disease or condition that may be of public health concern shall be reported to the local health authority or to the Missouri Department of Health and Senior Services within 1 day of knowledge or suspicion by telephone, facsimile or other rapid communication.”
- **Section 4** states that laboratory confirmed influenza shall be reported on a weekly basis.
- **Section 7, C** states “Influenza, laboratory-confirmed reporting as required in section (4) of this rule shall include the patient’s age group (i.e., 0–4, 5–24, 25–64, and 65+ years) and serology/serotype (i.e., A, B, and unknown), the local health authority jurisdiction within which the cases occurred, and the date of report. Aggregate patient data shall be reported weekly.”

## INFLUENZA SURVEILLANCE DURING THE PRE-PANDEMIC PERIOD

The public health goals of influenza disease surveillance are to serve as an early warning system and to detect increases in influenza-like illness (ILI) at the local level, to monitor the impact of influenza on health (e.g., by tracking outpatient visits, hospitalizations, and deaths), and to track trends in influenza disease activity and identify populations that are severely affected. During the **pre-pandemic period**, these goals are accomplished through the components of the national influenza surveillance system. The following components of influenza surveillance are functioning in Missouri.

### Outpatient surveillance

#### ILI surveillance

The Sentinel Provider Network (SPN), with approximately 22 healthcare providers statewide, reports the number of weekly outpatient visits for ILI and submits specimens from a small subset of patients to the Missouri State Public Health Laboratory (MSPHL) for influenza virus testing. Routine frequency involves submission of 3 specimens during the start (October through



December), middle (January through March) and toward the end (April through May) of the standard influenza season, plus 3 specimens during the June through September “off season.”

### Syndromic surveillance

Hospital Electronic Syndromic Surveillance (HESS) Reporting Rule (19 CSR 10-33.040) requires that 84 out of 120 hospitals with emergency departments report electronic data to DHSS specifically for syndromic surveillance. HESS is an automated system that captures about 90% of all emergency department visits in Missouri. These data are processed, analyzed, and viewable through the Missouri Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) system. ESSENCE is a web-based automated surveillance tool developed by the Johns Hopkins University Applied Physics Lab. Software is maintained by Johns Hopkins University designed to analyze electronically submitted emergency department data for significant changes in the number of individuals presenting in identified syndrome groups. These aberrations are identified as “alerts” and are investigated as needed by state and local staff. Missouri ESSENCE is maintained on DHSS servers and is accessible to over 300 state and local public health authorities and hospital staff. ESSENCE is maintained and monitored daily by DHSS Bureau of Reportable Disease Informatics staff.

The same Emergency Department (ED) data are stripped of identifiers and transmitted via Rhapsody to the CDC for the National Syndromic Surveillance Program’s BioSense Platform. The BioSense Platform uses its own installation of ESSENCE to analyze the data from Missouri and many other State, Local and Federal jurisdictions. Unlike Missouri’s syndromic surveillance data, BioSense also includes data from Veterans Administration hospitals. ESSENCE and BioSense each have the ability to track influenza-like illness chief complaints in real time for ongoing surveillance any time of the year. Missouri ESSENCE ILI data are included in the weekly influenza surveillance reports produced by the influenza program at the DHSS Bureau of Communicable Disease Control and Prevention. ILI surveillance reports can also be customized for specific areas, age groups, and situations using ESSENCE. For example, the St. Louis County Department of Public Health produces its own weekly ILI report and includes ESSENCE findings for just St. Louis area patients along with other data unique to that area. Similar tracking is possible at the national level using data from Missouri and other jurisdictions that participate in BioSense.

### **Virologic surveillance**

The MSPHL reports to CDC weekly throughout the year. Data reported are the number of respiratory specimens tested and the number positive for influenza by type, and also subtype. The percentage of specimens that are positive is also calculated. The MSPHL sends a subset of virus isolates to CDC each season for further analysis and characterization. In addition to providing information on when and where influenza activity is occurring, the data also identify which viruses are circulating.

### **Mortality surveillance**

- Missouri participates in 122 Cities Mortality Reporting System. Vital statistics offices in 122 United States cities report pneumonia and influenza (P&I)-related deaths on a weekly basis. Kansas City, MO and St. Louis, MO are part of this system.
- DHSS participates in National Notifiable Disease Surveillance System (NNDSS). State health departments report influenza-associated pediatric mortality (18 years of age or younger), to CDC on a weekly basis.

### Local Active Surveillance System (LASS)

- Participating local public health agencies (LPHAs) recruit a number of surveillance sites within their jurisdiction and then contact them each week to receive surveillance information.
- Number and type of sites is chosen by the LPHA to reflect the general population of their jurisdiction.
- Data is kept at the local level and analysis is done there. It is not routinely shared across jurisdictions, except in instances where regional (contract) epidemiologists collect it from all of the LPHAs in their area.
- The format and type of data collected is determined by each individual LPHA.

### State-Level Assessments

State Epidemiologist provides weekly reports to the CDC on the overall influenza activity according to following levels:

Activity Level	Influenza-Like Illness (ILI) Activity/Outbreaks		Laboratory Data
No activity	Low	And	No lab-confirmed cases
Sporadic	Not increased	And	Isolated lab-confirmed cases
	<b>OR</b>		
Local	Not increased	And	Lab-confirmed outbreak in 1 institution
	<b>OR</b>		
Local	Increased ILI in one region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	<b>OR</b>		
Local	2 or more institutional outbreaks (ILI or lab-confirmed) in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
	<b>OR</b>		
Regional	Increased ILI in $\geq 2$ but less than half of the regions	And	Recent (within the past 3 weeks) lab-confirmed influenza in the affected regions
	<b>OR</b>		
Regional	Institutional outbreaks (ILI or lab confirmed) in $\geq 2$ and less than half of the regions	And	Recent (within the past 3 weeks) lab-confirmed influenza in the affected regions
	<b>OR</b>		
Widespread	Increased ILI and/or institutional outbreaks (ILI or lab-confirmed) in at least half of the regions	And	Recent (within the past 3 weeks) lab-confirmed influenza in the state

During influenza season, providing an exact case count or population-based rates of infection or illness are not feasible because many infected persons are asymptomatic or experience only mild illness and do not seek medical care. In those who present to the health care system, laboratory testing is rare if cases are less severe. Despite limitations, weekly data on outpatient visits for ILI, hospitalizations, and deaths allow DHSS to monitor regional disease trends and to compare the timing and intensity of the current season to that of previous seasons.

## **Cooperative Zoonotic Surveillance**

The Missouri Council on Captive Wild and Exotic Animals provides an integrated response to cases or outbreaks of highly pathogenic avian influenza (or low pathogenic avian influenza of zoonotic concern) in poultry and wild birds as well as cases/outbreaks from strains of variant influenza in other species such as swine. Council membership includes the Missouri Departments of Agriculture, Health and Senior Services, Conservation, and Natural Resources as well as federal partners, primarily the United States Department of Agriculture [USDA], Animal and Plant Health Inspection Service (APHIS)/Veterinary Services, Animal Care Services, and Wildlife Services. Activities conducted by the Council help protect human life and reduce adverse social, economic, and mental health impacts that would result from an influenza pandemic.

## Wild Bird Surveillance

The Missouri Departments of Conservation and Agriculture in collaboration with the USDA/APHIS/Wildlife Services conduct surveillance for avian influenza in wild birds in accordance with *Early Detection and Monitoring of Avian Influenzas of Significance in Wild Birds – A U.S. Interagency Strategic Plan*. See [https://www.aphis.usda.gov/animal\\_health/downloads/animal\\_diseases/ai/wild-bird-strategic-plan.pdf](https://www.aphis.usda.gov/animal_health/downloads/animal_diseases/ai/wild-bird-strategic-plan.pdf) and [https://www.usgs.gov/centers/nwhc/science/avian-influenza-surveillance?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/nwhc/science/avian-influenza-surveillance?qt-science_center_objects=0#qt-science_center_objects).

## Domestic Bird Surveillance

The Missouri Department of Agriculture and USDA/APHIS/Veterinary Services collaborate with the Missouri poultry industry to routinely test domestic poultry and to increase surveillance/testing during crises. Information pertaining to these programs is included in the Missouri Poultry Health and Improvement Plan at <http://mda.mo.gov/animals/health/disease/poultry.php>.

For more information regarding zoonotic influenza surveillance, prevention, and response, contact the Office of Veterinary Public Health, 573-751-6113 or email [dhss.ovph@health.mo.gov](mailto:dhss.ovph@health.mo.gov).

## **Influenza surveillance coordinator**

The DHSS has a full-time influenza surveillance coordinator. The roles of the influenza coordinator include:

- Oversee all state influenza surveillance activities.
- Maintain and expand influenza SPN.
- Analyze year-round influenza surveillance.
- Maintain working relationships with the state public health laboratory and the CDC Influenza Branch.

## **INFLUENZA SURVEILLANCE DURING THE PANDEMIC PERIOD**

Surveillance activities will be modified as pre-pandemic period transitions into the period of increased pandemic risk, and eventually to the pandemic period. Following is a list of enhanced influenza surveillance activities that could be initiated as needed throughout the evolving pandemic.

## **Enhanced Surveillance for Novel Influenza**

Once a novel influenza virus with documented human cases are detected anywhere in the world, enhanced surveillance to ensure rapid recognition of the first cases and their contacts will be implemented. Specific recommendations regarding identification, treatment and public health control measures will depend on the epidemiology of the virus, clinical characteristics and location of cases inside the United States, or outside the United States, or in Missouri.

## **Outpatient Surveillance**

- Implement provider novel influenza case reporting as necessary prior to the novel influenza strain being identified in Missouri.
- Cases and/or clusters to be investigated in order to determine attack rate and case fatality rate.
- Providers may be asked to report cases of pandemic influenza with an unusual clinical presentation and severity.
- Once in the pandemic period, it is not expected that provider individual case reporting will be a primary method for surveillance.
- Recruit additional sentinel surveillance providers, as either permanent participating providers or for short-term reporting on an as-needed basis.
- Expand ILI surveillance beyond typical seasonal influenza season.
- Analyze outpatient surveillance data daily.
- Increase the frequency of analysis of ESSENCE and other syndromic surveillance data.

## **Healthcare Facility Surveillance**

- State and/or local health department staff will participate in CDC hospitalization surveillance initiatives, which may include specimen collection, virologic testing from a subset of patients, or clinico-epidemiological study of pandemic influenza.
- Consider statewide influenza hospitalization data reporting to determine hospitalization rate, case fatality rate, and other aspects of novel and pandemic influenza illness. Alternatively, consider sentinel hospitalization data from selected health care facilities if statewide reporting isn't feasible. Data collected and frequency of reporting can be adjusted as indicated to monitor the pandemic and ensure recommended surveillance and control measures are appropriate. It is anticipated that during widespread pandemic influenza activity, hospitalization data will be the primary surveillance method used to assess severity of illness.
- Consider expanding laboratory-confirmed influenza reporting by requiring laboratory testing of certain groups, such as all hospitalized patients, or all patients admitted to intensive care units, etc.

## **State-Level Assessments**

- State Epidemiologists Report. Current influenza activity level throughout the state will continue to be assessed weekly but reported to the CDC year-round.
- Participate in national and international surveillance activities as indicated.

## **Mortality Surveillance**

- Implement a reporting system for hospitals and nursing homes to report daily aggregate data on the number of suspected and confirmed influenza associated deaths and total number of deaths. It is anticipated that this electronic reporting system will be the primary method to collect daily data necessary to monitor the mortality of the pandemic.

- DHSS has converted from a paper-based to an electronic death certificate reporting system. The new system will allow reporting of any death with influenza or pneumonia listed as the underlying or contributing cause of death within one to two days of date of death.
- Provide mortality and case fatality rate data to CDC as needed to help guide national response measures. Case definitions and reporting procedures will be coordinated with the CDC.

### **Virologic Surveillance**

- Increase number of specimens submitted for testing to the MSPHL.
- Provide testing beyond the influenza season, based on the actual or projected arrival of the pandemic virus in Missouri.

## **PANDEMIC RESPONSE LEVEL**

### **When pandemic influenza is identified in the World, but not yet in the United States**

- Using statewide and local Health Alert Networks (HANs) and the EMS system, mandated disease reporters (providers, laboratories and hospitals) will be notified of the current situation by a Health Alert. They will be reminded of the necessity for rapid testing and the need for accurate and rapid case reporting. Novel strains of influenza with pandemic potential should be reported immediately as defined by the reportable disease rule. Disease reporters will also be reminded of the limitations of rapid testing and that positives should be confirmed by advanced testing, such as polymerase chain reaction (PCR), whenever possible, especially as early cases in their geographical area are identified. Virus cultures should **not** be attempted from patients suspected of having pandemic influenza.
- Providers who are members of the sentinel surveillance system will be additionally asked to submit specimens on any cases that are of epidemiological interest, defined as those persons who recently traveled to regions where the pandemic strain of influenza is circulating or those with unusual and/or severe symptoms.
- Supplementary sentinel sites will be identified and readied for use when/if the pandemic reaches the Western Hemisphere.
- Guidelines for reporting detailed, supplementary information (above and beyond the information required by 19 CSR 20-20.020) will be distributed to all mandated disease reporters as part of the Health Alert. This change in reporting requirements can be made by the DHSS Director or their designee. A pandemic-specific Influenza Case Report form will be developed and included in the Health Alert, and downloadable copies will be posted on the DHSS website.
- Reporting requirements can be tailored to CDC requests for specific information and will be submitted daily via the National Electronic Disease Surveillance System (NEDSS), or as otherwise requested by CDC.

### **When pandemic influenza is identified in the United States (or anywhere in the Western Hemisphere)**

- LPHAs, hospitals, medical examiners and other vital stakeholders will be notified of the current situation via the HAN. The information will be duplicated on the DHSS website and linked with prominent links on the first page. Additionally, the internal list server will be used to rapidly communicate information that is targeted specifically to the disease investigation staff in DHSS and LPHAs across the state.
- Mandated disease reporters (providers, laboratories and hospitals) will be notified of the current situation using statewide and local HANs and duplicated on the DHSS website. They

will be advised of the change in the reporting status for all types of influenza from weekly, aggregate reporting to immediate, detailed reporting of all diagnosed or suspected cases. They will be reminded of the necessity for rapid testing, and the need for accurate and rapid case reporting of this immediately reportable condition. They will also be reminded of the limitations of rapid testing and that positives should be confirmed by PCR, especially as early cases in their geographical area are identified. The Laboratory Preparedness Annex contains specific information regarding the submission of laboratory specimens. Virus cultures should **not** be attempted from patients suspected of having pandemic influenza.

- Providers who are members of the sentinel surveillance system will be asked to submit specimens on any cases that are of epidemiological interest, defined as those persons who recently traveled to regions where the pandemic strain of influenza is known to be circulating or those with unusual and/or severe symptoms.
- Supplementary sentinel sites may be activated.
- Existing surveillance systems will be analyzed at increased frequency.
- Electronic vital records submissions will be analyzed for the number and location of P&I related deaths.
- Active systems will be supplemented, if needed, by adding additional sites. LASS information will be consolidated by regional epidemiologists and forwarded to DHSS Senior Epidemiology Specialists, or their designees. That data will be consolidated and forwarded, if the DHSS Emergency Response Center (ERC) is activated, to the Field Investigations/Surveillance lead in the ERC, otherwise, to the Chief, Bureau of Communicable Disease Control and Prevention.
  - LPHAs and their active surveillance sites will be reminded of the surveillance definition for ILI. For the purposes of enhanced surveillance for influenza infections in humans ILI is defined as documented fever  $>100.4^{\circ}\text{F}$  ( $38.0^{\circ}\text{C}$ ) **and** cough, sore throat or shortness of breath.
  - LASS information may also be expanded on an as needed basis, perhaps to sentinel hospitals, to include numbers of persons hospitalized with ILI or pandemic influenza, the number of hospitals with ILI/pandemic influenza patients, the number of those isolated or quarantined, and the number of deaths associated with ILI/pandemic influenza.
  - Statewide electronic death reporting system data will be evaluated on a regular basis for influenza deaths in the state.
- LPHAs will be provided with a standardized active surveillance spreadsheet upon which to aggregate their data for submission. This will facilitate aggregation of the data on a regional and statewide basis.
- If needed, a regional and local reporting system may be established to facilitate the flow of information to the ERC.

### **When pandemic influenza is identified in Missouri**

- The first reported case(s) will be investigated immediately by LPHA disease investigation staff to learn the details and extent of the case(s). DHSS disease control staff will be available to support LPHA disease investigation staff during those first investigations. If necessary an Incident Command System (ICS) structure will be established.
- Continue case-specific (passive) and active surveillance as above until the occurrence of pandemic influenza is quantified as regional, based on the adaptation of the CDC guidelines for influenza activity as above.
- The Bureau of Communicable Disease Control and Prevention and the Office of Epidemiology will use collected data to make an estimate of the progress of the disease, and

make recommendations based on that information. Those activities may include, but are not limited to:

- Making recommendations regarding local isolation, quarantine or other prevention/intervention activities.
- Monitoring for antiviral resistance.
- Monitoring for adverse vaccine reactions.
- Analyzing case fatality rates, age groups affected and novel means of transmission.
- Monitoring and instituting recommendations from CDC for any additional surveillance activities that should be undertaken given the specific circumstances.
- Preparing reports for the Incident Commander as needed.
- As the extent of pandemic influenza increases from local to regional, surveillance activities should include monitoring the health care system for ability to cope with increased patient loads.
- Monitor the EMS system for indications of shortages and diversions in particular facilities or regions.
- Work with Missouri Hospital Association and other entities to identify and quantify local or regional shortages.
- Use the collected information to recommend redeployment of available resources to areas of greatest need.

# Pandemic Influenza Plan – Laboratory Preparedness

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## INTRODUCTION

A well-organized network of laboratories, capable of rapidly and correctly identifying a novel disease of unknown etiology and subtyping influenza viruses is critical to recognizing and managing a pandemic. Recognition of novel strains of diseases will be dependent upon early detection and sampling of initial clinical cases associated with the pandemic. Since the symptoms of many illnesses are nonspecific and are similar to those caused by a number of respiratory pathogens, laboratory testing is crucial to identify the causative agent. It is essential that the Missouri Department of Health and Senior Services (DHSS), Missouri State Public Health Laboratory (MSPHL) be prepared for the emergence of novel pathogens and pandemic.

## OBJECTIVES

- Provide laboratory resources for rapid detection of novel human or animal diseases.
- Monitor changes in the circulating viruses during the pandemic.
- Monitor development of antiviral resistance in novel virus strains.

## BACKGROUND

MSPHL is a collaborating laboratory in the World Health Organization's (WHO) Global Influenza Surveillance Network. Year-round respiratory specimens from designated sentinel laboratories are sent to MSPHL where they are first tested by polymerase chain reaction (PCR) and subsequently by virus isolation. The PCR-positive influenza specimens are then sub-typed and a representative number of influenza A and B positives are then forwarded to the Centers for Disease Control and Prevention (CDC) for further antigenic characterization. In addition, a representative number of samples sub-typed are sent to CDC for antiviral resistance testing. All specimens that cannot be sub-typed are forwarded to CDC for further testing. Daily reports of laboratory-confirmed cases of Influenza A and B viruses are sent by HL7 messaging to CDC via the Public Health Laboratory Interoperability Project (PHLIP).

MSPHL maintains a fully trained technical virology and molecular staff. In the summer of 2007, MSPHL moved into a new state-of-the-art facility that contains an extensive biosafety level 3 (BSL-3) laboratory. Additional scientists have been trained in the CDC PCR testing methods to provide back-up and support during a pandemic or public health emergency. MSPHL participates in year-round laboratory-based surveillance via the National Respiratory and Enteric Virus Surveillance System (NREVSS). MSPHL continues the Sentinel Surveillance Program with providers participating in the CDC Influenza Sentinel Provider Network. Providers are expected to send up to nine specimens per season October through May and/or if the providers see any unusual influenza activity.

Trainings and exercises are part of the preparedness activities that MSPHL participates in throughout the year. MSPHL exercises the laboratory pandemic plan by maintaining scientist's competencies in polymerase chain reaction (PCR) testing and maintains Clinical Laboratory Improvement Amendments (CLIA) certification.

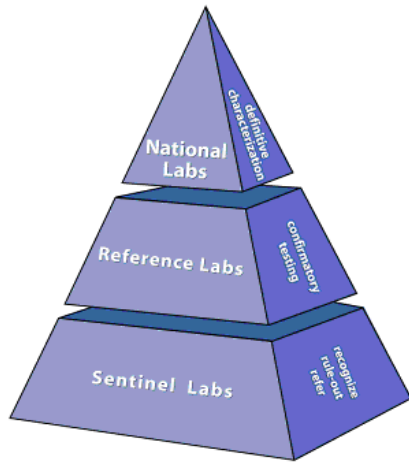


The MSPHL, Bureau of Communicable Disease Control and Prevention, and Bureau of Immunizations, in cooperation with local public health agencies (LPHAs), perform year-round outbreak and seasonal influenza surveillance. In support of this influenza surveillance, MSPHL and program staff conduct training sessions at DHSS area or district health offices. Such training provides hands on opportunities for LPHA staff to ask questions and gain knowledge on issues related to diseases of unknown etiology; seasonal, avian and pandemic influenza; data collection and interpretation; laboratory testing issues; and vaccinations. These trainings serve as an opportunity to review packaging and shipping protocols, safe specimen collection protocols, and testing procedures, as well as MSPHL reporting mechanisms and responsibilities.

## **PLANNING ASSUMPTIONS**

- As a member of the Association of Public Health Laboratories (APHL), MSPHL will utilize laboratory tests and methods recommended by CDC in cooperation with APHL. MSPHL will utilize all testing algorithms as disseminated by APHL and CDC.
- MSPHL will continue to conduct year-round testing for influenza viruses in order to characterize circulating influenza strains and to monitor for novel influenza subtypes.
- MSPHL will provide advanced testing, utilizing laboratory tests and reagents supplied by CDC and WHO. These testing procedures are not available to most clinical laboratories.
- During a pandemic, MSPHL will work with CDC to provide guidelines for specimen management and diagnostic testing as the pandemic evolves.
- MSPHL will maintain testing supplies and the capacity to meet the public health surveillance needs of the state. MSPHL will not accept specimens solely for diagnostic purposes. MSPHL will process only specimens of public health significance.
- MSPHL scientists are cross-trained in an effort to assist with testing of greatest need. There is an acknowledgement that certain testing may be delayed or redistributed to other laboratories in order to meet more pressing or other critical testing demands. The laboratory has worked with program staff to develop plans for specimen referral and triage.
- MSPHL will utilize the Missouri Laboratory Response Network (MOLRN) to contact member laboratories throughout the state with up-to-date testing recommendations and information.
- The pandemic intervals will determine testing strategies and testing algorithms. Highest test load is expected to occur during the early stages when the novel virus demonstrates efficient human-to-human transmission. During the peak of the pandemic, laboratory testing is expected to decrease as more patients will be treated without laboratory confirmation. During the pandemic peak, testing will be provided for the purpose of surveillance of the pandemic strain and for antiviral resistance. Once the cases begin to decline, MSPHL will continue testing for surveillance of the pandemic pathogen as well as other circulating viruses.

## LABORATORY RESPONSE NETWORK (LRN)



The LRN became operational in August 1999 with the objective to ensure an effective laboratory response to bioterrorism. The LRN is an integrated network of local clinical laboratories (sentinel labs), state and local public health laboratories (reference labs) and federal laboratories (CDC, The United States Army Medical Research Institute for Infectious Diseases, U.S. Food and Drug Administration). MOLRN is a network of Missouri laboratories that are fully equipped and trained to respond quickly to acts of chemical or biological terrorism, emerging infectious diseases and other public health threats and emergencies. MOLRN includes MSPHL, which serves as Missouri's LRN reference laboratory, plus sentinel laboratories within the state. See <https://emergency.cdc.gov/lrn/biological.asp>.

### SENTINEL LABORATORIES

According to the 2019 MOLRN survey of sentinel laboratories within Missouri, 56% perform rapid diagnostic testing for influenza viruses on respiratory specimens. Of these, 30% have the capability to perform high-complexity viral testing, including the use of viral isolation techniques. In addition, 22% of Missouri's sentinel laboratories are capable of performing PCR or immuno-fluorescence (IF) testing for rapid detection and sub-typing. These laboratories could be utilized for surge capacity should the situation warrant the need. *Hospital laboratories should not attempt to isolate influenza viruses from patients with suspected novel influenza virus infections.*

### MISSOURI STATE PUBLIC HEALTH LABORATORY TESTING CAPABILITIES

MSPHL receives samples for testing for respiratory viruses from multiple sources:

- Sentinel influenza surveillance sites.
- Respiratory outbreak investigations, including COVID-19.
- Suspected cases of novel influenza virus, including avian flu.
- As a reference laboratory, MSPHL receives influenza isolates from commercial and hospital laboratories.

MSPHL performs several different tests for diagnosis:

- Real-Time Polymerase Chain Reaction (RT-PCR): MSPHL performs the CDC FDA-approved influenza RT-PCR assay for detection of influenza A and B viruses. This test detects all influenza A and B viruses, including the highly pathogenic Influenza A/H5N1 (Asian lineage) and Influenza A/H7 (Eurasian lineage including H7N9) strains.
- All specimens that test positive for influenza A by PCR are further characterized by subtype. MSPHL can detect the following subtypes: human seasonal H3 and 2009 H1N1 pdm, H5 (Asian lineage), H7 (Eurasian lineage including H7N9), and H3N2 Variant Virus.
- A PCR assay for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Middle-Eastern Respiratory Syndrome Coronavirus (MERS-CoV).

- All specimens that test positive for influenza B by PCR are further characterized by lineage. MSPHL can detect the following lineage genotypes: Victoria and Yamagata.
- If the sample is from a patient who meets the criteria for a suspected case of highly pathogenic avian influenza virus, then RT-PCR testing is the only test performed. The sample is not inoculated into virus culture, where the virus would be amplified.
- If the RT-PCR test results suggest the presence of a novel influenza virus, the sample is sent to CDC for additional testing.

Laboratory procedures for testing may change depending on the characteristics of the circulating influenza strains.

- MSPHL maintains year-round capability to perform virus isolation and RT-PCR testing for influenza and other respiratory pathogens.
- MSPHL maintains testing capacity for outbreak investigations, reference testing, and testing for other influenza viruses.
- MSPHL continues to participate in a specimen exchange program with the Wadsworth Center in New York, the College of American Pathologists (CAP) proficiency-testing program, and the CAP bioterrorism proficiency testing program. MSPHL will maintain its status as a certified laboratory within the Select Agent Program.
- As part of the LRN, MSPHL has the capability of transferring samples to the nearest appropriate partner laboratory if MSPHL cannot perform the required tests or becomes overwhelmed.
- MSPHL has exercised and drilled the use of the Emergency Management Assistance Compact (EMAC). EMAC is another resource which could be employed should the need arise for additional testing beyond the capacity of MSPHL.

## **PANDEMIC INFLUENZA: LABORATORY ROLES AND RESPONSIBILITIES**

### **Sentinel and Other Private Laboratories:**

#### **Pandemic Planning**

- Inventory current levels of diagnostic supplies, including personal protective equipment. Assess anticipated needs for equipment and supplies, and determine trigger point for ordering additional resources. Consider a back-up source for supplies.
- Identify key laboratory personnel whose roles are critical to maintaining laboratory operations.
- Train employees in management of respiratory specimens.
- Institute surveillance for flu-like illnesses among laboratory personnel.
- Cross-train employees to perform rapid diagnostic tests and report results.
- Qualified personnel should be identified to staff laboratory for 24/7 capabilities.
- Ensure employees are trained in the proper packaging and shipping of suspected novel influenza strains to MSPHL.

#### **Pandemic Response**

- Follow current DHSS guidelines for collecting, testing, and reporting of persons with suspected infection with a novel pathogen. See updated health alerts at <http://health.mo.gov/emergencies/ert/alertsadvisories/> and guidance at <http://health.mo.gov/lab/respiratory.php>.
- Scale up to manage increased requests for testing.

- Continue to expedite specimens from possible pandemic illness patients to MSPHL.
- Maintain surveillance for flu-like illnesses among laboratory personnel.

## Missouri State Public Health Laboratory

### Pandemic Planning

- Follow CDC guidance related to possible emerging novel viruses, including implementation of new testing algorithms, changes in laboratory procedures, availability of testing reagents, etc. as pandemic evolves. Testing protocols will be determined by CDC algorithms and may be modified with each stage of the pandemic. The laboratory receives RT-PCR test kits and consumables through the CDC International Reagent Resource (IRR). These kits and consumables are supplied as a set to ensure the availability of necessary items during peak demand. Due to the highly variable nature of viruses, these kits are managed on a national level and cannot be stockpiled by the laboratory.
- Inventory current levels of supplies, assess anticipated needs for equipment and supplies, and determine trigger point for ordering additional resources. Include specimen mailing kits in assessment. Arrange for back-up manufacturer source for supplies and equipment.
- Enhance lab-based surveillance by increasing designated sentinel sites.
- Utilize the MOLRN **and** Health Alert Network to send out Health Alerts to educate sentinel laboratories, LPHAs, physicians, and other network partners on how to notify DHSS if novel illness infection is suspected.
- Institute surveillance for flu-like illnesses among laboratory personnel.
- Educate sentinel laboratories within Missouri which have BSL 3 facilities on the highly pathogenic nature of certain emerging novel diseases. Respiratory virus cultures should not be performed in most clinical laboratories, and such cultures should not be ordered for patients suspected of having highly pathogenic A/H5 (Asian Linage) virus infection. See <http://www.cdc.gov/flu>.
- Continue ongoing training of sentinel laboratories and LPHAs in proper specimen collection, handling and packaging, and shipping procedures. See [http://health.mo.gov/lab/pdf/sphl\\_avianflu\\_instructions.pdf](http://health.mo.gov/lab/pdf/sphl_avianflu_instructions.pdf).
- Communicate expeditiously to the DHSS Division of Community Public Health (DCPH) any confirmation of a novel illness within the state.
- Continue to supply specimen collection kits and maintain courier service to all counties to facilitate receipt of novel influenza strain at the MSPHL.

### Pandemic Response

- Educate sentinel laboratories on the evolving novel strain testing procedures as well as supply updated information received from CDC on an ongoing basis to MOLRN laboratories, LPHAs, and other associated partners using Health Alerts, MOLRN broadcasts, updated website information, and by other communication means as necessary. See <http://health.mo.gov/lab/respiratory.php>.
- Utilize technicians cross-trained in performing RT-PCR procedures to report results as requests for testing increase.
- Redirect laboratory staff to areas of greatest need, i.e., assist in specimen collection kit assembly, extraction, reporting, and telephone call triage.
- Utilize temporary staff as needed to meet increased staffing needs.

- Follow CDC guidance related to the novel pathogen, including institution of new testing algorithms, changes in procedures, electronic message/result reporting, availability of testing reagents, etc. as the pandemic evolves.
- Supply updated information received from CDC on an ongoing basis to MOLRN laboratories, LPHAs, and other associated partners using Health Alerts, MOLRN broadcasts, updated website information, and by other communication means as necessary. See <http://health.mo.gov/lab/respiratory.php>.
- Communicate expeditiously to DCPH initial confirmation of the novel pathogen within the state, and trends and movement of the pathogen throughout the state, as the pandemic evolves.
- Continue to supply specimen collection kits and maintain courier service to all counties to facilitate receipt of novel influenza strain at MSPHL.

### **LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)**

Beginning in 2009, MSPHL began the implementation of a Laboratory Information Management System (LIMS). Initially, LIMS provides for the electronic transfer of patient demographics, specimen information, and results within DHSS as well as to its federal partners. The long term capabilities and benefits of this system will be to interface with sentinel and other clinical laboratories, hospitals, health clinics, and healthcare institutions to facilitate the exchange of electronic laboratory information.

### **REFERENCES:**

#### **Missouri State Public Health Laboratory**

<http://health.mo.gov/lab/>

#### **Health Alerts and Updates for Novel Influenza A H1N1 and Avian Influenza A**

<http://health.mo.gov/emergencies/ert/alertsadvisories/index.php>

#### **Missouri Pandemic Influenza Response Plan**

<http://health.mo.gov/emergencies/panflu/panfluplan.php>

#### **CDC Influenza**

<https://www.cdc.gov/flu/>

#### **WHO Influenza Network**

[http://www.who.int/influenza/gisrs\\_laboratory/en/](http://www.who.int/influenza/gisrs_laboratory/en/)

#### **CDC Laboratory Response Network Partner in Preparedness (LRN)**

<https://emergency.cdc.gov/lrn/>

# Pandemic Influenza Plan - Healthcare Systems Readiness

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## INTRODUCTION

The Healthcare Systems Readiness section addresses aspects of healthcare surge capacity and management during a pandemic. The goal of this plan is to prepare healthcare systems to provide medical care in the event of pandemic influenza as well as other large-scale disasters while maintaining other essential medical services in the community during and after the event. For the purposes of this annex, healthcare systems are composed of hospitals and other healthcare facilities which are defined broadly as any combination of the following: outpatient clinics and centers, inpatient facilities and centers and other entities such as emergency medical services and community health centers.

During the interpandemic and pandemic alert periods, either before influenza has been detected or has only been detected outside of the United States, the Missouri Department of Health and Senior Services (DHSS) will emphasize the evaluation or development of institutional plans, infrastructural support, policies/protocols and drills for responding to influenza pandemic. Additionally, DHSS will assist with planning for regional coordination between various components of the healthcare system and local, state, and federal governments. It is important that local healthcare systems including hospitals, primary care centers, home health agencies and long-term care facilities coordinate to allow care for the sickest patients and to maximize resources. Therefore, the development of strong local/regional healthcare coalitions will be instrumental in an effective pandemic response.

During the pandemic period, once pandemic influenza has developed within the United States, DHSS will work in close coordination with other governmental agencies involved in the Unified Command Structure and the established regional healthcare coalitions that participate in the Hospital Preparedness Program as well as other Emergency Support Function 8 (ESF-8) partners. Healthcare systems are largely community assets, thus it is once pandemic influenza has developed locally or regionally that all aspects of this plan will be fully implemented. As influenza progresses in the locality or region from 'mild' to 'moderate' to 'severe', the healthcare systems will accelerate and intensify their response accordingly.

The development of this annex involved professionals with expertise in various facets of the healthcare arena. The recommendations suggested in this annex are intended to be synergistic with those of the other pandemic influenza planning efforts. Throughout the Healthcare Systems Readiness Annex, reference has been made to other Pandemic Influenza Response Plan annexes to assure coordination. This plan does not take the place of individual facility and community planning.

Healthcare entities incorporated into this planning effort include:

- Hospitals.
- Non-hospital settings including primary care centers, outpatient clinics and community health centers.
- Emergency medical services.
- Home care agencies.
- Long-term and other residential care facilities.

## **OBJECTIVES**

- Provide guidance on the key elements of planning for a pandemic influenza in health care settings.
- Emphasize role of infection control practices and staff education and training in reducing the impact of a pandemic.
- Understand the necessity of coordination among healthcare providers, as well as local and state health departments during a pandemic.

## **BACKGROUND**

Originally, the Health Resource Services Administration's (HRSA) Bioterrorism Hospital Preparedness Program (BHPP) was created through Section 3191C-1 of the Public Health Services Act to enhance the ability of hospitals and supporting healthcare systems to prepare for and respond to bioterrorism and other public health emergencies. The funding opportunity subsequently moved to the U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Preparedness and Response (ASPR), Office of Preparedness and Emergency Operations (OPEO), Division of National Healthcare Preparedness Programs (DNHPP) and will be referred to as the Hospital Preparedness Program (HPP) in this document. This funding has allowed the DHSS, working with federal, state and local partners to build upon the planning and infrastructure efforts of Missouri's healthcare entities.

The DHSS' HPP contracts with Missouri Hospital Association (MHA), St. Louis Area Regional Response System (STARRS) through East-West Gateway Council of Governments, Mid-America Regional Council (MARC), Missouri State Emergency Management Agency (SEMA), Missouri Department of Mental Health (DMH) and the Taney County Ambulance District (TCAD) to develop and enhance preparedness capacity and capability. Collaboration efforts are ongoing within the DHSS' Division of Community and Public Health (DCPH), Division of Regulation and Licensure (DRL), the Division of Senior and Disability Services (DSDS), and the Missouri State Public Health Laboratory (MSPHL) to support preparedness capacity and capability for hospitals and other healthcare entities.

Current and prior DHSS efforts to improve all-hazards and pandemic preparedness activities include:

- Missouri is divided into three regional healthcare coalitions which encompass the Missouri State Highway Patrol's (MSHP) nine response regions resulting in full geographic state coverage.
- Missouri's three regional healthcare coalitions all have the minimum core members of hospitals, emergency medical services, local public health and emergency management, as well as other members dependent upon regional engagement.
- Missouri's three regional healthcare coalitions are all able to activate incident command structures, exercise routinely and have duty officers on call.
- Missouri is currently implementing Tier 2 of the six-tier medical surge capacity and capability model (MSCC) of healthcare coalition planning statewide.
- MHA has taken the lead to engage all hospitals statewide in one collaborative mutual aid agreement, jointly agreeing to support other hospitals within the state during critical staff or supply shortages to the extent such support can occur without resulting in hardship within their own hospital's responsibilities.

- There is also a statewide mutual aid agreement between emergency medical services (EMS), with a state and regional coordinators designated, regional EMS medical directors and a state EMS Medical Director.
- Missouri has also embraced the concept of Immediate Bed Availability (IBA), defined and supported by HHS’s Assistant Secretary for Preparedness and Response as “the ability of the healthcare coalition to provide no less than 20% of bed availability of staffed members’ beds within four hours of a disaster” as a performance measure and a metric of medical surge capacity.
- The DHSS’ Emergency Response Center (ERC) monitors the day-to-day emergency preparedness of the state. A toll-free number is available around the clock for emergencies or disease reporting. Multiple stations are activated in the ERC during a public health emergency event to assure an effective, coordinated response.
- The Medical Incident Coordination Team (M-ICT) is composed of state-level partners from DHSS, SEMA, DMH, and the three healthcare coalitions and/or their fiscal intermediaries with a purpose to provide a structure and defined process for communication, joint decision-making and coordination of deployment of resources regionally or state-wide during any emergency event that requires more than a regional healthcare response while fully recognizing the authority of the Local Emergency Operations Center (LEOC) in every response within their jurisdiction. Any member of the M-ICT may call a meeting at any time to promote situational awareness or coordinate response to an incident.
- Surge support trailers have been purchased and equipped in order to support medical surge on hospital campuses or at other locations across the state as necessary (e.g., alternate care sites) or simply to provide medical surge supplies including personal protective equipment (PPE) to the hospital or other inpatient facility.
- Missouri-1 Disaster Medical Assistance Team (MO DMAT-1) is a fully operational Disaster Medical Assistance Team that is a State asset to Missouri. The system continues to develop and enhance three (3) six-bed Regional (Divisional) Response Trailers and Teams located in three (3) strategic locations around the state: St. Louis, Kansas City and Springfield/Branson areas, as well as three (3) 24-bed mobile emergency departments.
- Ventilator Cache consisting of 247 ventilators, 26 with pediatric capability, has been purchased and a Management, Training and Deployment Plan is in place which includes a defined resource request process for hospitals wishing to access ventilators from the cache.
- In collaboration with the TCAD, DHSS, SEMA and Missouri Homeland Security, a Mobile Medical Hospital (MMH) has been designed and procured by TCAD. The MMH as well is sustained and kept in a deployment ready status by TCAD. This mobile medical hospital is a modular, scalable response package with a 60 bed capacity that can be used to support any hospital in the State of Missouri that has been disabled or destroyed by natural disaster, fire or is in need of expanded resources for surge capacity. The MMH has significant oxygen generation and storage capacity using an Expeditional Deployable Oxygen Concentration System (EDOCS). The EDOC is robust enough for bed side patient oxygen delivery and ventilator support.
- There are respiratory and pulmonary caches located regionally throughout the state with varying capabilities, including oxygen generation capability and ventilators.
- In the 2017 Annual Capacity Assessment Survey of hospitals conducted by MHA, 125/128 responding hospitals had an influenza vaccination policy. Only 12% of the responding hospitals indicated their influenza vaccination policy was voluntary, the remaining



respondents either required influenza vaccines amongst all staff or it was mandatory with potential exceptions.

- DHSS, through a contract with the SEMA, maintains Missouri's Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) known as Show-Me Response in cooperation with the Missouri Division of Professional Registration. This web-based registry of over 10,000 registered volunteers includes representatives from the 20 health care occupations prescribed by HHS. Show-Me Response is a robust database, credentialing and communication tool that is used by Medical Reserve Corps (MRC) units, local public health agencies (LPHAs), SEMA for both MO DMAT-1 and Missouri Mortuary Operations Response Team (MO MORT 1) and other response partners for the management of volunteers. The Show-Me Response registry includes over 6,000 licensed health professionals and 4,000 lay volunteers. Fifty-six percent of Show-Me Response registrants are affiliated with MRC, LPHA, or other user organizations. This system is exercised regularly and will be activated during times of emergency to assist in the coordination of additional staff.
- MHA, through a contract with DHSS, manages two web-based programs for hospitals and other healthcare providers called eICS<sup>®</sup> and EMResource<sup>®</sup>.
- The first, eICS<sup>®</sup>, is an electronic incident command system specifically customized for healthcare organizations and is used routinely by hospitals when they activate their incident command structures for exercise or a real-world event from the scene of a medical surge event through the transfer to their final destination for healthcare, and includes information about the patient's condition, medications and treatments. EMResource<sup>®</sup> has been used statewide by hospitals for several years to communicate information about their current emergency department status to ambulance services and other healthcare partners. Health alerts and amber alerts are examples of other information posted by the state to hospitals, public health and ambulance services and other users of EMResource<sup>®</sup>.
- Through EMResource<sup>®</sup>, DHSS has the ability to conduct a query of hospitals to determine bed types and bed availability, as well, as situational assessment, such as current level of operations, facility stress indicators, and ventilator availability. Standard queries are available and used routinely during influenza season to determine supply levels, staffing issues, etc.
- Hospitals, EMS, and Federally Qualified Health Centers (FQHCs) have received personal protective equipment and received hands-on training.
- Hospitals have well-established and proven supply agreements for PPE and other resources.
- Hospitals, LPHAs and FQHCs routinely exercise dispensing of antivirals within their communities and many serve as closed points of dispensing.
- In order to assure secure redundant communication systems, equipment has been received by hospitals and FQHCs through a standardized purchase ordering system to assure interoperability that includes satellite telephones, 550 Motorola HT 1250 16-channel programmable handheld radios, amateur radio systems and Motorola MTR 2000-97 channel, 100 watt base station radios and Missouri Statewide Wireless Interoperable Network (MOSWIN) radios. Regional communication hubs with interoperable and redundant communication systems have been identified in each region.
- Competency based education has been provided to hospitals and other healthcare entities through contracts with MHA, STARRS, and MARC.
- DMH staff provides behavioral health education as well as communication tools and other resources. DMH has published and trained extensively on "The Behavioral Health Emergency Plan Template for Health Care Organizations" located at

<https://dmh.mo.gov/media/pdf/behavioral-health-emergency-plan-template-health-care-organizations>.

- Educational materials, including Ready in 3 guides, have been provided for patients, family members, and the public regarding influenza, as well as disaster related events.
- DHSS MSPHL has conducted a hospital laboratory assessment and provides resources and training to hospital laboratory personnel on various topics including packaging and shipping of diagnostic and infectious materials, Rule Out/Refer of Select Agents and Risk Assessment.
- Surveillance systems allow all rural and urban hospitals, EMS and the Poison Control Center to report data that is suggestive of influenza to their local and state health departments on a 24 hours a day, seven (7) days a week basis.
- Health alerts are sent to healthcare providers on acute public health issues through the Health Alert Network.
- Hospitals, LPHAs, FQHCs and other regional/state partners conduct individual and regional exercises throughout the year.
- Pandemic exercises are conducted.
- DHSS conducts regular meetings with HPP program contractors to update them on issues of concern, including pandemic preparedness planning.

## **CHALLENGES**

- The absence of statewide consensus on approach to crisis standards of care.
- The absence of statutory or regulatory guidance to address liability concerns regarding crisis or emergency standards of care.
- Lack of personnel to staff surge capacity needs, dependent upon the length of the pandemic.
- Potential for inadequate personal protective equipment for surge levels, dependent upon the length of the pandemic.
- Assurance of coordination between the healthcare system entities.
- ESAR-VHP (Show-Me Response) will only be effective if personal liability, institutional liability and worker's compensation for healthcare providers volunteering during an emergency are addressed.
- Willingness of healthcare providers to voluntarily receive influenza vaccinations.

## **PLANNING ASSUMPTIONS**

- All hospitals need to be prepared as there will be no designated pandemic influenza hospitals.
- Absenteeism could rise to 40%, severely crippling critical services including first responders, healthcare workers, etc.
- Hospitals may experience shortage of beds, medications, supplies, and staff. The level of the shortages will increase with the duration and severity of the pandemic.
- Emergency medical services may be severely strained in some areas, dependent upon the duration and severity of the pandemic.
- Waiting times to primary care physicians, clinics and hospital emergency departments may become very lengthy in some areas.
- Hospitals and other healthcare entities will not be able to rely on external resources beyond what they have already prepared locally. Using the Incident Command System, additional resources, if available, will be coordinated through State Emergency Operations Center (SEOC) and DHSS' ERC.

- Basic hygiene/cough etiquette and infection control strategies may have to be reiterated and encouraged.
- The EMResource® will be used as an inquiry and data collection tool, as well as healthcare coalition communication tool, that will allow agencies to anticipate potential shortages in beds, staff, and equipment.
- Biosense and Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) will be used for syndromic data collection.
- Communication and coordination among providers at the local and regional level is ongoing.
- Pandemic influenza plans are exercised and equipment tested routinely, including periodic unannounced tests.
- Healthcare entities will assure access to EMResource® in locations throughout the organization that are easily accessible to all appropriate personnel.
- An effective healthcare response to pandemic influenza will require utilizing non-hospital based healthcare providers outside of hospital settings in order to decrease the likelihood of surges that would overwhelm hospital capability.
- Physicians in all healthcare settings must be fully integrated into plans for the healthcare response.

## **ROLE OF HOSPITALS:**

### **Planning** (Refer to [www.hhs.gov](http://www.hhs.gov).)

All hospitals are encouraged to establish an ongoing planning committee and develop written pandemic influenza plans (See Attachment C.), inclusive of decision-making structures (Incident Command Management System) for responding to pandemic influenza. The checklist from HHS may be useful in developing individual facility plans that encompass disease surveillance, hospital communications both internally and externally, education and training, exercises, surge capacity, infection control, security, occupational health, and mortuary issues, which are addressed respectively below.

As well, the regional healthcare coalitions may wish to consider using the “Healthcare Coalition Influenza Pandemic Checklist” as a guide to their planning with healthcare coalition partners. <https://files.asprtracie.hhs.gov/documents/aspr-tracie-hcc-pandemic-checklist-508.pdf>

Integral to the effectiveness and sustainability of the hospital during a pandemic influenza surge event, will be the local or regional healthcare system partnerships and the regional healthcare coalitions developed during non-event periods. These coalitions should include all core members of the healthcare coalition including hospitals, emergency medical services, local public health and emergency management, but should be enhanced with other healthcare system partners such as long-term care facilities, home health agencies, mental health, outpatient clinics, federally qualified health and community health centers to the extent possible.

### **Surveillance** (Refer to Surveillance Annex.)

During the pre-pandemic period, individual health care providers and healthcare facilities play an essential role in surveillance for suspected cases of infection with novel strains of influenza and should be on the alert for such cases. Novel strains may include avian or animal influenza strains, such as avian influenza A H5N1 or novel influenza A strains, or re-emergent human viruses that cause human disease. Thus, surveillance needs will require hospitals to have systems in place

during the early pandemic period to timely identify patients at risk for infections with novel influenza strains. All patients, especially those whose primary presentation is not for influenza-like-illness (ILI), should be monitored closely for development of clinical signs of influenza during their hospital admission to detect illness and mitigate transmission of influenza throughout the hospital. Healthcare personnel involved in direct patient care should incorporate screening for the current available case definition of influenza while evaluating patients. Patients meeting these criteria should be reported immediately. These patients should receive pandemic influenza evaluation and appropriate infection control strategies should be implemented.

Hospital surveillance for pandemic influenza should include monitoring employee absenteeism, tracking emergency department visits, hospital admissions and discharges of suspected or laboratory-confirmed pandemic influenza patients, and conducting surveillance in emergency departments to detect any increase in ILI. Monitoring employee absenteeism should be implemented during the early pandemic period. All healthcare employees should be able to recognize the signs, symptoms, and risk factors of pandemic influenza and understand protocols for exclusion from work, and report their illness at the time of onset. Employees with symptoms of pandemic influenza should report to their employee health/occupational health office or similar designated offices. Hospitals should maintain a database of employees who are identified as ill and exposed from these screening programs to track staff and to direct treatment and prophylaxis. Staff surveillance during a pandemic will be critical in maintaining appropriate levels of staffing in the hospital.

Procedures should be in place to assess bed capacity and staffing needs, support local public health personnel in monitoring the progress and impact of the pandemic, detect a resurgence in pandemic influenza that might follow the first wave of cases, and antiviral treatment of healthcare workers who might be infected with the influenza virus. Hospitals should participate in the DHSS' surveillance systems including syndromic surveillance, hospitalization surveillance, and laboratory surveillance, as well as the EMResource®.

**Communication** (Refer to Public Communications Annex.)

Hospitals should work with the regional healthcare coalitions, public health officials, other government officials, neighboring healthcare facilities, the public and the press to ensure rapid and ongoing information sharing during an influenza pandemic. Each hospital should have a well-developed crisis communication plan fully integrated into the overall emergency response plan. Weekly or daily updates on hospital operations may improve internal, as well as external communications.

Hospitals should routinely communicate with their respective regional healthcare coalition regarding resource shortages or anticipated shortages, to include staff, and may be asked to provide updated surge capacity and resource availability via queries through EMResource®.

Health care facilities should assign responsibility for external communication about pandemic influenza. Persons responsible for updating public health reporting, a clinical spokesperson, and a media spokesperson should be identified. Providing accurate and consistent information will be critical during the pandemic.

The hospital should provide key messages regarding basic hygiene/cough etiquette, infection control, antivirals and vaccines, and general pandemic influenza updates to both their staff and

patients. With guidance from state or local health department, the healthcare facility should determine methods, frequency and scope of external communications. For example, the hospital should provide effective risk communication messages to gain the public's cooperation and trust relative to limiting hospital care to those most likely to benefit from that level of care.

Each hospital should communicate their plan to their staff and the LPHA. Policies dealing with various human resource related issues during a pandemic should be developed and clearly explained to staff, and available upon request. Hospitals should maintain up-to-date contact lists for all facility personnel including phone numbers, e-mail and home street address. Each hospital should assure redundant communication systems are available, for example to ramp up the ability to handle phone calls. Hospitals should assure systems are established to receive and distribute health alerts, ensure an ongoing system to monitor the EMResource<sup>®</sup> is implemented, coordinate with their LPHA to share contact information, and implement a plan regarding how communications will flow between local and regional healthcare facilities.

### **Education and Training**

The healthcare facility's pandemic influenza plan should establish education and training goals consistent with the clinicians' and ancillary healthcare providers' needs during various stages of the pandemic. Training materials should be available in different languages and at different reading levels, as necessary. General topics for **staff education** might include prevention and control of influenza, implications of pandemic influenza, benefits of annual influenza vaccination, role of antiviral drugs in preventing disease and reducing rates of severe influenza and its complications, infection control strategies, hospital-specific work restriction policies and procedures and creating family preparedness plans. All staff should be aware of proper donning and doffing of PPE and uses for items. Clinic-specific topics might include policies and procedures for the care of pandemic influenza patients, pandemic staffing contingency plans, reporting protocols to the state or local health department, and measures to protect family and other close contacts.

As the community's experience with the influenza progresses from "mild" to "moderate" to "severe", the healthcare system may need to implement additional 'just in time' trainings specific to clinical needs at the time and based upon pandemic management planning. For instance, training on intake and triage to detect patients with influenza symptoms and to implement immediate containment measures to prevent transmission or guidance to behavioral health workers for providing psychological support to patients and hospital personnel (Refer to Mental Health Annex.). As well, it will likely be necessary to implement cross training of personnel to provide support for essential patient-care areas at times of severe staffing shortages. Health care facility staff should be educated about the importance of being immunized, vaccine safety, and the rationale for vaccine prioritization when it becomes available.

Education and training should be designed and implementation plans prepared to expand healthcare personnel capacity beyond the normal scope of practice protocols, in the event of a gubernatorial executive order allowing such expanded scopes of practice.

To **educate visitors** to the health care facility, signs and placards applicable to infection control and general influenza information should be posted in various places within the hospital and should be of varying education levels. Educational campaigns should include signage posted in

common areas (elevators, waiting areas, cafeterias, lavatories, break rooms, etc.) in appropriate languages and literacy levels to assist with infection control.

Hospitals and other health care facilities should develop plans for communication of their strategy regarding use and distribution of **vaccine and antivirals** consistent with the local and state public health agencies' recommendations.

Employees, visitors, and patients should learn and understand the proper usage of PPE through fit testing, hands-on activities, and flyers posted in common areas in appropriate language and literacy levels. Pre-made flyers describing the basics of disease transmission should also be considered. Facility staff should be informed of the protocols for visitor and patient PPE requirements.

The healthcare facilities should actively participate in pandemic influenza response exercises and drills, incorporating lessons learned into response plans.

### **Surge Capacity**

Hospital surge planning may be enhanced by considering categories of conventional, contingency and crisis capacity. Four interdependent factors – system, space, staff, and supplies – contribute to effective surge capacity. The levels of surge capacity are defined as:

- Conventional capacity – The spaces, staff, and supplies used are consistent with daily practices within the institution. These spaces and practices are used during a major mass casualty incident that triggers activation of the facility emergency operations plan.
- Contingency capacity – The spaces, staff, and supplies used are not consistent with daily practices but maintain or have minimal impact on usual patient care practices. These spaces or practices may be used temporarily during a major mass casualty incident or on a more sustained basis during a disaster (when the demands of the incident exceed community resources).
- Crisis capacity – Adaptive spaces, staff, and supplies are not consistent with usual standards of care but provide sufficiency of care in the setting of a catastrophic disaster (i.e., provide the best possible care to patients given the circumstances and resources available).

### **System**

The pre-event healthcare planning and written pandemic influenza response plan should outline the hospital's incident command structure, indicating processes, triggers for implementation and interface with local, regional and state emergency management and public health. The hospital should monitor the EMResource<sup>®</sup> routinely and report to DHSS in order to coordinate requests for hospital closure, diversion or decreases in services. As well, healthcare planning should anticipate the potential necessity of implementing crisis or emergency standards of care during severe stages of a pandemic, hospitals should consult with DHSS and other regulatory agencies, prior to implementing altered standards of care.

The hospital should ensure effective triage and isolation procedures are in place to facilitate the early recognition and appropriate management of patients presenting with clinical symptoms and/or epidemiologic risk factors for influenza due to novel strains, as well as minimize the risk of transmission. This may include assigning a triage coordinator to manage patient flow, including deferring or referring patients who do not require emergency care (conventional to contingency), as well as establishing a separate triage evaluation area for

persons with respiratory symptoms. As the pandemic progresses, it may be useful to activate streamlined admission procedures, criteria and procedures for phone triage, cross-train staff from other parts of the hospital or community to assist with triage and admission, and activate external triage stations or evaluation units (contingency to crisis). Triage and admission guidelines should triage patients to the appropriate level of care including home care.

The hospital may wish to cohort patients admitted for influenza, monitor for nosocomial infections, discharge patients as soon as possible, defer elective admissions, and provide visual alerts regarding the need for patients with fever and respiratory symptoms to proceed directly to triage and adhere to respiratory and hand hygiene precautions (conventional to contingency). During moderate and severe levels of the pandemic, the hospital may need to limit admission of influenza patients to those with severe complications who can only be cared for in the hospital setting (contingency to crisis).

### **Space**

During conventional and contingency surge, space within the hospital should be prioritized for pandemic patients by implementing plans for rapid patient discharge, canceling elective surgery, establishing separate waiting areas for persons who are symptomatic, and cohorting patients admitted with influenza. As the pandemic progresses to contingency and severe surge, the hospital should implement policies and procedures for shifting patients between nursing units to free up bed space in critical care areas, cohort patients, collaborate with home health agencies to arrange at-home follow-up care for patients who have discharged early or admission has been deferred, determine if emergency procedure patients may be transferred/referred to other hospitals, activate surge capacity trailers, and consider opening alternate care site(s). In general, the hospital should coordinate with other outpatient clinics and community health centers, hospitals, home health agencies and long-term care facilities to allow hospitals to care for the sickest patients, and to maximize resources of other healthcare facilities and home care agencies to care for those less severely ill.

Depending on the severity of the pandemic, alternate care facilities may be necessary. Health care facilities should develop plans for alternate care site(s) incorporating issues of staffing, supplies, triage, and infection control. Upon establishment of an alternate care site(s), the health care facility is obligated to notify DHSS' Division of Regulation and Licensure (DRL) which is then responsible to monitor the alternate care site(s).

### **Staff**

Strategies to consider during conventional to contingency surge staffing include furloughing or reassigning pregnant staff and other staff at high risk for complications of influenza, reassigning non-essential staff to support critical hospital services, expanding staff shifts, and cohorting staff or assigning staff recovering from influenza to care for influenza patients. Moderate to severe levels of pandemic influenza in the community will likely result in contingency to severe surge staffing. Strategies to consider at these levels of the pandemic include activating the mutual aid agreement through MHA which is signed by Missouri hospitals to access additional staff, recruiting community volunteers (retired nurses and physicians, clinical staff working in outpatient settings), requesting DHSS to activate the ESAR-VHP or Show-Me Response, requesting assistance from MRC, requesting healthcare staffing via the Emergency Management Assistance Compact (EMAC), activating the

Missouri National Guard, requesting assistance from trainees (e.g., medical and nursing students), and requesting assistance from patients' family member in an ancillary healthcare capacity.

### **Supplies**

The hospital should evaluate the existing system for tracking available medical supplies in the facility and determine how/when to stockpile consumable resources, considering resources for a pandemic wave of six to eight weeks' duration. The hospital should develop a strategy for acquiring additional respiratory care equipment and to maintain antibiotics to treat bacterial complications of influenza. Systems should be developed for tracking hospital supplies as well as working with vendors to ensure a continued supply of available resources. The hospital should coordinate with the LPHA to determine needed doses of vaccine and antivirals for identified high priority groups (conventional to contingency). Contingency plans for situations where medical supplies become limited should also be developed.

As the pandemic increases in severity or extends in duration, it may be necessary for the hospital to access supplies from regional surge trailers, pulmonary caches, managed inventory from the Strategic National Stockpile or other state or federal supply requests as deemed necessary. These requests should be coordinated with local EOC (Emergency Operations Center), or Health Emergency Operations Centers (HEOCs) in some jurisdictions, according to Local Incident Management System and established process (contingency to crisis).

### **Infection Control**

It will be necessary for healthcare facilities to practice and reinforce the stringent use of infection control measures in order to prevent the spread of influenza. Strict adherence to handwashing recommendations and universal public health measures will be paramount during a pandemic. Pre-pandemic planning should ensure adequate supplies of hand hygiene products in all health care settings to anticipate possible shortages of hand antiseptic products, soap and hand towels. Hospitals should post signs for respiratory hygiene/cough etiquette. Patients with potential pandemic influenza should be identified, isolated and treated. The hospital should use triggers relative to signs/symptoms of pandemic influenza to escalate screening procedures of all persons entering the hospital to a more active level. Hospitals should accelerate the training of staff relative to infection control measures, in accordance with the clinic's pandemic influenza education and training plan, as well as consider site-specific infection control issues.

In order to reduce hospital-related transmissions, protocols to cohort staff and patients, as well as restrict new admissions (except for other pandemic influenza patients) to affected units should be considered. Cohorting patients in the designated areas of the hospital should be considered from the start of the influenza pandemic in order to contain infection within a segregated part of the hospital and thereby reduce the risk to other patients. Establishing separate entrances and exits when a dedicated area is segregated for influenza patients could be beneficial, as this would allow staff to put on PPE prior to entry to the area away from where they remove PPE after leaving that area. Hospitals should develop appropriate procedures and policies for restricting patients and staff movement within the hospital to allow proper functioning of influenza and non-influenza treatment zones. Limiting the movement of patients, including transfers within the hospital, could limit the spread of influenza within the facility.



Designated influenza areas should be cleaned at least daily, with special attention to potentially highly contaminated surfaces, such as bed rails, furniture, door handles, and bathroom fixtures. Routine cleaning procedure after patient discharge is expected to be adequate. **Visitors** should be informed when the Health Care Facility (HCF) has influenza activity. During a pandemic, visitation should be kept to a minimum, and restriction of visiting hours should be considered. Visitors with influenza symptoms should be prohibited from entering clinical areas. Visitors entering influenza treatment areas must be instructed on standard infection control principles and the wearing of protective equipment, as appropriate. Visitors' use of PPE should be determined by their level of interaction with the patients and staff.

**Volunteers** should report to and sign in at the area specially designated for them. Volunteers should not move between influenza designated and non-influenza areas. Instruction in standard infection control practices, including specific instruction on PPE, should be provided.

### **Occupational Health**

The development and implementation of an occupational health plan in the healthcare setting will help maintain a healthy workforce, both to assure adequate staff capacity to provide care to their patients as well as decrease the likelihood of healthcare staff exposing their patients to the influenza. Essential components will protect healthy workers from exposures in the healthcare setting, as well as evaluate and manage symptomatic and ill healthcare personnel.

Hallmarks of an occupational health plan will include basic hygiene/cough etiquette, infection control strategies, and vaccination. All healthcare personnel, including employees with non-patient care responsibilities, should be encouraged to voluntarily receive the influenza vaccine annually, unless the healthcare worker has specific medical restrictions prohibiting use of the vaccine. The healthcare system's plan should include distribution and administration of antiviral drugs and/or vaccines to healthcare personnel as recommended, as well as a system for documenting the vaccination of healthcare personnel. Prophylaxis antivirals should be available for healthcare providers, according to HHS and DHSS guidelines.

The healthcare system should provide information to staff regarding the importance of creating family emergency preparedness plans in advance of an emergency (<http://health.mo.gov/emergencies/readyin3/>). For pandemic influenza, the family emergency preparedness plan may include provisions for alternate care for children and elderly family members, should they become ill. Basic hygiene/ cough etiquette, infection control and vaccination may be appropriate considerations.

Clear guidance and work restriction policies should be formulated and clearly communicated prior to a pandemic influenza regarding the need for staff to stay at home in the event of fever and respiratory symptoms. The healthcare system should clearly communicate what actions an employee takes if onset of illness occurs during work or at home. If possible, it may be advantageous to reassign healthcare providers that are at high risk for complications of influenza to lower risk jobs that do not involve direct care of suspected pandemic patients.

During an influenza outbreak, the healthcare system should establish regular updates for clinicians, direct patient care staff and screening/triage staff on the current status of the pandemic and any changes in the recommendations for management of influenza patients. The plan should include provisions for ‘just in time’ training and education for all healthcare personnel, as needed.

The healthcare system’s plan should also include provisions for psychosocial and mental health needs of healthcare personnel and their families. These provisions should be designed to assist healthcare workers to deal with the stress of separation from family members for extended periods which may be necessary during a pandemic, as well as the stress of dealing with very ill patients and potentially multiple fatalities.

### **Human Resources**

During the pre-pandemic period, procedures should be developed regarding human resources policies for the pandemic period. The policies should be formulated for annual leave, sick leave, compensation, hiring, furloughing, workers’ compensation, and Family Medical Leave Act (FMLA).

### **Security**

Security in the healthcare setting will play a pivotal role during a pandemic. Additional security may be required because of the increased demand for services and possibility of long wait times, and because triage or treatment decisions may lead to people not receiving the care they think they require.

It will be important to implement restrictions on facility access, including limiting the number of visitors to those essential for patient support, assign clinical staff to entry screening, screen visitors at the point of entry to the facility for signs and symptoms of influenza, and limit points of entry to the facility. Each health care facility should consider their unique needs for security planning. Security personnel should participate in education and exercise opportunities, upgrade security equipment as necessary, and cross-train appropriate personnel in preparation for workforce reductions due to illness.

The Missouri National Guard may be activated to provide or augment security at vaccination, distribution, quarantine or hospital treatment sites.

### **Mortuary Issues (Refer to Mass Fatality Management Annex.)**

A planning workgroup, including the coroner/medical examiner, should develop strategies to address fatality surge. The workgroup should determine the scope and volume of supplies needed to handle an increased number of deceased persons, assess the current capacity for refrigeration, identify temporary morgue sites, and identify any regional supplies or assets for body storage.

## **ROLE OF NON-HOSPITAL HEALTHCARE SYSTEM PARTNERS**

### **Emergency Medical Service and Non-Emergency Medical Transport**

(Refer to Attachment C.)

Emergency medical organizations will be involved in the transport of acutely ill patients with known or suspected pandemic influenza to emergency departments. It is anticipated that some of

these patients might require mechanical ventilation for life support and/or other lifesaving interventions. Non-emergent (medical) transport organizations will be called upon to transport recovering pandemic influenza patients to their home, residential care facility, or possibly to alternative care sites.

The Missouri National Guard may be activated to provide ground or air support for medical or casualty evacuation.

Emergency and non-emergency medical transport organizations should promote occupational health principles as outlined in this plan, including promotion of basic hygiene/cough etiquette, infection control measures, vaccinations for staff, and prophylaxis antivirals as directed by HHS and DHSS. EMS may wish to use the state-wide mutual aid agreement to augment regional staffing, recognizing that all regions may be experiencing staffing shortages.

### **Home Healthcare Services (Refer to Attachment E.)**

In addition to providing care to their existing patients, home health agencies will likely be called upon to provide care for patients who do not require hospitalization for pandemic influenza, or for whom hospitalization is not an option because hospitals have reached their capacity to admit patients. These agencies may become overburdened very quickly and shortages of personnel and supplies providing home healthcare may occur.

It is incumbent upon both the home health agency and local/regional hospital(s) or healthcare systems to plan collaboratively prior to a pandemic influenza event regarding how the home health agencies' personnel might be optimally utilized during the surge of an event. All healthcare system partners in communities are encouraged to engage in their local/regional healthcare partnership or coalition. Pre-planning will allow the systems partners to provide more seamless care at the time of the event, increase communication across systems and relieve some of the stress of providing care during patient surge for all partners.

### **Non-Hospital Services, Including Outpatient Clinics and Community Health Centers**

Planning an effective delivery of care in outpatient settings is critical. To maintain essential medical services, careful coordination will be needed between hospitals, outpatient care clinics and community health centers. The emphasis will be on allowing hospitals to care for the sickest patients, regardless of etiology, and to maximize the resources of other healthcare facilities and home care agencies to care for those less severely ill and/or at lower risk for complications or death, as well as those less likely to survive even with critical care support. Appropriate management of outpatient influenza cases will reduce progression to severe disease and thereby reduce demand for inpatient care.

It is incumbent upon both the outpatient clinic or community health center and local/regional hospital(s) or healthcare systems to plan collaboratively prior to a pandemic influenza event regarding how the outpatient clinics' or community health centers' personnel might be optimally utilized during the surge of an event. All healthcare system partners are encouraged to engage in their local/regional healthcare partnership or coalition. Pre-planning will allow the systems partners to provide more seamless care at the time of the event, increase communication across systems and relieve some of the stress of providing care during patient surge for all partners.

## **Residential Care, Skilled Nursing, Assisted Living and Other Long-Term Care Facilities**

(Refer to Attachment F.)

All levels of long-term care facilities should also follow the basic principles outlined within this plan within their own facility including healthcare planning, establishing occupational health policies and protocols, reinforcing basic hygiene/cough etiquette, infection control, promotion of vaccines, and antiviral prophylaxis for staff, as guided by HHS and DHSS. It is assumed long-term care facilities will have the staff, supplies and other resources to provide influenza care for their own patients.

**Attachment A**  
**Flu Surge Estimates of the Health Care Impact**  
**from Pandemic Influenza in Missouri**

# Main Menu

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**Step 1: Determine population of locale by age groups:**

Age Group	Population
0-19 yrs	1,437,342
20-64 yrs	3,713,135
+ 65 yrs	838,450

Enter Data in  
WHITE  
boxes only!

View or  
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tions

**Step 2: Determine basic hospital resources:**

Total licensed non-ICU beds:	23,854
% licensed non-ICU beds staffed:	60%
Total staffed non-ICU beds:	14,312
Total licensed ICU beds:	2,124
% licensed ICU beds staffed:	90%
Total Staffed ICU beds:	1,912
Total number of ventilators:	2,000
% ventilators available:	10%
Total number of ventilators available:	200

**Step 3: Determine duration (6, 8, or 12 weeks) and attack rate (15%, 25% or 35%) of the pandemic:**

Duration: 8

Attack rate: 25%

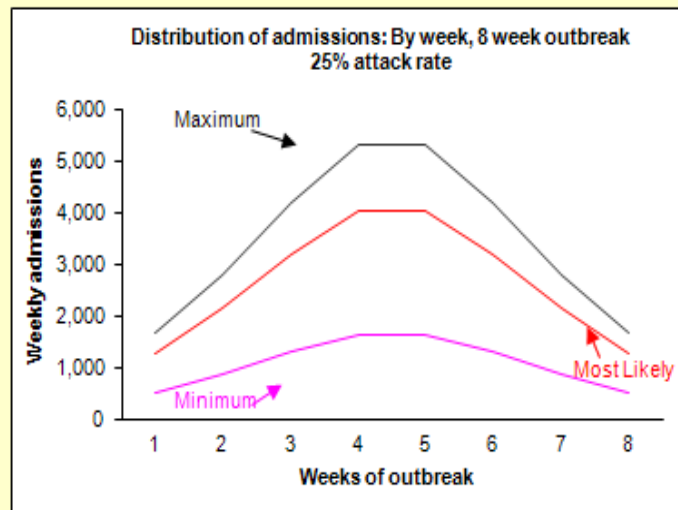
**Step 4:** [Click to View Results](#)

**Notes:** 1. Sample data are from Metropolitan Atlanta.

2. Duration (pandemic duration) refers to the number of weeks you assume the pandemic wave to last.

3. Attack rate (gross clinical attack rate) refers to the percentage of the population that became clinically ill due to pandemic influenza.

<b>Pandemic Influenza Impact / Attack Rate</b>	<b>25%</b>
<b>Total Hospital Admissions</b>	
Most Likely Scenario	21,204
Minimum Scenario	8,578
Maximum Scenario	27,923
<b>Total Deaths</b>	
Most Likely Scenario	4,265
Minimum Scenario	2,521
Maximum Scenario	6,996



Hosp Adm. / Week	1	2	3	4	5	6	7	8
<b>Most Likely Scenario</b>	1,272	2,120	3,181	4,029	4,029	3,181	2,120	1,272
<b>Minimum Scenario</b>	515	858	1,287	1,630	1,630	1,287	858	515
<b>Maximum Scenario</b>	1,675	2,792	4,188	5,305	5,305	4,188	2,792	1,675

Pandemic Influenza Impact / Weeks		1	2	3	4	5	6	7	8	9	10
<b>Hospital Admission</b>	Weekly admissions	1,272	2,120	3,181	4,029	4,029	3,181	2,120	1,272		
	Peak admissions/day				628	628					
<b>Hospital Capacity</b>	# of influenza patients in hospital	935	1,559	2,338	2,961	3,066	2,695	2,067	1,356		
	% of hospital capacity needed	7%	11%	16%	21%	21%	19%	14%	9%		
<b>ICU Capacity</b>	# of influenza patients in ICU	191	405	622	821	888	864	687	474		
	% of ICU capacity needed	10%	21%	33%	43%	46%	45%	36%	25%		
<b>Ventilator Capacity</b>	# of influenza patients on ventilators	95	202	311	410	444	432	343	237		
	% usage of ventilator	48%	101%	155%	205%	222%	216%	172%	119%		
<b>Deaths</b>	# of deaths from influenza			256	427	640	810	810	640	427	256
	# of influenza deaths in hospital			179	299	448	567	567	448	299	179

Notes: 1. All results showed in this table are based on most likely scenario.

2. Number of influenza patients in hospital, in ICU, and number of influenza patients on ventilators are based on maximum daily number in a relevant week.
3. Hospital capacity used, ICU capacity used, and % usage of ventilator are calculated as a percentage of total capacity available (see manual for details).
4. The maximum number of influenza patients in the hospital each week is lower than the number of weekly admissions because we assume a 5-day stay in general wards (see manual for details).

**Attachment B –  
Hospital Checklist**

Preparedness Subject	Actions Needed
<b>1. Structure for planning and decision making</b>	
<ul style="list-style-type: none"> <li>• An internal, multidisciplinary planning committee for influenza preparedness has been created.</li> </ul>	
<ul style="list-style-type: none"> <li>• A person has been designated as the influenza preparedness coordinator. (Insert name) _____</li> </ul>	
<ul style="list-style-type: none"> <li>• Members of the planning committee include the following hospital staff members (insert names)               <ul style="list-style-type: none"> <li>○ Administration _____</li> <li>○ Legal counsel _____</li> <li>○ Infection control _____</li> <li>○ Hospital disaster coordinator _____</li> <li>○ Risk management _____</li> <li>○ Facility engineering _____</li> <li>○ Nursing administration _____</li> <li>○ Medical staff _____</li> <li>○ Intensive care _____</li> <li>○ Emergency Department _____</li> <li>○ Laboratory services _____</li> <li>○ Respiratory therapy _____</li> <li>○ Psychiatry _____</li> <li>○ Environmental services _____</li> <li>○ Public relations _____</li> <li>○ Security _____</li> <li>○ Materials management _____</li> <li>○ Staff development _____</li> <li>○ Occupational health _____</li> <li>○ Diagnostic imaging _____</li> <li>○ Pharmacy _____</li> <li>○ Information technology _____</li> <li>○ Other members _____</li> <li>○ Other members _____</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• A state or local health department person has been identified as a committee liaison. (Insert name)</li> <li>• A linkage with local or regional emergency preparedness groups has been established. (Planning organization)</li> </ul>	

<b>2. Development of a written pandemic influenza plan</b>	
<ul style="list-style-type: none"> <li>• A written plan has been completed or is in progress that includes the elements listed in #3 below.</li> </ul>	
<ul style="list-style-type: none"> <li>• The plan specifies the circumstances under which the plan will be activated.</li> </ul>	
<ul style="list-style-type: none"> <li>• The plan describes the organization structure that will be used to operationalize the plan.</li> </ul>	
<ul style="list-style-type: none"> <li>• Responsibilities of key personnel related to executing the plan have been described.</li> </ul>	
<ul style="list-style-type: none"> <li>• A simulation exercise has been developed to test the effectiveness of the plan.</li> </ul>	
<ul style="list-style-type: none"> <li>• A simulation exercise has been performed. (Date performed _____)</li> </ul>	
<b>3. Elements of an influenza pandemic plan</b>	
<ul style="list-style-type: none"> <li>• A <b>surveillance plan</b> has been developed. <ul style="list-style-type: none"> <li>○ Syndromic surveillance has been established in the emergency room.</li> <li>○ Criteria for distinguishing pandemic influenza is part of the syndromic surveillance plan.</li> <li>○ Responsibility has been assigned for reviewing global, national, regional, and local influenza activity trends and informing the pandemic influenza coordinator of evidence of an emerging problem. (Name _____)</li> <li>○ Thresholds for heightened local surveillance for pandemic influenza have been established.</li> <li>○ A system has been created for internal review of pandemic influenza activity in patients presenting to the emergency department.</li> <li>○ A system for monitoring for nosocomial transmission of pandemic has been implemented and tested by monitoring for non-pandemic influenza.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• A <b>communication plan</b> has been developed. <ul style="list-style-type: none"> <li>○ Responsibility for external communication has been assigned. <ul style="list-style-type: none"> <li>▪ Person responsible for updating public health reporting _____</li> <li>▪ Clinical spokesperson for the facility _____</li> <li>▪ Media spokesperson for the facility _____</li> </ul> </li> <li>○ Key points of contact outside the facility have been identified. <ul style="list-style-type: none"> <li>▪ State health department contact _____</li> <li>▪ Local health department contact _____</li> <li>▪ Newspaper contact(s) _____</li> <li>▪ Radio contact(s) _____</li> </ul> </li> </ul> </li> </ul>	



<ul style="list-style-type: none"> <li>▪ Public Officials(s) _____</li> </ul> <ul style="list-style-type: none"> <li>○ A list of other healthcare facilities with whom it will be necessary to maintain communication has been established.</li> <li>○ A meeting with local healthcare facilities has been held to discuss a communication strategy.</li> <li>○ A plan for updating key facility personnel on a daily basis has been established.</li> </ul> <p>The person(s) responsible for providing these updates are: _____</p> <ul style="list-style-type: none"> <li>○ A system to track pandemic influenza admissions and discharges has been developed and tested by monitoring non-pandemic influenza admissions and discharges in the community.</li> <li>○ A strategy for regularly updating clinical, emergency department, and outpatient staff on the status of pandemic influenza, once detected, has been established. (Responsible person _____.)</li> <li>○ A plan for informing patients and visitors about the level of pandemic influenza activity has been established.</li> </ul>	
<ul style="list-style-type: none"> <li>• An education and training plan on pandemic influenza has been developed. <ul style="list-style-type: none"> <li>○ Language and reading level-appropriate materials for educating all personnel about pandemic influenza and the facility’s pandemic influenza plan, have been identified.</li> <li>○ Current and potential sites for long-distance and local education of clinicians on pandemic influenza have been identified.</li> <li>○ Means for accessing state and federal web-based influenza training programs have been identified.</li> <li>○ A system for tracking which personnel have completed pandemic influenza training is in place.</li> <li>○ A plan is in place for rapidly training non-facility staff brought in to provide patient care when the hospital reaches surge capacity.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• The following groups of healthcare personnel have received training on the facility’s influenza plan: <ul style="list-style-type: none"> <li>○ Attending physicians</li> <li>○ House staff</li> <li>○ Nursing staff</li> <li>○ Laboratory staff</li> <li>○ Emergency Department personnel</li> <li>○ Outpatient personnel</li> <li>○ Environmental Services personnel</li> <li>○ Engineering and maintenance personnel</li> <li>○ Security personnel</li> <li>○ Nutrition personnel</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• A <b>triage and admission plan</b> has been developed. <ul style="list-style-type: none"> <li>○ A specific location has been identified for triage of patients with possible pandemic influenza.</li> </ul> </li> </ul>	

<ul style="list-style-type: none"> <li>○ The plan includes use of signage to direct and instruct patients with possible pandemic influenza on the triage process.</li> <li>○ Patients with possible pandemic influenza will be physically separated from other patients seeking medical attention.</li> <li>○ A system for phone triage of patients for purposes of prioritizing patients who require a medical evaluation has been developed.</li> <li>○ Criteria for determining which patients need a medical evaluation are in place.</li> <li>○ A method for tracking the admission and discharge of patients with pandemic influenza has been developed.</li> <li>○ The tracking method has been tested with non-pandemic influenza patients.</li> </ul>	
<ul style="list-style-type: none"> <li>● A <b>facility access plan</b> has been developed. <ul style="list-style-type: none"> <li>○ Criteria and protocols for closing the facility to new admissions are in place.</li> <li>○ Criteria and protocols for limiting visitors have been established.</li> <li>○ Hospital security has had input into procedures for enforcing facility access controls.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>● An <b>occupational health plan</b> has been developed. <ul style="list-style-type: none"> <li>○ A system for rapidly delivering vaccine or antiviral prophylaxis to healthcare personnel has been developed.</li> <li>○ The system has been tested during a non-pandemic influenza season.</li> <li>○ A method for prioritizing healthcare personnel for receipt of vaccine or antiviral prophylaxis based on level of patient contact and personal risk for influenza complications has been established.</li> <li>○ A system for detecting symptomatic personnel before they report for duty has been developed.</li> <li>○ This system has been tested during a non-pandemic influenza period.</li> <li>○ A policy for managing healthcare personnel with symptoms of or documented pandemic influenza has been established. The policy considers: <ul style="list-style-type: none"> <li>❖ When personnel may return to work after having pandemic influenza.</li> <li>❖ When personnel who are symptomatic but well enough to work, will be permitted to continue working.</li> </ul> </li> <li>○ A method for furloughing or altering the work locations of personnel who are at high risk for influenza complications (e.g., pregnant women, immunocompromised healthcare workers) has been developed.</li> <li>○ Mental health and faith-based resources who will provide counseling to personnel during a pandemic have been identified.</li> <li>○ A strategy for housing healthcare personnel who may be needed on-site for prolonged periods of time is in place.</li> <li>○ A strategy for accommodating and supporting personnel who have child or elder care responsibilities has been developed.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>● A <b>vaccine and antiviral use plan</b> has been developed. <ul style="list-style-type: none"> <li>○ A contact for obtaining influenza vaccine has been identified. (Name) _____</li> <li>○ A contact for obtaining antiviral prophylaxis has been identified. (Name) _____</li> <li>○ A priority list (based on HHS guidance for use of vaccines and antivirals in a pandemic when in short supply) and estimated number of patients and healthcare</li> </ul> </li> </ul>	

<p>personnel who would be targeted for influenza vaccination or antiviral prophylaxis has been developed.</p> <ul style="list-style-type: none"> <li>▪ Number of first priority personnel _____</li> <li>▪ Number of second priority personnel _____</li> <li>▪ Number of remaining personnel _____</li> <li>▪ Number of first priority patients _____</li> <li>▪ Number of second priority patients _____</li> </ul> <ul style="list-style-type: none"> <li>○ A system for rapidly distributing vaccine and antivirals to patients has been developed.</li> </ul>	
<ul style="list-style-type: none"> <li>• Issues related to surge capacity have been addressed. <ul style="list-style-type: none"> <li>○ A plan is in place to address unmet staffing needs in the hospital.</li> <li>○ The minimum number and categories of personnel needed to care for a group of patients with pandemic influenza has been determined.</li> <li>○ Responsibility for assessing day-to-day clinical staffing needs during an influenza pandemic has been assigned.</li> </ul> <p>Persons responsible are: (names and/or titles)</p> <p>_____</p> <ul style="list-style-type: none"> <li>○ Legal counsel has reviewed emergency laws for using healthcare personnel with out-of-state licenses.</li> <li>○ Legal counsel has made sure that any insurance and other liability concerns have been resolved.</li> <li>○ Criteria for declaring a “staffing crisis” that would enable the use of emergency staffing alternatives have been defined.</li> <li>○ The plan includes linking to local and regional planning and response groups to collaborate on addressing widespread healthcare staffing shortages during a crisis.</li> <li>○ A priority list for reassignment and recruitment of personnel has been developed.</li> <li>○ A method for rapidly credentialing newly recruited personnel has been developed.</li> <li>○ Mutual AID Agreements (MAAs) and Memoranda of Understanding/Agreement (MOU/As) have been signed with other facilities that have agreed to share their staff, as needed.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• Strategies to increase bed capacity have been identified. <ul style="list-style-type: none"> <li>○ A threshold has been established for canceling elective admissions and surgeries.</li> <li>○ Memorandum of Agreements (MOAs) have been signed with facilities that would accept non-influenza patients in order to free-up bed space.</li> <li>○ Areas of the facility that could be utilized for expanded bed space have been identified.</li> <li>○ The estimated patient capacity for this facility is _____.</li> <li>○ Plans for expanded bed capacity have been discussed with local and regional planning groups.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• Anticipated durable and consumable resource needs have been determined. <ul style="list-style-type: none"> <li>○ A primary plan and contingency plan to address supply shortages has been developed.</li> </ul> </li> </ul>	

<ul style="list-style-type: none"> <li>○ Plans for obtaining limited resources have been discussed with local and regional planning and response groups.</li> </ul>	
<ul style="list-style-type: none"> <li>• A strategy for handling increased numbers of deceased persons has been developed. <ul style="list-style-type: none"> <li>○ Plans for expanding morgue capacity have been discussed with local and regional planning groups.</li> <li>○ Local morticians have been involved in planning discussions.</li> <li>○ Mortality estimates have been used to estimate the number of body bags and shrouds.</li> <li>○ Supply sources for postmortem materials have been identified.</li> </ul> </li> </ul>	

## Attachment C – EMS Checklist

### EMERGENCY MEDICAL SERVICE AND NON-EMERGENT (MEDICAL) TRANSPORT ORGANIZATIONS PANDEMIC INFLUENZA PLANNING CHECKLIST



Planning for pandemic influenza is critical for ensuring a sustainable health care response. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed the following checklist to help emergency medical services (EMS) and non-emergent (medical) transport organizations assess and improve their preparedness for responding to pandemic influenza. EMS organizations will be involved in the transport of acutely ill patients with known or suspected pandemic influenza to emergency departments; some of these patients might require mechanical ventilation for life support and/or other lifesaving interventions. Non-emergent (medical) transport organizations will be called upon to transport recovering pandemic influenza patients to their home, residential care facility, or possibly to alternate care sites set up by state or local health departments. This checklist is modeled after one included in the HHS Pandemic Influenza Plan ([www.hhs.gov/pandemicflu/plan/sup3.html#app2](http://www.hhs.gov/pandemicflu/plan/sup3.html#app2)). The list is comprehensive but not complete; each organization will have unique and unanticipated concerns that also will need to be addressed as part of a pandemic planning exercise. Also, some items on the checklist might not be applicable to all organizations. Collaborations among hospital, public health and public safety personnel are encouraged for the overall safety and care of the public. Further information can be found at [www.pandemicflu.gov](http://www.pandemicflu.gov).

This checklist identifies key areas for pandemic influenza planning. EMS and non-emergent (medical) transport organizations can use this tool to self-assess and identify the strengths and weakness of current planning. Links to websites with information are provided throughout the document. However, actively seeking information that is available locally or at the state level will be necessary to complete the development of the plan. Also, for some elements of the plan (e.g., education and training programs), information may not be immediately available and monitoring of selected websites for new and updated information will be necessary.

#### 1. Structure for planning and decision making.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pandemic influenza has been incorporated into emergency management planning and exercises for the organization.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A planning committee <sup>1</sup> has been created to specifically address pandemic influenza preparedness.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A person has been assigned responsibility for coordinating pandemic influenza preparedness planning (hereafter referred to as the pandemic response coordinator) for the organization. (Insert name, title, and contact information.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Members of the planning committee include the following: (Insert below or attach a list with name title and contact information for each.)
			<input type="checkbox"/> Administration: _____
			<input type="checkbox"/> Medical staff: _____
			<input type="checkbox"/> EMS providers: _____
			<input type="checkbox"/> Phone triage personnel/dispatch center: _____
			<input type="checkbox"/> Emergency management officer: _____
			<input type="checkbox"/> State/local health official: _____
			<input type="checkbox"/> Law enforcement official (for quarantine/security): _____
			<input type="checkbox"/> Other member <sup>2</sup> : _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A point of contact (e.g., internal staff member assigned infection control responsibility for the organization or an outside consultant) for questions/consultation on infection control has been identified. (Insert name, title, and contact information.)
			_____
			_____

1. Size of committee can vary, depending on the size and needs of the organization.

2. Some organizations may need or want to include a school official or volunteer coordinator for local civic and preparedness groups (e.g., Medical Reserve Corps, Citizen Corps, Community Emergency Response Teams, Rotary Club, Lions, Red Cross).

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## 2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of relevant sections of the Department of Health and Human Services Pandemic Influenza Plan have been obtained. <a href="http://www.hhs.gov/pandemicflu/plan">www.hhs.gov/pandemicflu/plan</a> .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of available community and state pandemic plans have been obtained.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A written plan has been completed or is in progress that includes the elements listed in #3 below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan describes the organizational structure (i.e., lines of authority) that will be used to operationalize the plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan complements or is part of the community response plan.

## 3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place for surveillance and detection of pandemic influenza in the population served and the appropriate organizational response.</p> <p><input type="checkbox"/> Responsibility has been assigned for monitoring national and state public health advisories (e.g., <a href="http://www.cdc.gov/flu/weekly/fluactivity.htm">www.cdc.gov/flu/weekly/fluactivity.htm</a>) and informing the pandemic response coordinator and members of the pandemic influenza planning committee when cases of pandemic influenza have been reported in the United States and when they are nearing the geographic area (e.g., state or city). (Insert name, title, and contact information of person responsible.)</p> <hr/> <p><input type="checkbox"/> A system has been created to track influenza-like illness in patients transported to hospitals and among EMS staff and to report this information to the pandemic response coordinator (i.e., weekly or daily number of patients with influenza-like illness). For more information see <a href="http://www.cdc.gov/flu/professionals/diagnosis/">www.cdc.gov/flu/professionals/diagnosis/</a>. (Having a system for tracking illness trends in patients and staff during seasonal influenza will ensure that organizations can detect stressors that may affect operating capacity, such as staffing and supply needs, and hospital and emergency department capacity during a pandemic.)</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A communication plan has been developed.</p> <p><input type="checkbox"/> Key public health points of contact for pandemic influenza have been identified. (Insert below or attach a list with the name, title, and contact information for each.)</p> <p><input type="checkbox"/> Local health department contact: _____</p> <p><input type="checkbox"/> State health department contact: _____</p> <p><input type="checkbox"/> Local emergency management contact: _____</p> <p><input type="checkbox"/> State emergency management contact: _____</p> <p><input type="checkbox"/> Federal health emergency contact(s): _____</p> <p><input type="checkbox"/> The organization's point person for external communication has been assigned. (Insert name, title, and contact information.)</p> <hr/> <p>(Having one person who speaks with the health department, and if necessary, media, local politicians, etc., will help ensure consistent communication is provided by the organization.)</p> <p><input type="checkbox"/> A list of healthcare entities and their points of contact (e.g., other local EMS and non-emergent [medical] transport organizations, local hospitals and their emergency departments, community health centers, residential care facilities) has been created. (Insert location of or attach copy of contact list.) _____</p> <hr/> <p><input type="checkbox"/> The pandemic response coordinator has contacted local or regional pandemic influenza planning groups to obtain information on communication and coordination plans, including how EMS will be represented in the planning process. (For more information on state and local planning, see <a href="http://www.hhs.gov/pandemicflu/plan/part2.html#overview">www.hhs.gov/pandemicflu/plan/part2.html#overview</a>.)</p> <p><input type="checkbox"/> The pandemic response coordinator has contacted other EMS and non-emergent (medical) transport organizations regarding pandemic influenza planning and coordination of services.</p>

### 3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place to ensure that education and training on pandemic influenza is provided to ensure that all personnel understand the implications of, and control measures for, pandemic influenza and the current organization and community response plans.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A person has been designated to coordinate education and training (e.g., identify and facilitate access to education and training programs, ensure that staff attend, and maintain a record of attendance at education and training programs). (Insert name, title, and contact information.)</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> Current and potential opportunities for long-distance (e.g., web-based) and local (e.g., health department or hospital sponsored programs, programs offered by professional organizations or federal agencies) education of EMS and medical transport personnel have been identified. (For more information see <a href="http://www.cdc.gov/flu/professionals/training/">www.cdc.gov/flu/professionals/training/</a>.)</li> <li><input type="checkbox"/> Language and reading-level-appropriate materials for professional and non-professional personnel on pandemic influenza (e.g., available through state and federal public health agencies and professional organizations) have been identified and a plan is in place for obtaining these materials.</li> <li><input type="checkbox"/> Education and training include information on infection control measures to prevent the spread of pandemic influenza.</li> <li><input type="checkbox"/> Differences between responding to pandemic influenza and a mass casualty event have been incorporated into education and training programs.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan has been developed for triage and management of patients during a pandemic that includes the following:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A system for phone triage of patients calling 911 or other emergency numbers that might be used (provide/post list of appropriate numbers) that includes pre-established criteria and coordination protocols to determine who needs emergency transport. The system includes points of referral for patients who do not need emergency transport.</li> <li><input type="checkbox"/> A plan for coordination with receiving facilities (e.g., hospital emergency departments), other EMS and non-emergent (medical) transport organizations, and local planning groups to manage the transportation of large numbers of patients at the height of the pandemic.</li> <li><input type="checkbox"/> A policy and procedure for transporting multiple patients with pandemic influenza during a single ambulance run.</li> <li><input type="checkbox"/> The plan considers the possible necessity of sharing transportation resources or using vehicles other than those designed for emergency or medical transport (e.g., buses).</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An infection control plan is in place and includes the following: (For information on infection control recommendations for pandemic influenza, see <a href="http://www.hhs.gov/pandemicflu/plan/sup4.html">www.hhs.gov/pandemicflu/plan/sup4.html</a>).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A plan for implementing Respiratory Hygiene/Cough Etiquette for patients with a possible respiratory illness.</li> <li><input type="checkbox"/> The plan includes distributing masks<sup>3</sup> to symptomatic patients who are able to wear them (adult and pediatric sizes should be available), providing facial tissues and receptacles for their disposal, and hand hygiene materials in EMS and medical transport vehicles.</li> <li><input type="checkbox"/> Implementation of Respiratory Hygiene/Cough Etiquette has been exercised during seasons when seasonal influenza and other respiratory viruses (e.g., respiratory syncytial virus, parainfluenza virus) are circulating in communities.</li> <li><input type="checkbox"/> A policy that requires healthcare personnel to use Standard Precautions (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html">www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html</a>) and Droplet Precautions (i.e., mask for close contact) (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html">www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html</a>) with symptomatic patients.</li> </ul>

3. Masks include both surgical and procedure types. Procedure masks that are affixed to the head with ear loops might be used more easily by patients and are available in pediatric and adult sizes. Either surgical or procedure masks may be used as a barrier to prevent contact with respiratory droplets.

### 3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>An occupational health plan has been developed that includes the following:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A liberal/non-punitive sick leave policy for managing EMS and non-emergent (medical) transport personnel who have symptoms of, or documented illness with, pandemic influenza.</li> <li><input type="checkbox"/> The policy considers the following: <ul style="list-style-type: none"> <li>• Handling of staff who become ill at work.</li> <li>• When personnel may return to work after recovering from pandemic influenza.</li> <li>• When personnel who are symptomatic but well enough to work will be permitted to continue working.</li> <li>• Personnel who need to care for their ill family members.</li> </ul> </li> <li><input type="checkbox"/> A system for evaluating symptomatic personnel before they report for duty that has been tested during a non-pandemic influenza period.</li> <li><input type="checkbox"/> A list of mental health and faith-based resources available to provide counseling to personnel during a pandemic.</li> <li><input type="checkbox"/> Management of personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised healthcare workers) by placing them on administrative leave or altering their work locations.</li> <li><input type="checkbox"/> The ability to monitor seasonal influenza vaccination of personnel.</li> <li><input type="checkbox"/> Offering annual influenza vaccine to personnel.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>A vaccine and antiviral use plan has been developed.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Websites containing current CDC and state health department recommendations for the use and availability of vaccines and antiviral medications have been identified. (For more information, see <a href="http://www.hhs.gov/pandemicflu/plan/sup6.html">www.hhs.gov/pandemicflu/plan/sup6.html</a> and <a href="http://www.hhs.gov/pandemicflu/plan/sup7.html">www.hhs.gov/pandemicflu/plan/sup7.html</a>.)</li> <li><input type="checkbox"/> An estimate has been made of the number of personnel who will be targeted as first and second priority for receipt of pandemic influenza vaccine and antiviral prophylaxis, based on HHS guidance for use. (For more information, see <a href="http://www.hhs.gov/pandemicflu/plan/appendixd.html">www.hhs.gov/pandemicflu/plan/appendixd.html</a>.)</li> <li><input type="checkbox"/> Discussions have been held with the local and/or state health department regarding the role of the organization in a large-scale program to distribute vaccine and antivirals to the general population.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>Concerns related to surge capacity during a pandemic have been addressed.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A plan is in place for managing a staffing shortage within the organization because of illness in personnel or their family members.</li> <li><input type="checkbox"/> The minimum number and categories of personnel necessary to sustain EMS and non-emergent (medical) transport services on a day-to-day basis have been determined.</li> <li><input type="checkbox"/> Contingency staffing plans have been developed in collaboration with other local EMS and non-emergent (medical) transport providers.</li> <li><input type="checkbox"/> Hospitals and regional planning groups have been consulted regarding contingency staffing resources.</li> <li><input type="checkbox"/> Anticipated consumable resource needs (e.g., masks, gloves, hand hygiene products) have been estimated.</li> <li><input type="checkbox"/> A primary plan and contingency plan to address supply shortages have been developed. These include detailed procedures for the acquisition of supplies through normal channels and requesting resources for replenishing supplies when normal channels have been exhausted.</li> <li><input type="checkbox"/> Plans include stockpiling at least a week's supply of resources when evidence exists that pandemic influenza has reached the United States.</li> <li><input type="checkbox"/> An understanding of the process exists for requesting and obtaining assets for the organization made available through the community response plan.</li> </ul>



## Attachment D – Non-Hospital Checklist

### MEDICAL OFFICES AND CLINICS PANDEMIC INFLUENZA PLANNING CHECKLIST



Planning for pandemic influenza is critical for ensuring a sustainable healthcare response. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed the following checklist to help medical offices and ambulatory clinics assess and improve their preparedness for responding to pandemic influenza. This checklist is modeled after a pandemic preparedness checklist for hospitals and should be used in conjunction with guidance on healthcare preparedness planning in Supplement 3 of the HHS Pandemic Influenza Plan. Many of the issues included in the checklist are also relevant to other outpatient settings that provide episodic and chronic healthcare services (e.g., dental, podiatric, and chiropractic offices, ambulatory surgery centers, hemodialysis centers). Given the variety of healthcare settings, individual medical offices and clinics may need to adapt this checklist to meet their unique needs. Further information can be found at [www.pandemicflu.gov](http://www.pandemicflu.gov).

This checklist identifies key areas for pandemic influenza planning. Medical offices and clinics can use this tool to identify the strengths and weaknesses of current planning efforts. Links to websites with information are provided throughout the document. However, actively seeking information that is available locally or at the state level will be necessary to complete the development of the plan. Also, for some elements of the plan (e.g., education and training programs), information may not be immediately available and it will be necessary to monitor selected websites for new and updated information.

#### 1. Structure for planning and decision making.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pandemic influenza has been incorporated into emergency management planning for the organization.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A planning committee <sup>1</sup> has been created to specifically address pandemic influenza preparedness for the medical office or clinic.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A person has been assigned responsibility for coordinating preparedness planning for the practice or organization (hereafter referred to as the pandemic influenza response coordinator).  (Insert name, title and contact information)  _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Members of the planning committee include the following: (Insert below or attach list with name, title and contact information for each)  Administration: _____ Medical staff: _____ Nursing: _____ Reception personnel: _____ Environmental services (if applicable): _____ Clinic laboratory personnel (if applicable): _____ Other member(s): _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A point of contact (e.g., person assigned infection control responsibility for the organization or an outside consultant <sup>2</sup> ) for questions/consultation on infection control measures to prevent transmission of pandemic influenza has been identified. (Insert name, title, and contact information)  _____ _____

1. The committee could be very small (e.g., two or three staff members) or very large, depending on the size and needs of the organization.  
2. Formal memorandum of understanding or contract may be needed if an outside consultant is used.

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## 2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of relevant sections of the Department of Health and Human Services Pandemic Influenza Plan have been obtained from <a href="http://www.hhs.gov/pandemicflu/plan">www.hhs.gov/pandemicflu/plan</a> ; copies of available state pandemic plans also should be obtained.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A written plan has been completed or is in progress that includes the elements listed in #3 below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan describes the organizational structure that will be used to operationalize (i.e., lines of authority) the plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan incorporates and compliments the community response plan.

## 3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place for surveillance and detection of pandemic influenza in the population served.</p> <p><input type="checkbox"/> Responsibility has been assigned for monitoring public health advisories (federal and state) and informing members of the pandemic influenza planning committee and/or the pandemic influenza response coordinator when pandemic influenza is in the United States and when it is nearing the geographic area (e.g., state and/or city). (For more information, see <a href="http://www.cdc.gov/flu/weekly/fluactivity.htm">www.cdc.gov/flu/weekly/fluactivity.htm</a>) (Insert name, title and contact information)</p> <p>_____</p> <p><input type="checkbox"/> A system has been created to monitor and review influenza activity in patients cared for by clinical staff (i.e., weekly or daily number of patients calling or presenting to the office or clinic with influenza-like illness) and among medical office or clinic staff. (For more information see <a href="http://www.cdc.gov/flu/professionals/diagnosis/">www.cdc.gov/flu/professionals/diagnosis/</a>) (Monitoring for seasonal influenza activity is performed to ensure that the monitoring system for pandemic influenza will be effective and will ensure that organizations can detect stressors that may affect organizational capacity, such as staffing and supply needs, and hospital and emergency department capacity [and supply needs] during a pandemic)</p> <p><input type="checkbox"/> A system is in place to report unusual cases of influenza-like illness and influenza to the local or state health department. (For more information see <a href="http://www.hhs.gov/pandemicflu/plan/sup1.html#outpat">www.hhs.gov/pandemicflu/plan/sup1.html#outpat</a> and <a href="http://www.hhs.gov/pandemicflu/plan/sup5.html#nov">www.hhs.gov/pandemicflu/plan/sup5.html#nov</a>)</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A communication plan has been developed.</p> <p><input type="checkbox"/> Key public health points of contact for pandemic influenza have been identified and arrangements have been made for telephone, facsimile, or e-mail messaging.</p> <p>Local health department contact: (Insert name, title and contact information)</p> <p>_____</p> <p>State health department contact: (Insert name, title and contact information)</p> <p>_____</p> <p><input type="checkbox"/> The office or clinic's point person for external communication has been assigned. (Insert name, title and contact information)</p> <p>_____</p> <p>(Having one person who speaks with the health department, and if necessary, media, local politicians, etc., will help ensure consistent communication is provided by the organization)</p> <p><input type="checkbox"/> A list has been created of healthcare entities and their points of contact (e.g., local hospitals/health facilities, home health care agencies, social service agencies, emergency medical services, commercial and clinical laboratories, relevant community organizations [including those involved with disaster preparedness]) with whom the medical office or clinic anticipates that it will be necessary to maintain communication and coordination of care during a pandemic. (Attach or insert location of contact list)</p> <p>_____</p> <p>_____</p>

3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
			<input type="checkbox"/> The pandemic response coordinator has contacted local or regional pandemic influenza planning groups to obtain information on communication and coordination plans, including notification when updated plans are created. (For more information on state and local planning, see <a href="http://www.hhs.gov/pandemicflu/plan/part2.html#overview">www.hhs.gov/pandemicflu/plan/part2.html#overview</a> ) <input type="checkbox"/> A list or database has been created with contact information on patients who have regularly-scheduled visits and may need to be contacted during a pandemic for purposes of rescheduling office visits or assigning them to another point of care. (Insert location of list/database) <hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place to provide an education and training program to ensure that all personnel understand the implications of, and control measures for, pandemic influenza.</p> <input type="checkbox"/> A person has been designated to coordinate education and training (e.g., identify and facilitate access to education and training programs, maintain a record of attendance at education and training programs). (Insert name, title and contact information) <hr/> <input type="checkbox"/> Current and potential opportunities for long-distance (e.g., web-based) and local (e.g., health department or hospital sponsored programs, programs offered by professional organizations or federal agencies) education of medical and nursing personnel have been identified. ( <a href="http://www.cdc.gov/flu/professionals/training/">http://www.cdc.gov/flu/professionals/training/</a> ) <input type="checkbox"/> Language and reading-level appropriate materials on pandemic influenza (e.g., available through state and federal public health agencies and professional organizations) appropriate for professional, allied and support personnel have been identified and a plan is in place for obtaining these materials. (For more information see <a href="http://www.cdc.gov/flu/professionals/patiented.htm">www.cdc.gov/flu/professionals/patiented.htm</a> ) <input type="checkbox"/> Education and training includes information on infection control measures to prevent the spread of pandemic influenza. <a href="http://www.hhs.gov/pandemicflu/plan/sup4.html">www.hhs.gov/pandemicflu/plan/sup4.html</a>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Informational materials for patients on pandemic influenza that are language and reading-level appropriate for the population being served have been identified, and a plan is in place to obtain these materials. (For more information see <a href="http://www.cdc.gov/flu/professionals/patiented.htm">www.cdc.gov/flu/professionals/patiented.htm</a>)</p> <input type="checkbox"/> The roles of medical and nursing personnel in providing health care guidance for patients with pandemic influenza have been established. <hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan for triage and management of patients during a pandemic has been developed.</p> <input type="checkbox"/> A system is in place for phone (and e-mail, where appropriate) triage of patients to determine who requires a medical evaluation, to limit office visits to those that are medically necessary. <input type="checkbox"/> Plans have been developed to manage patient care at the height of the pandemic including the following possibilities: <ul style="list-style-type: none"> <li>• Temporarily canceling non-essential medical visits (e.g., annual physicals).</li> <li>• Designating separate blocks of time for non-influenza and influenza-related patient care.</li> </ul> <input type="checkbox"/> Local plans and criteria for the disposition of patients following a medical evaluation (e.g., hospitalization, home health care services, self- or family-based care at home) have been discussed with local hospital and health care agencies and local health department. (Flexibility will be necessary based on hospital bed capacity) <hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An infection control plan is in place and includes the following: (For information on infection control recommendations for pandemic influenza see <a href="http://www.hhs.gov/pandemicflu/plan/sup4.html">www.hhs.gov/pandemicflu/plan/sup4.html</a>)</p> <input type="checkbox"/> A specific waiting room location has been designated for patients with symptoms of pandemic influenza that is segregated from other patients awaiting care. (This may not be feasible in very small waiting rooms, in which case the emphasis may be on use of masks as noted below) <hr/>

3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A plan for implementing Respiratory Hygiene/Cough Etiquette is in place. (For more information see <a href="http://www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm">www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm</a>)               <ul style="list-style-type: none"> <li>• Signage (language appropriate) directing patients and those accompanying them to notify reception personnel if they have symptoms of pandemic influenza has been developed or a source of signage (e.g., CDC website above) has been identified.</li> <li>• Signage (language appropriate) on Respiratory Hygiene/Cough Etiquette instructing symptomatic persons to use tissues to cover their cough to contain respiratory secretions and perform hand hygiene has been developed or a source of signage (e.g., CDC website above) has been identified.</li> <li>• The plan includes distributing masks to symptomatic patients who are able to wear them (adult and pediatric sizes should be available), providing facial tissues, receptacles for their disposal and hand hygiene materials in waiting areas and examination rooms.</li> <li>• Implementation of Respiratory Hygiene/Cough Etiquette has been exercised during seasons when influenza and other respiratory viruses (e.g., respiratory syncytial virus, parainfluenza virus) are circulating in communities.</li> <li>• If patients with pandemic influenza will be evaluated in the same location as patients without an influenza-like illness, separate examination rooms have been designated for evaluation of patients with symptoms of pandemic influenza.</li> <li>• A policy is in place that requires healthcare personnel to use Standard (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html">www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html</a>) and Droplet Precautions (i.e., mask for close contact) (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html">www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html</a>) with symptomatic patients.</li> <li>• The policy includes protection of reception and triage personnel at initial points of patient encounter.</li> </ul> </li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A vaccine and antiviral use plan has been developed.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Websites where current federal and/or state health department recommendations for the use and availability of pandemic influenza vaccines and antiviral medications have been identified. (for more information see <a href="http://www.hhs.gov/pandemicflu/plan/sup6.html">www.hhs.gov/pandemicflu/plan/sup6.html</a>)</li> <li><input type="checkbox"/> An estimate of the number of personnel and patients who would be targeted as first and second priority for receipt of pandemic influenza vaccine or antiviral prophylaxis, based on HHS guidance for use, has been developed. (<a href="http://www.dhhs.gov/nvpo/pandemicplan/annex6.pdf">www.dhhs.gov/nvpo/pandemicplan/annex6.pdf</a>) (This estimate can be used for considering which patients may need to be notified first about vaccine or antiviral availability, anticipating staffing requirements for distribution of vaccines and antivirals, and for procurement purposes)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An occupational health plan has been developed and includes the following:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A liberal/non-punitive sick leave policy for managing personnel who have symptoms of or documented illness with pandemic influenza.           <p>The policy considers:</p> <ul style="list-style-type: none"> <li>• The handling of staff who become ill at work.</li> <li>• When personnel may return to work after recovering from pandemic influenza.</li> <li>• When personnel who are symptomatic, but well enough to work, will be permitted to continue working.</li> <li>• Personnel who need to care for their ill family members.</li> </ul> </li> <li><input type="checkbox"/> A system for evaluating symptomatic personnel before they report for duty and tested during a non-pandemic influenza period.</li> <li><input type="checkbox"/> Mental health and faith-based resources that are available to provide counseling to personnel during a pandemic.</li> </ul>

3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The management of personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised healthcare workers) by placing them on administrative leave or altering their work location.</li> <li><input type="checkbox"/> The ability to monitor seasonal influenza vaccination of healthcare personnel.</li> <li><input type="checkbox"/> The offer of annual influenza vaccine to medical office or clinic personnel.</li> </ul> <p>Issues related to surge capacity (i.e., dealing with an influx of patients and staff and supply shortages) during a pandemic have been addressed. (For more information see <a href="http://www.hhs.gov/pandemicflu/plan/sup3.html#surge">www.hhs.gov/pandemicflu/plan/sup3.html#surge</a>)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Plans for managing a staffing shortage within the organization due to illness in personnel or their family members have been addressed.</li> <li><input type="checkbox"/> Staff have been encouraged to develop their own family care plans for the care of dependent minors and seniors in the event community containment measures (e.g., "snow days," school closures) are implemented. (<a href="http://www.pandemicflu.gov/planguide/checklist.html">www.pandemicflu.gov/planguide/checklist.html</a>; <a href="http://www.pandemicflu.gov/planguide/familyhealthinfo.html">www.pandemicflu.gov/planguide/familyhealthinfo.html</a>)</li> <li><input type="checkbox"/> The minimum number and categories of personnel necessary to keep the office/clinic open on a given day have been determined.</li> <li><input type="checkbox"/> Plans for either closing the office/clinic or recruiting temporary personnel during a staffing crisis have been addressed.</li> <li><input type="checkbox"/> Anticipated consumable resource needs (e.g., masks, gloves, hand hygiene products, medical supplies) have been estimated.</li> <li><input type="checkbox"/> A primary plan and contingency plan to address supply shortages have been developed and each details procedures for acquisition of supplies through normal channels, as well as requesting resources when normal channel resources have been exhausted.</li> <li><input type="checkbox"/> Plans include stockpiling at least a week's supply of consumable resources, including all necessary medical supplies, when there is evidence that pandemic influenza has reached the United States.</li> </ul>

## Attachment E– Home Health Checklist

### HOME HEALTH CARE SERVICES PANDEMIC INFLUENZA PLANNING CHECKLIST



Planning for pandemic influenza is critical. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention have developed the following checklist to help public and private organizations that provide home health care services assess and improve their preparedness for responding to pandemic influenza. Home health agencies will likely be called upon to provide care for patients who do not require hospitalization for pandemic influenza, or for whom hospitalization is not an option because hospitals have reached their capacity to admit patients. These agencies may become overburdened very quickly and shortages of personnel and supplies for providing home health care may occur. This checklist is modeled after the one included in the HHS Pandemic Influenza Plan ([www.hhs.gov/pandemicflu/plan/sup3.html#app2](http://www.hhs.gov/pandemicflu/plan/sup3.html#app2)). The list is comprehensive but not complete; each home care agency will have unique and unanticipated issues that will need to be addressed as part of a pandemic planning exercise. Also, some items on the checklist may not be applicable to a given agency. Collaboration with hospitals, local pandemic planning committees and public health agencies will be essential to ensure that the affected population receives needed health care services. Further information can be found at [www.pandemicflu.gov](http://www.pandemicflu.gov).

This checklist identifies key areas for pandemic influenza planning. Home health care organizations can use this tool to identify the strengths and weaknesses of current planning efforts. Links to websites with information are provided throughout the document. However, actively seeking information that is available locally or at the state level will be necessary to complete the development of the plan. Also, for some elements of the plan (e.g., education and training programs), information may not be immediately available and it will be necessary to monitor selected websites for new and updated information.

#### 1. Structure for planning and decision making.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pandemic influenza has been incorporated into emergency management planning for the organization.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A planning committee has been created to specifically address pandemic influenza preparedness.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A person has been assigned responsibility for coordinating preparedness planning (hereafter referred to as the pandemic response coordinator) for the practice or organization. (Insert name, title and contact information) _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Members of the planning committee <sup>1</sup> include the following: (Insert name, title and contact information for each) Administration: _____ Nursing: _____ Clerical: _____ Other: _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A point of contact has been identified for questions/consultation on infection control (e.g., hospital- or state health department-based infection control professional, healthcare epidemiologist). (Insert name, title, and contact information) _____

#### 2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of relevant sections of the Department of Health and Human Services Pandemic Influenza Plan have been obtained. ( <a href="http://www.hhs.gov/pandemicflu/plan/">www.hhs.gov/pandemicflu/plan/</a> )
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of available state and/or local pandemic influenza plans have been obtained.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A written plan has been completed or is in progress that includes the elements listed in #3 below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan describes the organizational structure (i.e., lines of authority, function and assignment of responsibility) that will be used to operationalize the plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan complements <sup>2</sup> local response plans in communities served by the home health care agency.

1. The committee could be very small (e.g., two or three staff members) or very large, depending on the size and needs of the organization. Members of the "group of professional personnel" required by CMS as one of the Home Health Agency Conditions of Participation should be included on the planning committee.

2. As communities develop their pandemic response plans, the provision of home health care will be a pivotal concern. Home health care agencies should have input into these plans to ensure there are no conflicts between what the agency can provide and what the community expects.

### 3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place for monitoring for pandemic influenza in the population served.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Responsibility has been assigned for monitoring national and state public health advisories (e.g., <a href="http://www.cdc.gov/flu/weekly/fluactivity.htm">www.cdc.gov/flu/weekly/fluactivity.htm</a>) and updating members of the pandemic influenza planning committee when cases of pandemic influenza have been reported in United States and in the geographic area. (Insert name, title, and contact information) _____</li> <li><input type="checkbox"/> A system has been created to monitor influenza-like illness in patients cared for in the home (i.e., weekly or daily number of patients with influenza-like illness). <a href="http://www.cdc.gov/flu/professionals/diagnosis/">www.cdc.gov/flu/professionals/diagnosis/</a> (Having a system for tracking illness trends during seasonal influenza will ensure that organizations can detect stressors that may affect operating capacity, including staffing and supply needs, during a pandemic.)</li> <li><input type="checkbox"/> A system is in place to report unusual cases of influenza-like illness and influenza-related deaths to local health authorities.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A communication plan has been developed and includes the following information:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Key public health points of contact for pandemic influenza have been identified. (Insert name, title, and contact information for each)</li> <li><input type="checkbox"/> Local health department _____</li> <li><input type="checkbox"/> State health department _____</li> <li><input type="checkbox"/> Local emergency management _____</li> <li><input type="checkbox"/> The organization's point person for external communication (e.g., with hospitals, nursing homes, health departments, social services agencies) has been assigned. (Insert name, title and contact information)</li> <li><input type="checkbox"/> A list has been created of healthcare entities and their points of contact (e.g., other home care services providers, local hospitals, residential care facilities, social service agencies, emergency medical services providers, health centers and rural health facilities, relevant community organizations [including those involved with disaster preparedness]) with whom the home care agency anticipates that it will be necessary to maintain communication and coordination of care during a pandemic. (Insert location of contact list): _____</li> <li><input type="checkbox"/> The pandemic response coordinator has contacted local or regional pandemic influenza planning groups to obtain information on communication and coordination of plans.</li> <li><input type="checkbox"/> The pandemic response coordinator has contacted other home care services providers in the area regarding their pandemic influenza planning efforts. (Whenever possible, home care agencies should consider joint planning and coordination opportunities.)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An education and training program has been developed to ensure that all personnel understand the implications of, and control measures for, pandemic influenza and the current community response plan. (For more information on the scope of recommended education and training, see <a href="http://www.hhs.gov/pandemicflu/plan/sup3.html#edutrain">www.hhs.gov/pandemicflu/plan/sup3.html#edutrain</a>)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A person has been designated to coordinate education and training (e.g., identify and facilitate access to education and training programs, ensure that home care personnel attend, and maintain a record of attendance). (Insert name, title, and contact information): _____</li> <li><input type="checkbox"/> Current and potential sites have been identified for long-distance (e.g., web-based programs offered by professional associations or federal agencies) and local (e.g., health department or hospital sponsored programs) education of home care personnel. (<a href="http://www.cdc.gov/flu/professionals/training/">www.cdc.gov/flu/professionals/training/</a>)</li> <li><input type="checkbox"/> Language and reading-level appropriate materials have been identified on pandemic influenza (e.g., available through state and federal public health agencies and professional organizations) and a plan is in place for obtaining these materials.</li> <li><input type="checkbox"/> The education and training program includes information on infection control measures to prevent the spread of pandemic influenza, including information on measures home health care personnel should apply during home care of patients. (For further information on infection control recommendations for home care, see <a href="http://www.hhs.gov/pandemicflu/plan/sup4.html#care">www.hhs.gov/pandemicflu/plan/sup4.html#care</a>)</li> </ul>

3. Most home health agencies will already have a list of healthcare organizations and points of contact that can be used for this purpose.

### 3. Elements of an influenza pandemic plan. (continued)

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Informational materials on pandemic influenza for patients and their families have been identified that are language and reading-level appropriate for the population being served and a plan is in place to obtain and disseminate these materials.</p> <p><input type="checkbox"/> Materials have been identified or developed to guide family members on infection control and care of patients with pandemic influenza in the home. <a href="http://www.pandemicflu.gov/plan/tab3.html">www.pandemicflu.gov/plan/tab3.html</a></p> <p><input type="checkbox"/> Patients and families are encouraged to maintain a 30-day supply of medications and medical supplies as well as a two-week supply of non-perishable food and water.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan has been developed for the management of patients during a pandemic, which covers the following issues:</p> <p><input type="checkbox"/> Plans have been developed to manage patient care during the height of a pandemic to accommodate the increased number of patients who will need home care services.</p> <p><input type="checkbox"/> The scope of services that the agency will provide and those that will be denied or referred to other providers has been clearly defined.</p> <p><input type="checkbox"/> The role and responsibility of the agency regarding distribution of infection control supplies (e.g., masks, hand hygiene materials), food, medications, and other necessities in the home to patients and their families has been discussed with a local or regional pandemic influenza planning group.</p> <p><input type="checkbox"/> Plans include decision tools for determining which patients can have altered service schedules based on their health conditions, needs, and available resources.</p> <p><input type="checkbox"/> Local plans and criteria for the disposition of patients have been discussed with area hospitals and other home care agencies. (Hospitals may discharge patients to home and home health care agencies early to free-up bed space for critically ill patients.)</p> <p><input type="checkbox"/> The plan considers how social service agencies (e.g., Red Cross, Salvation Army) will help meet the needs of families in the community (e.g., by providing child- or elder-care meals, shopping services) in homes where there are patients with pandemic influenza, particularly where the primary adult support person living in the home is ill.</p> <p><input type="checkbox"/> The plan considers how the agency will maintain a database of clients who require electrically-dependent technology-driven care (e.g., ventilators, breathing treatments, suction, pumps, turning devices), oxygen, special nutrition requirements, dialysis, etc.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An infection control plan is in place and includes the following:</p> <p><input type="checkbox"/> An infection control policy for the care of pandemic influenza patients in the home. (<a href="http://www.hhs.gov/pandemicflu/plan/sup4.html">www.hhs.gov/pandemicflu/plan/sup4.html</a> and <a href="http://www.cdc.gov/flu/professionals/infectioncontrol/">www.cdc.gov/flu/professionals/infectioncontrol/</a>)</p> <p><input type="checkbox"/> The policy requires healthcare personnel to use Standard (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html">www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html</a>) and Droplet Precautions (i.e., mask for close contact) (<a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html">www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html</a>) with symptomatic patients.</p> <p><input type="checkbox"/> A list has been developed of supplies (e.g., surgical masks, gloves, alcohol-based hand hygiene products) that will be used during home care of patients with pandemic influenza.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>An occupational health plan has been developed that includes the following:</p> <p><input type="checkbox"/> A liberal/non-punitive sick leave policy for managing home care personnel who have symptoms of, or documented illness with, pandemic influenza. The policy considers:</p> <ul style="list-style-type: none"> <li>• The handling of staff who become ill at work</li> <li>• When personnel may return to work after recovering from pandemic influenza</li> <li>• When personnel who are symptomatic, but well enough to work, will be permitted to continue working</li> </ul> <p><input type="checkbox"/> A system for evaluating symptomatic personnel before they report for duty has been developed and tested during a non-pandemic (e.g., seasonal) influenza period.</p> <p><input type="checkbox"/> Mental health and faith-based resources have been identified that are available to provide counseling to personnel during a pandemic.</p> <p><input type="checkbox"/> The management of personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised healthcare workers) has been addressed by placing them on administrative leave or altering their work location</p> <p><input type="checkbox"/> Staff have been encouraged to develop their own family care plans for the care of dependent minors and seniors in the event community containment measures (e.g., "snow days," school closures) are implemented and for possible illness in adult family members.</p> <p><input type="checkbox"/> The agency has the ability to monitor influenza vaccination of healthcare personnel.</p> <p><input type="checkbox"/> Influenza vaccine is offered or made available on an annual basis to healthcare personnel.</p>



**3. Elements of an influenza pandemic plan. (continued)**

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>A vaccine and antiviral use plan has been developed.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Websites containing current federal and state health department recommendations for the use and availability of vaccines and antiviral medications have been identified. (<a href="http://www.cdc.gov/flu/professionals/vaccination/">www.cdc.gov/flu/professionals/vaccination/</a>)</li> <li><input type="checkbox"/> An estimate has been developed of the number of personnel who would be targeted as first and second priority for receipt of pandemic influenza vaccine and antiviral prophylaxis, based on HHS guidance for use. (<a href="http://www.hhs.gov/pandemicflu/plan/appendixd.html">www.hhs.gov/pandemicflu/plan/appendixd.html</a>)</li> <li><input type="checkbox"/> The potential role of the home health care organization in the distribution of vaccine and antivirals in the community has been discussed with the local health department and/or regional pandemic planning committee.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>Issues related to surge capacity during a pandemic have been addressed.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A plan is in place for managing a staffing shortage within the organization due to illness in personnel or their family members.</li> <li><input type="checkbox"/> The minimum number and categories of nursing staff and other professional personnel necessary to sustain home care services for a given number of patients or on a day-to-day basis have been determined. Cross-training (where applicable) has been implemented.</li> <li><input type="checkbox"/> Priorities for providing care have been established.</li> <li><input type="checkbox"/> Contingency staffing plans have been developed for either limiting home care access or recruiting temporary personnel during a staffing crisis.</li> <li><input type="checkbox"/> Hospitals and other appropriate healthcare service providers have been consulted regarding contingency staffing resources.</li> <li><input type="checkbox"/> Anticipated consumable resource needs (e.g., masks, gloves, hand hygiene products) have been estimated.</li> <li><input type="checkbox"/> A primary plan and contingency plan to address supply shortages have been developed, including detailed procedures for acquisition of supplies through normal channels as well as requesting resources for replenishing supplies when normal channels have been exhausted.</li> <li><input type="checkbox"/> Plans include stockpiling at least a week's supply of resources when there is evidence that the potential for pandemic influenza has reached the United States.</li> <li><input type="checkbox"/> There is an understanding of the process for requesting and obtaining assets (e.g., personal protective equipment, medical supplies) made available through the community's response plan.</li> <li><input type="checkbox"/> Information has been obtained on local and regional plans and resources for dealing with mass fatalities including removal of the deceased from the home.</li> </ul>

March 1, 2006  
Version 5



## Attachment F– Long Term Care Checklist

### LONG-TERM CARE AND OTHER RESIDENTIAL FACILITIES PANDEMIC INFLUENZA PLANNING CHECKLIST



Planning for pandemic influenza is critical for ensuring a sustainable healthcare response. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed this checklist to help long-term care and other residential facilities assess and improve their preparedness for responding to pandemic influenza. Based on differences among facilities (e.g., patient/resident characteristics, facility size, scope of services, hospital affiliation), each facility will need to adapt this checklist to meet its unique needs and circumstances. This checklist should be used as one tool in developing a comprehensive pandemic influenza plan. Additional information can be found at [www.pandemicflu.gov](http://www.pandemicflu.gov). Information from state, regional, and local health departments, emergency management agencies/authorities, and trade organizations should be incorporated into the facility's pandemic influenza plan. Comprehensive pandemic influenza planning can also help facilities plan for other emergency situations.

This checklist identifies key areas for pandemic influenza planning. Long-term care and other residential facilities can use this tool to self-assess the strengths and weaknesses of current planning efforts. Links to websites with helpful information are provided throughout this document. However, it will be necessary to actively obtain information from state and local resources to ensure that the facility's plan complements other community and regional planning efforts.

#### 1. Structure for planning and decision making.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pandemic influenza has been incorporated into emergency management planning and exercises for the facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A multidisciplinary planning committee or team <sup>1</sup> has been created to specifically address pandemic influenza preparedness planning. (List committee's or team's name.) _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A person has been assigned responsibility for coordinating preparedness planning, hereafter referred to as the pandemic influenza response coordinator. (Insert name, title and contact information.) _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Members of the planning committee include (as applicable to each setting) the following: (Develop a list of committee members with the name, title, and contact information for each personnel category checked below and attach to this checklist.)
			<input type="checkbox"/> Facility administration
			<input type="checkbox"/> Medical director
			<input type="checkbox"/> Nursing administration
			<input type="checkbox"/> Infection control
			<input type="checkbox"/> Occupational health
			<input type="checkbox"/> Staff training and orientation
			<input type="checkbox"/> Engineering/maintenance services
			<input type="checkbox"/> Environmental (housekeeping) services
			<input type="checkbox"/> Dietary (food) services
			<input type="checkbox"/> Pharmacy services
			<input type="checkbox"/> Occupational/rehabilitation/physical therapy services
			<input type="checkbox"/> Transportation services
			<input type="checkbox"/> Purchasing agent
			<input type="checkbox"/> Facility staff representative
			<input type="checkbox"/> Other member(s) as appropriate (e.g., clergy, community representatives, department heads, resident and family representatives, risk managers, quality improvement, direct care staff, collective bargaining agreement union representatives)

<sup>1</sup> An existing emergency or disaster preparedness team may be assigned this responsibility.  
May 1, 2006 Version 1



### 1. Structure for planning and decision making *(continued)*.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Local and state health departments and provider/trade association points of contact have been identified for information on pandemic influenza planning resources. (Insert name, title and contact information for each.)  Local health department contact: _____ State health department contact: _____ State long-term care professional/trade association: _____ _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Local, regional, or state emergency preparedness groups, including bioterrorism/communicable disease coordinators points of contact have been identified. (Insert name, title and contact information for each.)  City: _____ County: _____ Other regional: _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area hospitals points of contact have been identified in the event that facility residents require hospitalization or facility beds are needed for hospital patients being discharged in order to free up needed hospital beds. (Attach a list with the name, title, and contact information for each hospital.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The pandemic influenza response coordinator has contacted local or regional pandemic influenza planning groups to obtain information on coordinating the facility's plan with other influenza plans.

### 2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies have been obtained of relevant sections of the HHS Pandemic Influenza Plan (available at <a href="http://www.hhs.gov/pandemicflu/plan/">www.hhs.gov/pandemicflu/plan/</a> ) and available state, regional, or local plans are reviewed for incorporation into the facility's plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The facility plan includes the elements listed in #3 below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The plan identifies the person(s) authorized to implement the plan and the organizational structure that will be used.

### 3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place for surveillance and detection of the presence of pandemic influenza in residents and staff.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A person has been assigned responsibility for monitoring public health advisories (federal and state), and updating the pandemic response coordinator and members of the pandemic influenza planning committee when pandemic influenza has been reported in the United States and is nearing the geographic area. For more information, see <a href="http://www.cdc.gov/flu/weekly/fluactivity.htm">www.cdc.gov/flu/weekly/fluactivity.htm</a>. (Insert name, title and contact information of person responsible.) _____</li> <li><input type="checkbox"/> A written protocol has been developed for weekly or daily monitoring of seasonal influenza-like illness in residents and staff. For more information, see <a href="http://www.cdc.gov/flu/professionals/diagnosis/">www.cdc.gov/flu/professionals/diagnosis/</a>. (Having a system for tracking illness trends during seasonal influenza will ensure that the facility can detect stressors that may affect operating capacity, including staffing and supply needs, during a pandemic.)</li> <li><input type="checkbox"/> A protocol has been developed for the evaluation and diagnosis of residents and/or staff with symptoms of pandemic influenza.</li> <li><input type="checkbox"/> Assessment for seasonal influenza is included in the evaluation of incoming residents. There is an admission policy or protocol to determine the appropriate placement and isolation of patients with an influenza-like illness. (The process used during periods of seasonal influenza can be applied during pandemic influenza.)</li> </ul>

### 3. Elements of an influenza pandemic plan (continued).

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><input type="checkbox"/> A system is in place to monitor for, and internally review transmission of, influenza among patients and staff in the facility. Information from this monitoring system is used to implement prevention interventions (e.g., isolation, cohorting). (This system will be necessary for assessing pandemic influenza transmission.)</p> <p>A facility communication plan has been developed. For more information, see <a href="http://www.hhs.gov/pandemicflu/plan/sup10.htm">www.hhs.gov/pandemicflu/plan/sup10.htm</a>.</p> <p><input type="checkbox"/> Key public health points of contact during an influenza pandemic influenza have been identified. (Insert name, title and contact information for each.)</p> <p><input type="checkbox"/> Local health department contact: _____</p> <p><input type="checkbox"/> State health department contact: _____</p> <p><input type="checkbox"/> A person has been assigned responsibility for communications with public health authorities during a pandemic. (Insert name, title and contact information.) _____</p> <p><input type="checkbox"/> A person has been assigned responsibility for communications with staff, residents, and their families regarding the status and impact of pandemic influenza in the facility. (Having one voice that speaks for the facility during a pandemic will help ensure the delivery of timely and accurate information.)</p> <p><input type="checkbox"/> Contact information for family members or guardians of facility residents is up-to-date.</p> <p><input type="checkbox"/> Communication plans include how signs, phone trees, and other methods of communication will be used to inform staff, family members, visitors, and other persons coming into the facility (e.g., sales and delivery people) about the status of pandemic influenza in the facility.</p> <p><input type="checkbox"/> A list has been created of other healthcare entities and their points of contact (e.g., other long-term care and residential facilities, local hospitals' emergency medical services, relevant community organizations [including those involved with disaster preparedness]) with whom it will be necessary to maintain communication during a pandemic. (Insert location of contact list and attach a copy to the pandemic plan.) _____</p> <p><input type="checkbox"/> A facility representative(s) has been involved in the discussion of local plans for inter-facility communication during a pandemic.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>A plan is in place to provide education and training to ensure that all personnel, residents, and family members of residents understand the implications of, and basic prevention and control measures for, pandemic influenza.</p> <p><input type="checkbox"/> A person has been designated with responsibility for coordinating education and training on pandemic influenza (e.g., identifies and facilitates access to available programs, maintains a record of personnel attendance). (Insert name, title, and contact information.) _____</p> <p><input type="checkbox"/> Current and potential opportunities for long-distance (e.g., web-based) and local (e.g., health department or hospital-sponsored) programs have been identified. See <a href="http://www.cdc.gov/flu/professionals/training/">www.cdc.gov/flu/professionals/training/</a>.</p> <p><input type="checkbox"/> Language and reading-level appropriate materials have been identified to supplement and support education and training programs (e.g., available through state and federal public health agencies such as <a href="http://www.cdc.gov/flu/groups.htm">www.cdc.gov/flu/groups.htm</a> and through professional organizations), and a plan is in place for obtaining these materials.</p> <p><input type="checkbox"/> Education and training includes information on infection control measures to prevent the spread of pandemic influenza.</p> <p><input type="checkbox"/> The facility has a plan for expediting the credentialing and training of non-facility staff brought in from other locations to provide patient care when the facility reaches a staffing crisis.</p> <p><input type="checkbox"/> Informational materials (e.g., brochures, posters) on pandemic influenza and relevant policies (e.g., suspension of visitation, where to obtain facility or family member information) have been developed or identified for residents and their families. These materials are language and reading-level appropriate, and a plan is in place to disseminate these materials in advance of the actual pandemic. For more information, see <a href="http://www.cdc.gov/flu/professionals/infectioncontrol/index.htm">www.cdc.gov/flu/professionals/infectioncontrol/index.htm</a> and <a href="http://www.cdc.gov/flu/groups.htm">www.cdc.gov/flu/groups.htm</a>.</p>

### 3. Elements of an influenza pandemic plan (continued).

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An infection control plan is in place for managing residents and visitors with pandemic influenza that includes the following: (For information on infection control recommendations for pandemic influenza, see <a href="http://www.hhs.gov/pandemicflu/plan/sup4.html">www.hhs.gov/pandemicflu/plan/sup4.html</a> .)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An infection control policy that requires direct care staff to use Standard ( <a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html">www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html</a> ) and Droplet Precautions (i.e., mask for close contact) ( <a href="http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html">www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html</a> ) with symptomatic residents.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A plan for implementing Respiratory Hygiene/Cough Etiquette throughout the facility. (See <a href="http://www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm">www.cdc.gov/flu/professionals/infectioncontrol/resphgiene.htm</a> .)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A plan for cohorting symptomatic residents or groups using one or more of the following strategies: <sup>2</sup> 1) confining symptomatic residents and their exposed roommates to their room, 2) placing symptomatic residents together in one area of the facility, or 3) closing units where symptomatic and asymptomatic residents reside (i.e., restricting all residents to an affected unit, regardless of symptoms). The plan includes a stipulation that, where possible, staff who are assigned to work on affected units will not work on other units.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Criteria and protocols for closing units or the entire facility to new admissions when pandemic influenza is in the facility have been developed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Criteria and protocols for enforcing visitor limitations have been developed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An occupational health plan for addressing staff absences and other related occupational issues has been developed that includes the following:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A liberal/non-punitive sick leave policy that addresses the needs of symptomatic personnel and facility staffing needs. The policy considers: <ul style="list-style-type: none"> <li>- The handling of personnel who develop symptoms while at work.</li> <li>- When personnel may return to work after having pandemic influenza.</li> <li>- When personnel who are symptomatic, but well enough to work, will be permitted to continue working.</li> <li>- Personnel who need to care for family members who become ill.</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A plan to educate staff to self-assess and report symptoms of pandemic influenza before reporting for duty.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A list of mental health and faith-based resources that will be available to provide counseling to personnel during a pandemic.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A system to monitor influenza vaccination of personnel.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A plan for managing personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised workers) by placing them on administrative leave or altering their work location.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A vaccine and antiviral use plan has been developed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> CDC and state health department websites have been identified for obtaining the most current recommendations and guidance for the use, availability, access, and distribution of vaccines and antiviral medications during a pandemic. For more information, see <a href="http://www.hhs.gov/pandemicflu/plan/sup6.html">www.hhs.gov/pandemicflu/plan/sup6.html</a> and <a href="http://www.hhs.gov/pandemicflu/plan/sup7.html">www.hhs.gov/pandemicflu/plan/sup7.html</a> .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> HHS guidance has been used to estimate the number of personnel and residents who would be targeted as first and second priority for receipt of pandemic influenza vaccine or antiviral prophylaxis. For more information, see <a href="http://www.hhs.gov/pandemicflu/plan/sup6.html">www.hhs.gov/pandemicflu/plan/sup6.html</a> and <a href="http://www.hhs.gov/pandemicflu/plan/sup7.html">www.hhs.gov/pandemicflu/plan/sup7.html</a> .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A plan is in place for expediting delivery of influenza vaccine or antiviral prophylaxis to residents and staff as recommended by the state health department.

2. CDC guidance on preventing and controlling influenza transmission in long-term care facilities will be a useful resource during pandemic influenza. (See [www.cdc.gov/flu/professionals/infectioncontrol/longtermcare.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/longtermcare.htm).)

**3. Elements of an influenza pandemic plan (continued).**

Completed	In Progress	Not Started	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><b>Issues related to surge capacity during a pandemic have been addressed.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A contingency staffing plan has been developed that identifies the minimum staffing needs and prioritizes critical and non-essential services based on residents' health status, functional limitations, disabilities, and essential facility operations.</li> <li><input type="checkbox"/> A person has been assigned responsibility for conducting a daily assessment of staffing status and needs during an influenza pandemic. (Insert name, title and contact information.)</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> Legal counsel and state health department contacts have been consulted to determine the applicability of declaring a facility "staffing crisis" and appropriate emergency staffing alternatives, consistent with state law.</li> <li><input type="checkbox"/> The staffing plan includes strategies for collaborating with local and regional planning and response groups to address widespread healthcare staffing shortages during a crisis.</li> <li><input type="checkbox"/> Estimates have been made of the quantities of essential materials and equipment (e.g., masks, gloves, hand hygiene products, intravenous pumps) that would be needed during a six-week pandemic.</li> <li><input type="checkbox"/> A plan has been developed to address likely supply shortages, including strategies for using normal and alternative channels for procuring needed resources.</li> <li><input type="checkbox"/> Alternative care plans have been developed for facility residents who need acute care services when hospital beds become unavailable.</li> <li><input type="checkbox"/> Surge capacity plans include strategies to help increase hospital bed capacity in the community.               <ul style="list-style-type: none"> <li>- Signed agreements have been established with area hospitals for admission to the long-term care facility of non-influenza patients to facilitate utilization of acute care resources for more seriously ill patients.</li> <li>- Facility space has been identified that could be adapted for use as expanded inpatient beds and information provided to local and regional planning contacts.</li> </ul> </li> <li><input type="checkbox"/> A contingency plan has been developed for managing an increased need for post mortem care and disposition of deceased residents.</li> <li><input type="checkbox"/> An area in the facility that could be used as a temporary morgue has been identified.</li> <li><input type="checkbox"/> Local plans for expanding morgue capacity have been discussed with local and regional planning contacts.</li> </ul>

## References

Centers for Disease Control and Prevention. Pandemic Website

<https://www.cdc.gov/flu/pandemic-resources/index.htm>

US Department of Health and Human Services. *Pandemic Influenza Plan, 2017 Update*,

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Occupational Safety and Health Administration. *Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers*, 2009.

[https://www.osha.gov/Publications/OSHA\\_pandemic\\_health.pdf](https://www.osha.gov/Publications/OSHA_pandemic_health.pdf)

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[www.phe.gov/preparedness/planning/mscc/handbook/pages/default.aspx](http://www.phe.gov/preparedness/planning/mscc/handbook/pages/default.aspx)

Centers for Disease Control and Prevention. *FluSurge 2.0*. <https://www.cdc.gov/flu/pandemic-resources/tools/flusurge.htm>

Agency for Healthcare Research and Quality by Health Systems Research, Inc. *Altered Standards of Care*, Publication No. 05-0043, April 2005, <http://archive.ahrq.gov/research/altstand/>

*Rocky Mountain Regional Care Model for Bioterrorism Events: Local Care Sites During an Emergency Final Report to the AHRQ, Alternative Care Sites*, Publication No. 04-0075, August 2004, <http://archive.ahrq.gov/research/altsites/>

Department of Defense. *Modular Emergency Medical Systems*, June 1, 2002

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[http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Downloads/SandC\\_EPChecklist\\_Persons\\_LTCFacilities\\_Ombudsmen.pdf](http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Downloads/SandC_EPChecklist_Persons_LTCFacilities_Ombudsmen.pdf)

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Joint Commission on Accreditation of Healthcare Organizations. *Surge Hospital: Providing Safe Care in Emergencies*, 2006

American College of Physicians. *The Health Care Response to Pandemic Influenza*.

Philadelphia: American College of Physicians; 2006; Position Paper (available from American College of Physicians, 190 N. Independence Mall West, Philadelphia PA 19106)

DHSS. *Pandemic Influenza - Medical & Public Health Professionals*

<https://health.mo.gov/emergencies/panflu/panflu.php>

# Pandemic Influenza Plan – Vaccine Storage and Distribution

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## INTRODUCTION

Vaccination against the circulating pandemic virus is a major focus of pandemic response efforts. Vaccination is crucial in reducing morbidity and mortality, and in minimizing social disruption by maintaining essential services.

In response to the 2009 H1N1 influenza pandemic, public health authorities conducted a vaccination campaign to protect tens of millions of Americans from the virus. This was one of the biggest public health initiatives in the United States history. The goal was to ensure that everyone who wanted to be vaccinated was able to be vaccinated. Providing one dose of vaccine to everyone in groups considered to be at high risk for serious complications would have required 159 million doses, a much greater task compared to 85 million people who are vaccinated annually for seasonal influenza. Funded by the federal government, vaccine was allocated to states in proportion to the size of their total population, regardless of the disease burden in each state and the number of state residents in the Advisory Committee on Immunization Practices (ACIP) target groups. Each state then developed its own plan to distribute and administer vaccine. Vaccine was shipped directly to public and private provider vaccination sites from the central distributor, based on orders placed by the states. States developed many kinds of distribution plans. Some states, such as Missouri, relied mostly on local health departments, which then distributed to other stakeholders. Other states distributed vaccine to a combination of state and local public health authorities, private healthcare providers, and pharmacies. A smaller number of states received all the states' vaccine supply and handled the physical redistribution to vaccine administrators themselves, a so-called centralized distribution model. The diversity in distribution methods across the country meant that neighboring jurisdictions often had different distribution systems. This caused confusion and communications challenges, some participants noted, especially in states in which each local health department developed its own distribution plan. Despite challenges caused by delays in supply, the identification of priority groups to receive the initial supply of vaccine, and associated public health messaging complexities, 61 million Americans were vaccinated in the first 3 months of the campaign.

## OBJECTIVES

- Ensure timely and equitable distribution of pandemic vaccine.
- Track pandemic vaccine use across the state.
- Monitor pandemic vaccine safety.
- Ensure that the public and the health care providers have access to accurate and timely information on vaccine use and availability.

## PLANNING ASSUMPTIONS

Since during the initial stages of a pandemic supply of vaccine will be limited, the CDC and ACIP are likely to provide epidemiologic information and guidelines for the prioritization of pandemic vaccine distribution and use. During the H1N1 pandemic, the high risk groups previously defined as a priority for the seasonal influenza vaccination needed to be redefined for



pandemic vaccination due to the different epidemiology of the pH1N1 virus. The Missouri Department of Health and Senior Services (DHSS) will use the CDC recommendations for guidance on how to specifically address vaccinating those prioritized for vaccine. Groups usually considered for vaccine prioritization include:

- Maintain essential services (e.g., homeland and national security, critical infrastructure).
- At high risk for contracting influenza during a pandemic (e.g., first responders, health care providers).
- At high risk for complications or death from the pandemic virus (e.g., young children, elderly, etc.).
- In the beginning of the pandemic, it will not be known how quickly the pandemic vaccine will become available.
- Vaccine supply is likely to be limited during the early stages of the pandemic.
- Two doses of vaccine will be likely required to achieve a protective response from the vaccine.
- The effectiveness of the pandemic vaccine may be limited depending on the emergent strain.
- The amount of vaccine allocated and delivered to Missouri might not be adequate to vaccinate all persons in the high priority groups.

## **DHSS ACTIVITIES BY THE PANDEMIC INTERVAL**

### **Pre-pandemic interval**

- Provide information and tools for mass vaccination.
- Assess vaccine storage capacity within state and counties.
- Review vaccine storage and handling procedures. (Vaccines for Children [VFC] guidelines)
- Estimate number of people in each pandemic virus vaccination priority group.
- Develop a plan on how persons in priority groups would be identified at vaccination clinics and how vaccine would be most efficiently provided to those groups.
- Develop a plan to vaccinate the remainder of the population after priority groups have been vaccinated.
- Discuss security provisions for vaccine supply.
- Review adverse event reporting procedure.
- Clarify responsibilities of community partners in vaccination.
- Identify potential funding sources to support vaccine related activities during pandemic.
- Monitor new pandemic developments, and modify existing vaccination plans as needed to reflect new recommendations.
- Identify sources of additional vaccinators if needed for surge.
- Assist local health departments to assess vaccine quantities needed based on priority levels.
- Develop a communications plan with local public health agencies (LPHAs) and a communications plan to the public.

### **Pandemic Interval**

#### **Prior to Pandemic Vaccine Availability**

- Mobilize healthcare partners and prepare to activate plan for distributing and administering vaccines.

- Work with LPHAs and health care partners to distribute, deliver, administer, and track pre-pandemic or stockpiled vaccines to designated priority groups, if available.
- Work with Centers for Disease Control and Prevention (CDC) and other federal partners, vaccine manufacturers and public health organizations to establish plan for acquisition and distribution of initial vaccine supplies.
- Communicate new pandemic developments, and modify existing internal plans as needed to reflect new recommendations to LPHAs and the public, as necessary.
- Keep the healthcare and public health workforce up-to-date on projected timelines for availability of vaccines and the expected timeline for vaccine distribution.
- Review and update modifications, if any, to recommendations on vaccinating priority groups.
- Make any revisions of priority groups needed and communicate the changes to LPHAs and health care partners.
- Work with other governmental agencies and non-governmental organizations to ensure effective public health communications.

#### After Pandemic Vaccine Available for Distribution

- Work with LPHAs and health care partners to distribute, deliver, administer, and track pandemic vaccine to priority groups.
- Consider redistribution of vaccine as needed to provide an equitable geographic distribution of supplies.
- Continue to review and revise priority groups, and communicate changes to LPHAs and health care partners.
- Introduce vaccination of the rest of the population after priority groups have been vaccinated or demand from priority groups has waned.
- Maintain existing Vaccine Adverse Event Reporting System (VAERS) reporting procedures during pandemic.
- Work with Public Information Officers (PIOs) to provide timely and accurate public messages regarding vaccine availability and location of vaccine administration sites.

#### **Pandemic Vaccine Distribution**

This vaccine will be distributed to local jurisdictions based on population. However, DHSS may allocate significant portions of the vaccine based on the epidemiology of the disease, with additional amounts being provided to those areas being more severely impacted early in the pandemic in terms of illnesses, deaths, or loss of critical infrastructure. DHSS has identified the ship-to site that will receive the bulk delivery of the pre-pandemic and pandemic vaccine into the state. Planning guidance from the United States Department of Health and Human Services (HHS) indicates that the 240,000-dose allocation will be received as one shipment. DHSS, in collaboration with the Missouri Department of Public Safety (DPS), will ensure the regional and local distribution of these vaccines to pre-determined sites. Local emergency management, public health and public safety authorities, in conjunction with the state authorities, will play key roles in ensuring the safe and proper storage and handling of the vaccine. DHSS will develop a memorandum of understanding with DPS to establish roles and responsibilities.

### The pre-pandemic vaccine

The pre-pandemic vaccine will be administered per the tiered priority structure through those methods deemed most appropriate by local authorities, in accordance with minimal levels of handling as established and verified by the state. The local public health authority will be the lead in ensuring proper vaccine distribution and administration. These methods may include clinics at the site of the prioritized recipients, through mass clinics, and through other distribution and administration structures as best fits the needs and resources of each local community. Minimal levels of handling to be followed are those established through Missouri's VFC program. (See Attachments A, B and C.)

### Pandemic Vaccine

When vaccine will be made available, the DHSS will order from weekly allocations of the vaccine to be shipped by the centralized distributor to the designated ship-to site(s). The designated ship-to sites would include LPHAs that could then further distribute the vaccine to other private providers or administer the vaccine to local residents. In some local jurisdictions, the LPHA may choose to also have private providers designated as ship-to sites to expedite the distribution process. DHSS will allocate vaccine to local jurisdictions according to the number of persons in priority groups, general population, and the disease burden.

### **Vaccine Logistics and Security**

Logistics and security at the state level will be the dual responsibility of DHSS and DPS, and at the local level by local public health and law enforcement with state support.

- Vaccine will be shipped from the manufacturer or distributor to the state ship-to site.
- DHSS will maintain, on a real-time basis, a database inventory of each dose of vaccine that is shipped from the manufacturer or distributor and received at each ship-to site. Ship-to sites will maintain, on a real-time basis, an inventory of vaccine in stock, the manufacturer, lot numbers, expiration dates for each lot, and a record of each dose of vaccine transferred to any clinics designated to conduct the vaccination clinics. All such data will be transmitted to DHSS electronically, and DHSS will transmit it to CDC.

### Local Clinic Sites and Administration

- Based on experience during the H1N1 event, the LPHAs would work within their jurisdiction to conduct mass vaccination clinics that would be effective in reaching the priority populations. Many LPHAs would collaborate with private providers in organizing and conducting the clinics.
- In the event that the Strategic National Stockpile (SNS) for Missouri is activated, a State Security Officer will be identified in the memoranda of agreement. Security for additional transport for vaccine administration to on-site priority groups or for administration at clinics outside the sites will be the responsibility of local law enforcement, with state support. Local authorities will ensure that they have a workable security plan in place to continue dispensing operations. DHSS and DPS will review security plans during the monitoring process and provide technical planning assistance. State public health and public safety staff will work with local authorities to assist them in establishing relationships to assure the security of the vaccine and the orderly operation of vaccine clinics. Protocols will be established with guidance from DPS and DHSS. DPS will provide assistance with site vulnerability assessments.

- Local authorities will need to implement a system of staff security and identification and in addition implement a system of pre-identifying those in the priority groups. This system must be able to function effectively while stressed. Staffing plans will be the responsibility of each allocation site. The system employed can be designed to best suit local needs and resources but must pass review by the state. Incidents will be managed at local sites and reported to the state as needed.
- All handling of the vaccine and management of clinics, including transportation and storage environment, must be done according to the stipulations from the Centers for Disease Control and Prevention. The LPHA has primary responsibility to ensure this compliance. This may include providing a vaccine site manager for each site (see Attachments A, B, C, and D). The practices will be monitored by the DHSS, Bureau of Immunizations (BI) staff through regular site visits and the routine communication via e-mail, fax, regular mail, and phone.
- In the event that the SNS for Missouri is activated, a DHSS site manager will be assigned to the state storage and distribution site to ensure compliance with vaccine transportation and storage requirements.
- Refrigeration devices at sites will be maintained according to manufacturer and DHSS recommendations. Refrigeration units must be validated by LPHA staff or staff from the VFC Program before shipment of vaccines may be received. Refrigerators must have calibrated data logger thermometers that will be monitored and recorded twice daily. If temperatures are outside acceptable ranges, the LPHA will contact the manufacturer for appropriate instructions.
- Vaccine inventories will be tracked in a DHSS-provided database.
- Vaccine balances will be tracked daily.

### **Vaccine Administration and Tracking**

Ideally, the Immunization Registry (ShowMeVax) would be used to track pandemic influenza vaccines administered. However, based on experience gained during H1N1 and depending on the clinic logistics, response and time constraints, this might not be feasible. If it was not possible for all the individual records to be entered into ShowMeVax, aggregate reporting of vaccines administered would be required of the LPHAs and private providers. Providers (LPHAs and private providers) will use ShowMeVax to record pandemic influenza immunizations. Data transmissions will be made into the Countermeasures Response Administration (CRA) system.

- LPHAs have extensive guidance procedures for screening patients and administering vaccines, as well as for storing, handling, and accounting for vaccines. LPHAs will ensure staff that provides vaccines be trained and demonstrate competency in the assessment and administration of vaccine. Job descriptions will include vaccine administration and related duties associated with the activities of safe handling and storage of vaccine. BI provides written guidance as well as technical support (see Attachments A, B and C). Those documents refer providers to other resources for more specific information, such as the CDC's *Epidemiology and Prevention of Vaccine-Preventable Diseases*, guidance on the website of the National Center for Immunization and Respiratory Diseases, and Vaccine Information Statements.
- Based on experience gained during H1N1, it is evident that, depending on the clinic logistics, response and time constraints, it might not be feasible for all the individual records to be entered into ShowMeVax. In that situation, aggregate reporting of vaccines administered would be required of the LPHAs and private providers.

- Any adverse event reported will be entered into VAERS.
- In the event that a second dose of vaccine is required, recipients will be recalled for the second dose based on the information in the database.

### **Clinic Operations and Management**

Trained DHSS staff will be available to conduct site visits at the request of the LPHA to provide technical assistance for proper vaccine handling, documentation, dating, storage, and overall maintenance of the vaccine.

### **Vaccine Safety Monitoring, Reporting, Treatment, and Patient Referral**

VAERS reports should go directly to the VAERS site. The DHSS will provide technical assistance and communicate with CDC on all aspects of vaccine adverse event reporting.

Vaccine safety education will be done by BI to providers statewide.

- The Division of Community and Public Health (DCPH) has established a legal basis for reporting adverse events using criteria developed for the federal VAERS. The VAERS safety coordinator position is housed in BI.
- DHSS and the LPHAs will utilize CDC's clinic guidelines, screening forms, and fact sheets to educate individuals concerning possible adverse events.
- A DHSS workgroup will identify information that must be captured to provide appropriate follow-up of primary vaccines, including adverse reactions. The workgroup will utilize federal disease reporting forms to capture this information. DHSS will educate medical care providers and LPHAs regarding adverse reactions and reporting requirements. LPHAs will educate patients about reporting adverse events. Adverse events that occur at the vaccinating clinics will be treated and reported at the time of vaccination.
- Medical care providers will report to VAERS vaccine adverse reactions. LPHAs will provide follow up in consultation with DHSS and with logistical support from DHSS as needed.
- DHSS will report adverse reactions and investigation findings to CDC.
- Best practices regarding off-site clinics and vaccine management are described in this resource: <https://www.izsummitpartners.org/naiis-workgroups/influenza-workgroup/off-site-clinic-resources/>.

## Resources

Institute of Medicine. 2010. “The 2009 H1N1 influenza vaccination campaign: Summary of a workshop series”. Washington DC: *The National Academies Press*.

*Missouri Vaccines for Children, LPHA Program Manual, 2018:*  
Available upon request

Vaccine Adverse Events Reporting System:  
[www.vaers.hhs.gov/](http://www.vaers.hhs.gov/)

Report from Secretary Michael O. Leavitt, U.S. Department of Health and Human Services, July 18, 2007:  
<http://www.flu.gov/professional/panflureport4.html>

The CDC’s detailed guidance on how vaccine will be prioritized by tier and according to the severity of pandemic is available on the pandemic flu website:  
[www.pandemicflu.gov/professional/federal/index.html](http://www.pandemicflu.gov/professional/federal/index.html)

Tools to Assist Satellite, Temporary, and Off-Site Vaccination Clinics  
<https://www.izsummitpartners.org/naiis-workgroups/influenza-workgroup/off-site-clinic-resources/>

# VACCINE COLD CHAIN PROTOCOL

## MISSOURI VACCINES FOR CHILDREN (VFC) PROGRAM

### **\*\*\*POST IN A CONSPICUOUS PLACE\*\*\***

<p><i>Required Temperatures:</i></p> <p><b><u>Refrigerator:</u></b>  <i>36-46 Degrees Fahrenheit</i>  <i>2-8 Degrees Celsius</i></p> <p><b><u>Freezer:</u></b>  <i>-58 to 5 Degrees Fahrenheit or below</i>  <i>-50 to -15 Degrees Celsius</i></p>
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***“Maintaining the cold chain”*** means keeping vaccines at the recommended temperature. The cold chain begins at the manufacturer, extends to the distributor and continues at the provider until the vaccine is administered. Proper vaccine temperature must be maintained during transit and at every link in the chain to ensure its viability. The importance of maintaining the cold chain cannot be overstated. When the cold chain is not maintained, the vaccine may cease to be effective and will not provide protection from disease. **Any vaccine suspect of cold chain violation should be segregated from viable vaccine and NOT USED until the manufacturer determines viability.**

The **Vaccine Cold Chain Protocol** provides vaccine handling guidelines and action steps for health care providers in the event of a vaccine cold chain failure.

***Cold chain failure occurs when there is a break in any link of this chain.*** Cold chain failure may occur due to a power outage, equipment failure, staff error, etc. To prevent vaccine cold chain failure, it is essential to have properly functioning equipment, appropriately trained staff, clearly written procedures and easily accessible emergency operating protocols for handling vaccines.

### **Immunization Providers Utilizing Vaccine Supplied by the VFC Program shall:**

- Develop and maintain a current written Vaccine Emergency Plan, providing guidelines to ensure vaccine cold chain maintenance to include:
  - Identification of an alternative storage facility (i.e., hospital, packing plant, local public health agency, nursing home, fire department, etc.) with back-up power (generator) where the vaccine can be stored and monitored during a power failure.

- Identification of staff responsible to pack and move vaccine during an emergency.
- Maintenance of a supply of appropriate packing materials (insulated containers; the type vaccines are shipped in not soft side or high peaked, gel/ice packs).
- Identification of transportation to move vaccine to a secure storage facility during an emergency.
- Establishment of procedures to monitor vaccine temperature during transport to confirm its viability with the manufacturer upon its return.

Policies/procedures will be available for review by program representatives as requested. A template is attached for use in preparing a Vaccine Emergency Plan (attached).

**Protocol for *Suspected* Vaccine Cold Chain Failure, the Provider shall:**

- **Within 24 hours:**
  - Inventory all vaccines determined to have been stored at inappropriate temperatures. They should be labeled “**DO NOT USE.**” Store potentially compromised vaccines at proper refrigerator/freezer temperatures while assessing viability.
  - Contact the VFC Program at (800) 219-3224. Be prepared to provide:
    - **Ambient room temperature**
    - **Vaccine storage unit temperature**
    - **Estimated duration of event**
    - **Vaccine name**
    - **Lot number**
    - **Expiration date**
    - **Number of doses at risk**
    - **Provide the electronic log of temperatures from the required temperature data logger**
- **The VFC program representative will investigate and determine what to do with the vaccine, and the provider will be given instructions on returning vaccine for credit.**

**Protocol for *Confirmed* Vaccine Cold Chain Failure, the Provider shall:**

- **No later than 24 hours of the confirmed cold chain failure:**
  - Notify the VFC Program.
  - Contact the vaccine manufacturer for guidance and provide the following information:
    - **Ambient room temperature**
    - **Vaccine storage unit temperature**
    - **Estimated duration of event**
    - **Vaccine name**
    - **Lot number**
    - **Expiration date**
    - **Number of doses lost**



- Return non-viable vaccines (full, unopened vials only) to the VFC vaccine distributor, McKesson Specialty Distribution, using vaccine return packing slip within 15 days.
- Review patient records to identify persons receiving vaccines during the identified cold chain failure periods as deemed necessary by the VFC Program and/or the manufacturer.
- Compile and submit a Corrective Action Plan to the VFC Program outlining the steps to identify, recall and revaccinate persons within one week.
- Contact identified persons and/or appropriate parent/guardian by telephone or written correspondence with the following information within 30 days of approval of the Corrective Action Plan.
  - **Purpose of recall**
  - **Need for revaccination**
  - **Information about available clinics and times for revaccination**
- Schedule clinics and appointments to revaccinate persons vaccinated during the cold chain failure event as identified in the Corrective Action Plan.
- Document appropriate vaccination information on the person's immunization record or provide an immunization record with the appropriate vaccination information at the time of revaccination.
- Instruct the appropriate parent/guardian of a revaccinated child to provide revaccination information immediately to the child's school and/or childcare facility.
- Keep an ongoing log with the following:
  - Number of persons revaccinated; and
  - Number of doses and date of each vaccine administered.

Submit status report **each Monday for the preceding week** to the VFC Program. The report must include:

- ❖ Names of patients revaccinated
- ❖ Vaccines administered
- ❖ Documentation of parental refusal to revaccinate

Provide proper vaccine storage and handling guidelines and vaccine administration protocols to each new employee, continually review and document this information with the staff to assure optimal cold chain practices.

## EMERGENCY RESPONSE PLAN

Your Emergency Response Plan will include: actions to be taken in the event of refrigerator or freezer malfunction, power failure, natural disasters or other emergencies that might compromise appropriate vaccine storage condition.

Reminder: Your **Vaccine Emergency Response Plan** needs to be updated annually and submitted with your annual VFC application forms. All staff should review, sign and date the emergency response plan on annual basis or when there is a change in staff that has responsibilities specified to the emergency plan.

If your facility already has a written Emergency Response Plan, you may submit that document with annual application forms, but the document must include all of the following components.

Facility Name: \_\_\_\_\_

Primary Person Responsible: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell: \_\_\_\_\_  
 Secondary Person Responsible: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell: \_\_\_\_\_  
 Person with 24 hour access to building: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell: \_\_\_\_\_

**For a Power Outage:** If your facility does not have a generator, identify at least one location with a generator (hospital, pharmacy, fire station) that may be used for a back-up location for vaccine storage.

### Who will be notified in the event of a power outage?

1. Contact's name: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell: \_\_\_\_\_  
 2. Contact's name: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell: \_\_\_\_\_  
 3. Alarm company name (if applicable): \_\_\_\_\_ Phone: \_\_\_\_\_  
 4. Alternate storage facility (if applicable): \_\_\_\_\_ Phone: \_\_\_\_\_

**HOW** will you be notified of a power outage at your facility (alarm, phone call, paging service)?  
 (Insert description of how the responsible person will be notified.)

**Succession of notification: Who will be notified first, second, third etc.**  
 (Insert order of persons being notified.)

**My facility has a generator:** Who will turn on the generator and maintain it (supplying gasoline if needed) during the power outage? Name: \_\_\_\_\_

**WHEN** entering the vaccine storage facility, please do the following:

- Utilize the (insert which entrance) \_\_\_\_\_ of the building.
- Flash Lights will be located on the \_\_\_\_\_
- Circuit breakers may be checked and box is located \_\_\_\_\_

**Determine** if vaccine will need to be transported. How long will the power likely be out?

**Power Company phone number:** \_\_\_\_\_

**WHO** will transport the vaccine (yes you may use your own vehicle). Vaccines will not be transported in the trunk of a vehicle.: Name: \_\_\_\_\_

- Ice/Gel packs to use will be located in freezers in the vaccine storage units.
- Insulated containers (Styrofoam or vaccine shipping boxes) needed for transport will be kept at:

Bubble wrap or other barrier will be kept at: \_\_\_\_\_

**CALL:** Before transporting vaccine, call the back-up location site to ensure that their generator is working and they are aware you will be transporting vaccine to them. Assure that they are aware of how to properly store and maintain the vaccine while it is in their possession.

**Name:** (contact person at back-up site) \_\_\_\_\_ Phone: \_\_\_\_\_

**Documentation:** Using the **Emergency Response Worksheet** to document current temperatures of the unit and the vaccines affected with expiration dates and **Conduct** and record an inventory before you transport the vaccine.

**Label** vaccines or container as belonging to your facility.

**Refrigerator Vaccine:** To pack for transport, place ice packs or refrigerated gel packs in the bottom of container, lay a barrier (bubble wrap, crumpled paper etc.) on top of the ice followed by the vaccine and the thermometer, cover with another layer of bubble wrap or crumpled paper followed by an additional layer of ice or gel packs. Close lid. Log time and temperature on transfer form before transport and immediately upon arrival at destination. DO NOT transport in the trunk of a vehicle or in the back of a pick-up truck.

**Freezer Vaccine:** MMR (not diluents), MMRV, Varicella (VAR) and Zoster. In container marked "Freezer Vaccines" place vaccine in appropriate container along with thermometer and pack container with enough **ice packs** to maintain temperature. If temperature exceeds 5°F (-15°C), contact the vaccine manufacturer for assistance. Log time and temperature on transfer form before transport and immediately upon arrival at destination. DO NOT transport in the trunk of a vehicle or in the back of a pick-up truck.

**MOVE** vaccine to back-up storage:

Take the most direct route to the back-up facility.

DIRECTIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Upon arrival:** open the containers, record the temperatures, inventory the stock (with the receiving person) and see that the receiving person places vaccines in the proper refrigeration units which are maintained at the proper temperature ranges.

**CHECK** that vaccine containers are properly labeled with facility name.

**MECHANICAL FAILURE OF EQUIPMENT**

Mechanical failure of equipment includes situations where the refrigerator or freezer door was left open, the temperature of the refrigerator or freezer was too warm or too cold, the storage unit was unplugged or any other situation which would cause improper storage conditions.

**WHAT HAPPENED? Determine if POWER is Lost OR MECHANICAL FAILURE has occurred:**

**TAKE ACTION!** Once you have determined mechanical failure has occurred, correct the mechanical failure if you can (shut the door, plug in the unit, move the thermostat to the correct position). If the type of mechanical failure cannot immediately be determined, use the following procedures.

**WHO** needs to be contacted to repair or replace the unit? Office manager, Physician or Repair Company?

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Responsible Persons' Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Additional contacts: \_\_\_\_\_ Phone: \_\_\_\_\_

Additional contact: \_\_\_\_\_ Phone: \_\_\_\_\_

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**THEN** use the **Emergency Response Worksheet** to proceed.

**Documentation:** Using the Emergency Response Worksheet, document current temperatures of the unit and the vaccines affected with expiration dates and amounts of vaccine that have been submitted to unsafe temperatures.

**CALL:** Using the completed Emergency Response Worksheet, contact vaccine manufacturer(s) and give them the information from the worksheet.

**RECORD:** Write down the information given by the vaccine manufacturer(s) that you have contacted regarding EACH vaccine that was affected by the mechanical failure.

**TRANSPORT:** If the mechanical failure cannot be immediately rectified, refer to the procedures to be followed for transporting vaccine to the back-up location in the event of a power failure.

**CONTACT:** Contact the VFC program at 1-800-219-3224 relaying the information regarding the nature of the mechanical failure OR power outage, the information that you have documented on the Emergency Response Worksheet AND information you were given by the vaccine manufacturer(s) regarding the viability of all the vaccines that were affected.

**Review Emergency Plan**

The emergency plan must be reviewed and/or updated annually or when changes in staff occur.

The primary and backup vaccine coordinators are responsible for training other staff who are responsible for administering vaccines or who may be required to transport vaccine in an emergency situation, following the office's vaccine storage and handling plan. A simple log sheet with the staff member's name and date of training should be kept as documentation.

All staff should review, sign and date the emergency plan annually.

**EMERGENCY RESPONSE WORKSHEET**

- 1. Current temperature of refrigerator: \_\_\_\_\_ Max/min temperature reached: \_\_\_\_\_
- 2. Current temperature of freezer: \_\_\_\_\_ Max/min temperature reached: \_\_\_\_\_
- 3. Amount of time temperature was outside normal range: refrigerator: \_\_\_\_\_ freezer: \_\_\_\_\_

**Refrigerator**

Vaccine and Lot #	Expiration Date	Amount of Vaccine (# of Doses)

**Freezer**

Vaccine and Lot #	Expiration Date	Amount of Vaccine (# of Doses)

**CALL ALL MANUFACTURERS OF AFFECTED VACCINE(S):**

Request and document the following information from each manufacturer representative with whom you spoke: Their name and a confirmation number of your call provided by the representative.

Manufacturer	Phone #
CSL Biotherapies	888-435-8633
GlaxoSmithKline	866-475-8222
MedImmune, Inc.	877-358-6478
Merck & Co., Inc.	800-637-2579
Novartis Vaccines	800-244-7668
sanofi pasteur	800-822-2463
Wyeth Vaccines	800-934-5556

## VACCINE MANAGEMENT PLAN

Clinic Name: \_\_\_\_\_ VFC Pin Number: \_\_\_\_\_

• **I. Designation of primary vaccine coordinator and at least one back-up staff**

1. \_\_\_\_\_ (Phone) \_\_\_\_\_
2. \_\_\_\_\_ (Phone) \_\_\_\_\_

• **II. Vaccine Storage and Handling**

*Vaccine storage and handling plans follow the “Vaccine Management Guidelines” as found in the Vaccine for Children (VFC) Program Manual, the CDC resource “Vaccine Storage and Handling Toolkit” and the CDC training “How to Protect Your Vaccine Supply” as found on the CDC website <http://video.cdc.gov/asxgen/nip/isdvacstorage/VacStorage.wmv>.*

1. \_\_\_\_\_ (Primary Person Responsible)
2. \_\_\_\_\_ (Designee or Back-up Person Responsible)

Responsibilities include:

1. All staff will only open one box of vaccine at a time.
2. All staff will not “dump” vaccine into other containers (even if they are the same vaccine).
3. All staff will check and use vaccine within time frames specified by manufacturer labeling and recommendations prior to administration.
4. All staff will ensure that vaccines are not “pre-drawn” from their vials.
5. All staff will ensure that vaccines are kept away from sides and back of the refrigerator.
6. Remove crisper drawers and place bottles of water in that space.
7. Ensure that vaccines are not stored in the door of the refrigerator.
8. Line the freezer sides and floor with ice packs.
9. Regularly check all storage units to ensure adequate air circulation is occurring around vaccine and that vaccine has not been placed in closed bins (such as the plastic closed containers supplied by drug manufacturer representatives).
10. Take appropriate steps to ensure refrigerators and freezers are not unplugged accidentally, the “Do Not Unplug” sticker is visible, and the use of plug guards or other means to secure plugs are in place.
11. Ensure that refrigeration units are plugged directly into outlets and not into power strips or extension cords).
12. Identify and label the circuit breakers for the vaccine refrigerators and freezers using the “Do Not Turn Off” stickers or similar labeling.
13. Ensure that all staff are familiar with the ***Vaccine Loss and Replacement Protocol*** and that vaccine allowed to expire, or is wasted due to negligence, will require replacement (*see Vaccine Loss and Replacement Protocol*).
14. Ensure that all staff is proficient in their ability to properly pack vaccine for transfer or emergency shipping.
15. Ensure that all staff is proficient in their ability to read data logger thermometers, know correct temperature ranges, and can properly record temperatures on correct (Fahrenheit or Celsius) temperature log sheets.

16. Ensure that temperatures are taken twice per day, AM/PM, when clinic is open and logged on appropriate (Fahrenheit or Celsius) temperature log, and min\max from previous 24 hours noted.
17. If at any time there is a break in the cold chain the VFC program is to be immediately notified and provided with: the temperature of the storage unit upon discovery, period of time excursion occurred, have all manufacturers been notified; if so – provide name of individual you spoke to along with discussion confirmation number.
18. Ensure that all required VFC monthly reports are submitted to the VFC program on time and that the most current form is used.
19. Maintain a simple training log documenting staff training dates.

### • III. Vaccine ordering

Vaccine ordering plans follow the “**Vaccine Management Guidelines**” as found in the **Vaccine for Children (VFC) Program Manual**.

1. \_\_\_\_\_  
(Primary Person Responsible)
2. \_\_\_\_\_  
(Designee or Back-up Person Responsible)

Responsibilities include:

1. Ensure that all orders are made by ordering the number of vaccine doses needed, not the number of boxes.
2. Ensure that if more than one vaccine manufacturer is available, order one brand as much as possible to lessen administration and accounting errors.
3. Ensure that all orders are signed and dated.
4. Ensure that all orders include PIN and provider name.
5. Ensure that the vaccine ordered is only to maintain approximately a 45-day supply of vaccine.
6. Ensure that the vaccine orders are faxed to (573-526-5220), e-mailed to the VFC Program at vfc@health.mo.gov, or you may e-mail your VFC Liaison directly and copy the VFC e-mail.
7. Ensure that all vaccine orders are submitted properly with required reports (*Vaccine Accountability* form and *Vaccine Temperature Logs* with documentation of out-of-range temperatures situations as appropriate) or the Vaccine Ordering System.
8. Temperature logs are to be documented from the first day of the month through the last day of the month and mailed the first business day following the last day of the month (regardless of the date the accountability report is sent).
9. Ensure that accountability reports and vaccine orders are submitted according to the provider’s prescribed schedule to assure providers remain in good standing and orders can be processed.

### • IV. Vaccine shipping (includes receiving, & transport)

*Vaccine storage and handling plans follow the “Vaccine Management Guidelines” as found in the Vaccine for Children (VFC) Program Manual, the CDC resource “Vaccine Storage and Handling Toolkit” and the CDC training “How to Protect Your Vaccine Supply” as found on the CDC website <http://video.cdc.gov/asxgen/nip/isdvacstorage/VacStorage.wmv>.*

1. \_\_\_\_\_  
(Primary Person Responsible)
2. \_\_\_\_\_  
(Designee or Back-up Person Responsible)

Responsibilities for receiving include:

1. Upon receipt of vaccine, immediately examine all vaccine shipments for damage, or opening prior to receipt, contacting the VFC Program within 2 hours of delivery if abnormalities are noted.
2. Immediately open the shipping box and count vaccines received, comparing the numbers against shipping invoice and order form, check the temperature of the vaccine to see that they have not gone out-of-range, again contacting the VFC Program within 2 hours of delivery if abnormalities are noted.
3. Immediately store vaccines in the appropriate storage units, checking expiration dates and placing the order received in the proper stock rotation to assure usage of the shortest expiration dated vaccines are used first, and add vaccine received to Vaccine Accountability form.
4. Maintain vaccine packing slip from manufacturers for 3 years
5. VFC highly recommends the following:
  - Document the date and time your order was received on packing slip.
  - Write the expiration date in black marker on top of vaccine box.
  - Tape boxes of vaccine shut that are not already secured by the manufacturer to avoid opening more than one box of vaccine at a time and to help facilitate your monthly vaccine inventory count .

Responsibilities for vaccine transport include:

When transporting vaccine, place vaccine in appropriate container (such as vaccine shipping box) found (state where the container is located) along with all packing supplies and copy of transfer form (state where ice packs, bubble wrap and transfer forms are located) as directed below. Data loggers must be used during transport.

Freezer Vaccines: MMR (not diluents), MMRV, Varicella (VAR) and Zoster. Mark container “Freezer Vaccines” and store in designated area until needed. To pack for transport, place vaccine and thermometer in bottom of container and cover with enough **ice packs** to maintain temperature. If temperature exceeds 5°F (-15°C), contact the vaccine manufacturer for assistance. Log time and temperature on transfer form before transport and immediately upon arrival at destination. Vaccines will not be transported in the trunk of a vehicle or in the back of a pick-up truck.

Refrigerator Vaccine: Mark container “Refrigerator Vaccines” and store in designated area until needed. To pack for transport, place ice packs or refrigerated gel packs in the bottom of container, lay a barrier (bubble wrap, crumpled paper etc.) on top of the ice or gel packs followed by the vaccine and the thermometer, cover with another layer of bubble wrap or crumpled paper followed by an additional layer of ice or gel packs. Close lid. Log time and temperature on transfer form before transport and immediately upon arrival at destination. Vaccines will not be transported in the trunk of a vehicle or in the back of a pick-up truck.

Contact the VFC Program at 800-219-3224 prior to transfer. Complete the Vaccine Transfer sheet found (state location) and take with the vaccine to the new location. Upon arrival open the containers, record the temperatures, inventory the stock (with the receiving person) and see that the receiving person places vaccines in the proper refrigeration units which are maintained at the proper temperature ranges. After transfer is complete, fax a copy of the Vaccine Transfer sheet to the VFC Program at (573-526-5220), and deduct the transferred vaccine from the Vaccine Accountability sheet.



- **V. Inventory control** (e.g., stock rotation)

Inventory control plans follow the “**Vaccine Management Guidelines**” as found in the **Vaccine for Children (VFC) Program Manual**, the CDC resource “**Vaccine Storage and Handling Toolkit**” and the CDC training “**How to Protect Your Vaccine Supply**” as found on the CDC website <http://video.cdc.gov/asxgen/nip/isdvacstorage/VacStorage.wmv>.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
 (Primary Person Responsible) (Designee or Back-up Person Responsible)

Responsibilities include:

1. Check expiration dates monthly; put the expiration date on the box so it is easily visible yet not obscuring vital vaccine information on the box; rotate vaccine as needed to ensure that the shortest expiration dated vaccine is used first.
2. Ensure that vaccine does not expire. If expiration date is within 90 days, contact the local county health department or another VFC provider to see if they will accept a transfer. If unable to find transfer, contact the VFC Program for transfer assistance.

- **VI. Vaccine wastage**

Vaccine wastage plans follow the “**Vaccine Management Guidelines**” as found in the **Vaccine for Children (VFC) Program Manual**.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
 (Primary Person Responsible) (Designee or Back-up Person Responsible)

Responsibilities include:

1. In the event that vaccine is wasted, the information regarding the reason for the wastage will be listed on (list the form used and its location).
2. Collect and record the wastage information accounting for the vaccine wasted on the Vaccine Accountability form submitted to the VFC Program monthly.
3. Contact VFC Program at 800-219-3224 to obtain shipping label to return out-dated, unopened vials of vaccine for excise tax credit to McKesson per the VFC return policy.
4. Unaccounted vaccine on the monthly accountability form will be considered wasted and subject to replacement.

# Guidelines for Large Scale Pandemic Influenza Vaccination Clinics

## Introduction

This document provides information specific to influenza vaccination clinics during a pandemic, and is based on the general guidance for planning and conducting large-scale immunization clinics. Specific planning at the state, local and clinic levels should be flexible and build around varied scenarios.

This document covers important topics such as clinic settings, clinic flow, staffing functions, administration and storage of vaccine, clinic supplies and equipment, security, documentation, post-vaccination observation, handling and disposal of needles

## 1. Determine Resource Needs

Based on the vaccination strategy (i.e., priority groups, disease severity and prevalence, seasonal flu patterns, etc.) the number and duration of clinics, and number of staff required should be calculated. The precise number of personnel needed for any one clinic will vary, however, depending on the size and layout of clinic facilities, location of clinic, geographic area being served by the clinic, estimated number of vaccine recipients at each clinic. The over-all staffing needs should be estimated based on the model described under Section 1: Clinic Operations.

## 2. Identify Potential Clinic Sites

Potential clinic sites should be selected based on the estimated number of people expected to be served and the size and layout of the facility. The size and type of facilities needed for novel influenza immunization clinics will vary depending on the number of persons to be served. Small clinics, such as those to immunize health care workers, can be conducted in almost any available space, most likely a local health department, hospital occupational clinic, or similar facility. Larger clinic sites could be housed in schools, churches, industrial locations, office buildings, or apartment complexes. Schools may be the preferred location for any clinic required to be larger than a local health department. Schools have parking lots, long corridors, large classrooms, gymnasiums, cafeterias, private offices, and other immediately available resources, such as tables and chairs, and offer an ideal physical structure that can meet most clinic needs. Elementary schools are preferable because they are numerous and serve fairly well-defined neighborhoods convenient to the public. The use of middle or high schools may also be considered.

In selecting clinic sites, handicap access must be assured. Also, consideration should be given to ensuring a smooth flow of clients, accessibility of the facility to major streets, restroom facilities, parking, refrigeration, heating/air conditioning, protection from the elements, personal and client safety and security. Before final selection, a visit should be made to the location to ensure that the facility meets the needs of the vaccination operation.

### **3. Obtain Authorization / Standing Orders**

Before a clinic can be implemented, standing orders must be obtained from the public health authority, usually the state and/or local health officer to provide authorization for administration of the influenza vaccine. Standing orders are also needed for responding to medical emergencies that occur during vaccination clinics, ranging from minor injuries and illnesses to anaphylactic shock. In addition to providing standing orders, the health officer or his/her designee must approve the content of informational materials and serve as medical consultants for nursing and other staff.

### **4. Plan Training**

All public and private health care workers and the many volunteer workers who may become involved in influenza vaccination efforts should receive both job specific and, where possible, cross job training in advance and/or on the job. Large numbers of clinic staff can be trained using a train-the trainer approach.

### **5. Publicize the Clinic**

After immunization clinic locations are determined and recipient populations identified, public announcements with information about these clinics should be released as soon as possible.

When developing communications materials, all relevant information should be included. As decisions are made, the information disseminated must clearly describe the groups for whom the clinic is intended or not intended. For example, certain locations might serve priority groups exclusively. Non-English speaking groups may be asked to come at specific dates and times when translator resources are available. Information identifying clinic locations and directions, dates and times of operations, length of time the vaccination process may take, tips on type of clothing to wear, and what to expect once at a clinic should be provided through various media outlets (TV, newspapers, etc.) in as many languages as needed.

The CDC's education and communication materials will be made available electronically and in printed formats. When available they should be translated into the appropriate languages for the geographical area, reproduced in appropriate quantities and ready for rapid distribution. Patient education materials may need to be modified in consultation and coordination with immunization partners and representatives of the community to ensure that the information provided is adequate and culturally appropriate for local audiences. Printed materials should be at reading levels suitable for their intended audiences.

Using professional public relations assistance when available, announcements should be updated from the CDC materials and released for television, radio, and newspaper media. If specific groups require additional information, (e.g., to counteract misconceptions about vaccination) clinic organizers may need to distribute flyers to targeted populations in apartment buildings, neighborhoods, workplaces, schools, and/or religious centers.

If special transportation can be provided for persons with physical or age-related disabilities, the telephone number for requesting special transportation should be included in all clinic publicity.

To ensure accurate reporting by the media a list of subject experts and media spokespersons from state and local public health agencies and community partners should be developed and made easily accessible to the media through an approved format. If necessary, individuals who can be called upon to serve as interpreters should be identified to help inform non-English speakers. This list should note the foreign languages spoken by these individuals. To improve understanding of the subject matter, photographs and graphics should be provided in various media.

In addition to information about the specific clinic being publicized, a concerted effort should be made to provide information to the public that emphasizes:

- The rationale of the immunization strategy.
- Disease containment measures are effective.
- All possible measures are being taken to prevent the further spread of the disease.

## Section 1: Clinic Operations

### 1. The Vaccination Clinic Process

#### **Step One: Orientation**

As vaccine recipients arrive, they are routed to the clinic entrance by security personnel who are handling outside traffic flow and parking. Staff will screen patients for signs and symptoms of an influenza-like illness (ILI). Clients who present with symptoms of an ILI will be directed to an alternative section of the clinic. Well-clients enter the clinic building vaccine and are directed to a location where the greeter-educator briefs groups about what is going to take place during the clinic process and hands out paperwork for the client to fill out. Clients will begin to read and fill in required personal information (name, address, etc.) Multiple educator-greeters locations may be necessary to accommodate the rate at which people arrive.

#### **Step Two: Form Completion and Assessment for Contraindications**

Clinic flow coordinators direct vaccination clients to tables where staff is available to answer questions and aid clients in completing required forms. Vaccine clients who check 'yes' for allergy to eggs and/or previous problems following a previous influenza vaccinations are directed to a separate station where a medical professional will complete a more in-depth evaluation.

#### **Step Three: Vaccination**

Vaccine clients with no medical contraindications are directed to the vaccination area. This area is a screening area that affords privacy to persons who find it necessary to remove clothing in order to expose the vaccination site. A vaccination assistant helps vaccine recipients expose their vaccination site (upper arm, thigh) and cleans the vaccination site if necessary. The vaccine administrator then administers the vaccine and the assistant applies a bandage to the vaccination site. The patient's clinic documents and a patient-held vaccination card are completed.

**Step Four: Post Vaccination Observation, Clinic Forms Collection and Exit**

The vaccine recipients are routed to an area set aside to be observed for 10-15 minutes for potential post-vaccination problems. During this time the clinic forms collector ensures that forms are complete, answers any remaining questions and informs vaccine recipients that they will need a second vaccination or are finished with the process, as appropriate. This individual also ensures that the vaccinee has been provided a completed vaccination card.

**2. Staffing and Training**

The official responsible for overall direction of the vaccination operation must assign a clinic manager who is responsible for overall clinic operation. This is the primary decision maker for the site, and supervises all non-medical personnel. All staff and volunteer assignments should be documented on a clinic assignment sheet.

**Management and Coordination Functions**

To assist the manager with large clinic operations, coordinators should be identified for the various clinic functions as outlined below:

**Nurse Coordinator:** Oversees nursing staff assigned to the clinic; assists clinic manager in making clinic assignments for nursing staff; assists on-duty nurses as needed.

**Supply Officer/ Vaccine Manager:** Ensures that all necessary clinic supplies are on site and are available in sufficient quantities during clinic operations; ensures vaccine supply and orders vaccine; tracks vaccine supply at the beginning and end of each day, maintains an inventory of supplies; oversees distribution of supplies to appropriate locations in the clinic; ensures that the vaccine is maintained properly (refrigeration, vaccine monitoring) and in a secure manner at the clinic site; accounts for unused vaccine; very importantly, maintains adequate vaccine and other supplies at the vaccine station; and ensures that ‘sharps’ containers and other waste are disposed of appropriately.

**Security Coordinator:** Oversees personnel assigned to security activities at the clinic site; assists the clinic manager in making duty assignments of security personnel; determines appropriate number of security staff necessary according to clinic size and location; maintains a list of authorized clinic staff and their phone numbers; assigns and coordinates use of cell phones and pagers; establishes staff check-in and check-out procedures; ensures that all staff wear ID badges; maintains communication with local law enforcement officials.

**Volunteer Coordinator:** Oversees volunteer activity at the clinic site. Assists the clinic manager in making duty assignments of volunteer staff; maintains roster of persons available for volunteer duty; and maintains a schedule of times that volunteers will be available to work.

**Staff Functions**

Following is a summary of suggested responsibilities of the staffing roles as outlined in the operational concept above:

**Clinic Screeners:** Screeners intercept clinic clients outside the clinic area and separate clients presenting with signs and symptoms of influenza-like illness from well clients. They direct well clients into the clinic area and ILI patients to an alternate area.

**Greeter-Educators:** Greet and conduct initial orientation of potential vaccine recipients upon their arrival; provide basic information about the vaccine and the vaccination process; distribute informational material and clinic documents and answer questions.

Greeter-Educators must be able to explain the purpose of receiving the vaccine, outline the vaccination clinic process, and distribute and explain the clinic documents to vaccine recipients.

**Forms Completion Assistants/ Contraindication Assessment Staff:** Assist and review each vaccine client's documents for completeness, accuracy, and address those that answered, "yes" to any questions that concerns contraindications to influenza vaccine.

These staff must be familiar with the content of each form. They must be prepared to respond to exceptional situations such as non-English speaking patients or patients who are anxious, hostile, disoriented or physically disabled. The documentation staff will aid clients in completing all forms accurately. They should be prepared to read the forms to illiterate or semiliterate persons needing their assistance. If a "yes" is indicated by the client in a question concerning a contraindication to an influenza vaccine, the staff directs the client to the medical station.

**Medical Evaluator:** Medical personnel further evaluate clients who indicate they might have a contraindication, provides medical aid to vaccinees experiencing medical problems following vaccination, and participates in further evaluation of clients who presented with ILIs.

This role should be filled by a physician, nurse or paraprofessional who is well-versed in contraindications to vaccination and the risks of influenza disease. The medical evaluator will review in greater detail the specified contraindication with the client and will assist in making a final decision about whether or not to vaccinate.

Medical personnel must be able to respond to emergencies, including reactions ranging from the minor to anaphylactic shock and serious medical emergencies that are incidental and unrelated to vaccination but can be expected to occur whenever large groups of people congregate. For large operations, a physician, physician's assistant, nurse practitioner or emergency medical technician should be on-site at all times during clinic operations.

**Vaccination Assistants:** Assist the vaccine administrator with all aspects of pre-and post-vaccine administration activities; ensure that vaccination station maintains adequate

supplies; at site of vaccination, assist vaccine recipients in preparing the vaccination site (roll up sleeves, remove arm from shirt/blouse, expose thigh, etc.); ensure that “sharps” containers and other waste materials are correctly handled and disposed of, and help complete clinic forms.

Vaccination assistants must have a thorough understanding of the vaccination process and the necessary supplies, proper care and handling of vaccine in the clinic, how to disinfect contaminated surfaces and dispose of soiled materials, and where to access additional supplies. Vaccination assistants are also responsible for entering the vaccine lot numbers and other required information onto the patients’ clinic record and personal vaccination card. Finally, the assistant directs the patient to the post-vaccination observation area.

**Vaccine Administrators:** Oversee the immunization process; determine appropriate type (inactivated, injectable or live, attenuated, nasal spray) and dose volume (child or adult) of vaccine; administer the vaccine; appropriately dispose of “sharps” containers, sign the clinic record (if required) and observe vaccine recipients in the post-vaccination observation area for reactions or complications.

Vaccine administrators can be RNs, physicians, LPN, MAs or designated paraprofessionals (according to individual state rules/regulations) who have received technical training in administration of each type of influenza vaccine (inactivated, injectable and live-attenuated, nasal spray). Vaccinators must have training to be able to quickly select the appropriate type of vaccine to administer based on clients’ age. They must have in-depth people skills, and understanding of proper vaccination techniques, methods to prevent contamination of the vaccine, preparation of the vaccination site and normal and abnormal post vaccination responses. Vaccinators must also be prepared to recognize, respond to and alert emergency medical personnel of possible post vaccination reactions and other medical emergencies that occur within the vaccination area.

**Forms Collectors:** Answer client questions, verify that forms are correctly completed; collect all necessary forms from recipients before departure.

The forms collector is responsible for checking that the vaccination team has signed the clinic record (if required) and entered the lot numbers on the appropriate documents. As the last staff to have contact with the vaccine recipients, the forms collector must have the ability to ensure a response by the appropriate staff to any remaining concerns those clients may have.

**Clinic Flow Controllers:** Direct vaccine clients through the clinic process and monitor clinic flow.

Clinic flow coordinators are responsible for continuously monitoring and directing client activity throughout the facility. They must be able to calmly manage and assist people who may be anxious and unable to follow directions. When congestion (backlog) is noted, flow controllers determine if staff at other locations are less busy and request

assistance in the congested area. They are also responsible for feeding back information about the number and rate of upstream clients to the vaccination assistants to enable them to maximize use of all vaccine doses in opened vaccine vials. Flow controllers may be in a position to provide early alert of situations that may require additional security personnel.

**Security Staff:** Ensure an orderly flow of traffic and parking at the clinic site; assist in maintaining orderly movement of vaccine recipients through the clinic process; provide necessary control if persons become unruly; assist supply officer in maintaining security of vaccines and other clinic supplies.

Security Staff can be off-duty law enforcement officers, professional security personnel and/or volunteers who are experienced and trained in crowd control. Potential responsibilities of security staff are described in detail below (under Security).

### **Staff Training**

The staff operating a clinic site should receive a group orientation about the overall purpose, function, and flow of the vaccination clinic, as well as specific verbal and written directions for their individual roles. During the orientation a diagram with annotations should be provided to show traffic flow, the functions of all clinic stations and a list of staff assigned to each role and each station, if possible. The responsibilities of each area of the vaccination clinic are reviewed with the entire staff. All staff need to know where they will work, where supplies and resources are located, and who their consults are as well as how to summon them. Daily post-clinic debriefings should be held to assess staff performance and ascertain if additional training or clinic reconfiguration is needed.

In small clinics staff roles can be flexible to accommodate changes in clinic flow and patient numbers, and to permit rest breaks for other staff. In large clinics this, and accommodating unexpected staff absences, can be accomplished by cross training of staff. Therefore, orienting staff in small, interchangeable teams is suggested.

If time permits, a mock vaccination clinic or role playing session should be conducted to train and evaluate the potential performance of staff. Vaccinating clinic staff, as well as first responders and other health providers, is suggested as a way to provide critical training and experience for all staff, especially the vaccine administrators.

Emergency personnel should also attend the group orientation and be given information about influenza. They should be familiar with the layout of the clinic site and know where ill patients will be maintained prior to transport.

## **3. Clinic Layout and Flow**

Clinics should have clearly marked entrance and exit points with adequate “waiting” space for queues of people seeking vaccination. Security staff should be posted at both locations to maintain order. The traffic flow within the clinic should be controlled and should follow a logical path from entry into the clinic to exit from the clinic. A linear path of traffic flow from entry to



exit on opposite sides of the facility is optimal. If time permits, easy-to-read signage should be provided to guide people through the clinic process. (See – Example of Large Scale Influenza Vaccination Clinic below.)

One or more persons (screeners) should ask about, and monitor clients for signs and symptoms of influenza-like illness (ILI) while outside the entrance to the clinic. All persons presenting without such ILI signs and symptoms should proceed into the clinic. Those found to have symptoms of ILI should be directed to a set-aside alternative area for a more detailed medical evaluation.

Within the clinic, greeter-educators provide information to clients on clinic procedures and hand out clinic forms for completion of Vaccine Information Statements (VISs) and other materials. A separate area should be provided in which clients can be seated to complete forms, and staff member are available to answer questions and assist in the completion of client forms. Medical providers are available to interview clients with histories of contraindications to influenza vaccine. All this should be performed in an area separate from the vaccine administration stations.

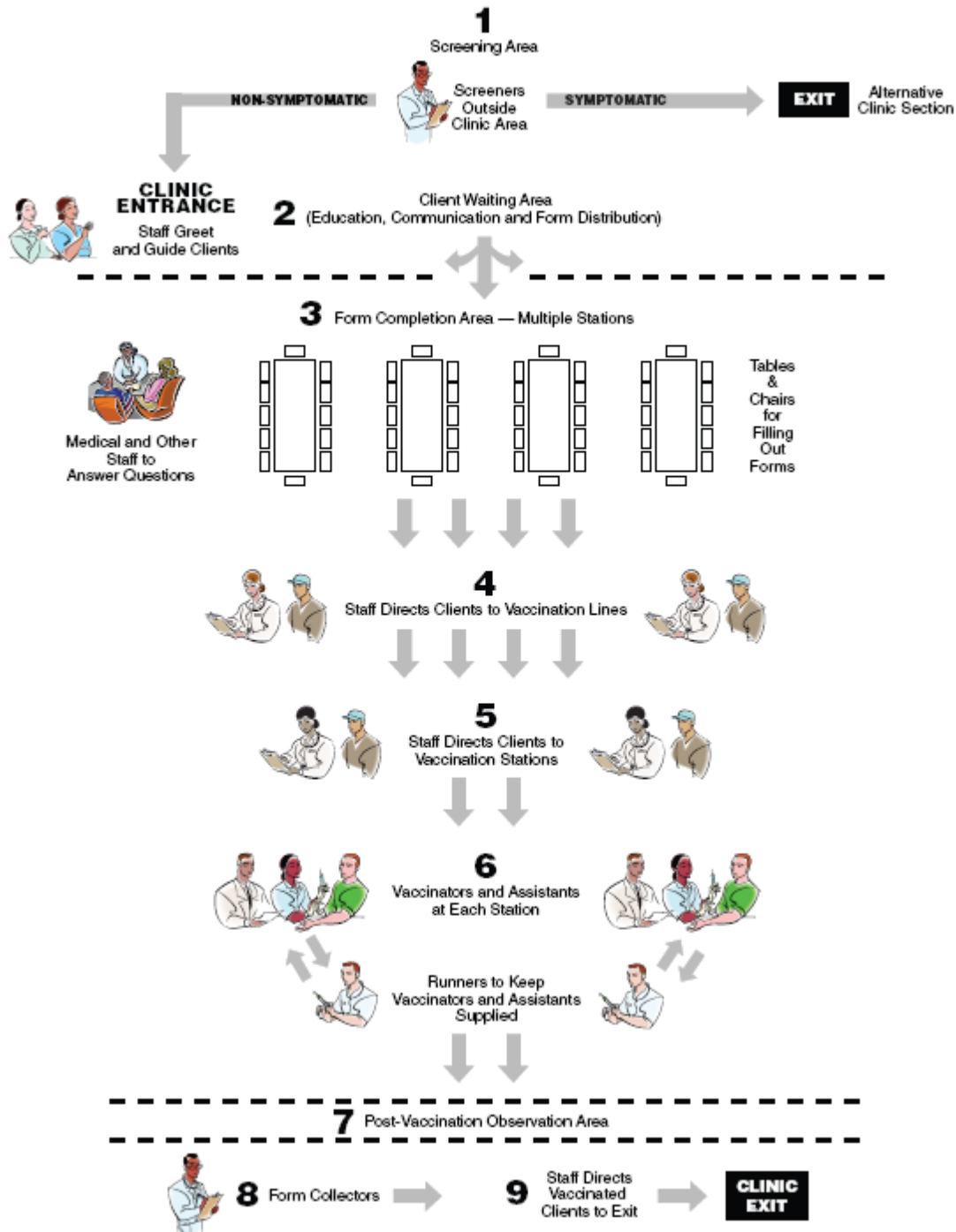
It is likely that form completion will become the most time-consuming clinic activity. Sufficient staff should be assigned to move persons through these areas with some dispatch in order to maintain a steady flow of clients to the vaccination areas and maximize the efficiency of the vaccinators. Client overflow should be held in a location in the clinic designated for this contingency.

Traffic in the area where vaccine is being administered should be kept to a minimum. Ideally, each vaccination station should be physically organized so that clients must present one at a time at the vaccine administration table. The three steps of the actual vaccination process (site preparation, vaccination, and dressing application) shared by the vaccination team will take place in a relatively small space (one or two tables) in the same area. Since some vaccine recipients may need to remove shirts or blouses in order to be vaccinated, a separate, screened privacy area should be available out of view of other persons waiting to be vaccinated. If possible, a separate vaccination station should be opened for the families with young children and elderly and persons with disabilities who may need additional time, a station for single adults and adolescents.

The clinic vaccination record for each vaccine recipient should be completed and verified. The recipient should also be provided with a personal vaccination card.

The post-vaccination observation area and medical emergency area should be located as close to the vaccine administration area as possible.

# Example of the Steps in a Large Scale Influenza Vaccination



## 4. Documentation and Paperwork

Vaccinee-specific documents that may be required by a novel H1N1 influenza immunization clinic must be collected (Table 1.). The clinic vaccination record of each recipient must be retained by the clinic in paper or electronic format. If computer resources are available, required recipient clinic data should be entered in “real time” throughout the vaccination process. However, paper-based documents may be the only available collection format. Where possible, these can then be entered into a computer for storage and to provide a summary.

Certain administrative documents and worksheets, such as staffing assignments, attendance, doses available, administered and wasted, will be required to assist in clinic management and keeping track of the vaccine (Table 2.).

## 5. Security

Early in the vaccination program, especially if influenza cases are many, severe and rapidly increasing in number and vaccine availability is not well defined, the level of risk perceived by the public may be extreme. In these circumstances, state and local public health officials should be prepared for a high level of demand for vaccine by the public. Likewise state, local and contract law and security agencies should be prepared for traffic and crowd control near vaccination clinics.

### Management Responsibilities

The clinic manager must ensure that the following activities are handled at each site:

- Notify state/local police and EMS of the time location of the clinic
- Assign a security coordinator
- Ensure presence of police or other security personnel
- Require that all staff wear identification cards
- Determine need for trained security guards, crowd control and traffic control personnel
- Designate entrances/exits for staff use
- Provide list of authorized staff for each clinic site
- Establish staff check-in/check-out procedures
- Establish methods and locations to safeguard vaccine and other clinic supplies
- Maintain a system to vaccinate clients in their order of arrival

**TABLE 1**  
**POSSIBLE VACCINATION DOCUMENTS**

Document	Information Collected Or Provided	How Used
Screening Protocols: a) ILI symptoms b) Contraindications c) Prioritization	Symptoms of ILI or not Contraindications to Flu Vaccine or Components Priority Group	> Screen ILI suspects from entering clinic > Identify/send to medical person for expert opinion > Ensure vaccination of high priority groups first
Vaccine Information Statement and/or EUA Fact Sheet (if required)	Verbal: Yes/No: Have you read? Do you understand? VAERS instructions.	Provide disease and vaccine information at clinic; Taken home by vaccinee to inform/advise how to report adverse events to VAERS
Clinic Vaccination Record	Name, Address, Date age/DOB,M/F, lot number, manufacturer, type of administration (injection/nasal), other state, local, and clinic- required data	Official clinic medical record retained and available for VAERS review and/or FDA/CDC review under EUA
Patient Vaccination Card	Name, Clinic Name and phone, Date age/DOB,M/F, lot number, manufacturer, type 1st dose, 2nd dose, date to return for 2nd dose	Proof of vaccine receipt; Information presentable to health provider in the advent of an Adverse Event; Reminder/recall for 2nd dose and date for 2nd dose verify receipt of vaccine

**TABLE 2**  
**POSSIBLE ADMINSTRATIVE WORKSHEETS**

Document	Information Collected Or Provided	How Used
<b>Daily Vaccine Tracking Record By:</b> • Inactivated types • Life, attenuated type	<ul style="list-style-type: none"> <li>• Beginning Inventory</li> <li>• Dose received</li> <li>• Doses Administered</li> <li>• Ending Inventory</li> <li>• Doses Wasted</li> <li>• Signature of clinic official</li> </ul>	Documents where, when and how much vaccine was used; daily vaccine supply monitoring, accountability
<b>Staffing/Volunteer Assignment Sheet</b>	<ul style="list-style-type: none"> <li>• Date of Clinic</li> <li>• Clinic Roles</li> <li>• Individuals Assigned</li> <li>• Attendance</li> </ul>	Record staffing/volunteer assignments

### Security Staff Responsibilities

Security staff functions include: (1) maintaining orderly clinic operations; (2) protecting patients; (3) protecting employees; (4) protecting facility property, including medical supplies and vaccine; and (5) enforcing the direction of ILI symptomatic clients to an alternative section of the clinic. To fulfill these functions, security staff must have the capacity to:

- Manage the facilities' security resources.
- Monitor the physical facility.
- Recognize potential for mob behavior.
- Control access to the facility and areas within it...
- Provide a means to identify authorized employees.
- Update an authorized personnel list on an ongoing basis.
- Coordinate with other security agencies.
- Direct person in need of care to alternative facilities.
- Remove individuals who pose a risk to the facility and its operation.
- Follow the emergency response plan of the state, local and/or facility.
- Communicate with clinic staff, the command center, and external security personnel.
- Perform a secure lock down of the facility quickly.
- Obtain additional security resources in a predefined "emergency" situation.
- Respond with appropriate force if required.
- Provide information to persons massed outside the facility.

### Security Strategy

To manage a large number of people arriving at clinic sites, the main strategy should be to (1) secure a limited access perimeter at a designated distance from the physical facility; (2) secure the clinic itself (interior perimeter; e.g., the facility's main and secondary entrances, front drive, and parking area); and (3) maintain order within the facility. To carry out these strategies, security personnel must be prepared to:

- Intercept and detain individuals attempting unauthorized entry to the facility.
- Continuously provide situation information to state/local disaster command and control.
- Disseminate public information, including leaflet distribution.
- Control and disperse crowds.
- Operate available security equipment such as closed circuit television, metal detectors, security alarm systems and radio communications system.

### Emergency Protocol

In a medical or public safety emergency, security staff should immediately undertake the following activities:

- Set up an outer perimeter
- Arrange to meet emergency vehicles at the outer perimeter and guide them to the appropriate entrance.

- Meet mass transit and supply vehicles at the outer perimeter and direct them to the appropriate entrance.
- Meet individuals coming to the facility at the outer perimeter and identify them as either authorized staff or eligible for care.
- Deny ineligible or unauthorized persons admission using standard scripts.
- Direct authorized persons to the admission station at the interior perimeter. Offer disabled persons, the elderly, and parents with small children an escort, when appropriate.
- Monitor length on lines at the clinic entrance and relay information to the outer perimeter to limit admission, when necessary.
- Refer over-flow to other clinics, if necessary.
- Lock down the facility in the event the security objectives were compromised.

## 6. Clinic Supplies and Equipment

A secure area should be identified for maintaining clinic supplies including vaccine. A list of clinic supplies should be kept on hand at the clinic site to be used for staff training, clinic set-up, and restocking. A list of suggested supplies is provided in Table 3.

## 7. Transportation

Depending on circumstances (security concerns, parking facilities, clinic size and location, etc.) the following groups may require transportation assistance:

- Clinic staff,
- High-risk, elderly and disabled individuals, or specific priority group
- The general public (i.e., persons with lower or unknown risk of exposed).

In addition, transportation will be needed to keep adequate amounts of vaccine and various clinic supplies in stock. Pick-up locations for staff and supplies should be arranged and clearly communicated to drivers and staff.

Although transportation of clinic staff can be handled with agency motor pool or rented vans, special security arrangements may be required. Until vaccine supplies are no longer critical, vaccine can be transported in law enforcement or similar secure vehicles. If transportation of large numbers of vaccine clients is required, public and/or private buses may be needed. In these cases, a hotline or other mechanism must be established to enable individuals to obtain information about bus departure locations and schedules. Special consideration should be given if transportation of special populations becomes necessary [e.g., children, the elderly, homeless persons, remote populations, and disabled (including homebound) persons]. The ability to communicate with drivers via radio or cell phones is critical.

**TABLE 3**  
**PANDEMIC INFLUENZA CLINIC SUPPLIES AND EQUIPMENT**

<u>General Supplies and Equipment</u>	<u>Vaccine Administration Supplies</u>	<u>Emergency Supplies</u>
Tables	Cooler/refrigerator for vaccine	Standing orders for emergencies
Chairs	Needles	Epinephrine 1:1000 SQ
Water and cups	Syringes	Diphenhydramine 50 mg IM
Paper	“Sharps” containers	3cc syringes with 1”, 25-gauge needles
Pen, pencils	Latex gloves	1.5’ needles
Envelopes	Latex-free gloves	Tuberculin syringes with 5/8” needles (for epinephrine)
Rubber bands	Antibacterial hand-washing solutions	Alcohol wipes/Sterile dry pads
Tape	Alcohol wipes	Bandages
Stapler/staples	Rectangle band-aids	Tongue depressors
Scissors	Gauze	Adult and pediatric pocket masks with one way valve
Post-it Notes	Adhesive tape	Adult and pediatric airways tubes
Clipboards	Spray bottle of bleach solution	Tourniquet
File boxes	Thermometers for vaccine and people	Gurney
Telephone/Cell phones	Curtain for privacy	Stethoscope
Paper towel		Flashlight/batteries
Kleenex tissue		Blood Pressure Monitor
Table pads/clean paper		Instant Cold Packs
Trash containers/bags		Cots
ID badges for staff		Blankets
List of emergency phone numbers		Pillows
	 <b><u>Crowd Management Supplies</u></b> Signs for clinic stations and between stations Queue partitions (to keep people in lines), roping	
	 <b><u>Computer Equipment and Supplies</u></b> Computers Printers/Ink Cartridges Paper Internet access	



## 8. Vaccine Storage and Handling

Guidelines for handling and storage of inactivated and live-attenuated influenza vaccines are appended. The package inserts should be consulted for optimal cold storage criteria. For both types of vaccine, the cold storage temperature recommendations for vaccine refrigerators, shipping containers and day storage at administration sites is 2-8° C. Vaccine shipping boxes and equivalent containers and cold gel packs are adequate for day use. If the clinic lasts for more than one day, arrangements must be used to store the vaccine in a secure, temperature-monitored refrigerator. Vaccine usage should be monitored closely, and arrangements made to obtain additional vaccine, as needed.

## 9. Disposal of Needles and Medical Supplies

All vaccination operations should observe universal precautions for preventing blood exposures and blood borne pathogen transmission (i.e., hepatitis B and C viruses [HBV, HCV], and human immunodeficiency virus [HIV]). Specific guidelines for the proper disposal of instruments and other potentially contaminated material during a novel H1N1 influenza vaccination operation are summarized below:

1. Appropriate disposal of pre-sterilized needles after use:
  - Medical waste sharps containers should be available in the area where the sharp is used.
  - Arrangement should be in place for transport and destruction of filled sharps containers.

Other medical waste, including gauze or cotton used during administration of vaccine, other potentially contaminated material, and empty vaccine vials and nasal spray containers should be bagged in appropriately marked biohazard bags and incinerated or autoclaved on-site if possible

## 10. Vaccine Security and Tracking

Since the demand for influenza vaccine for novel H1N1 may be very high, care must be taken to protect the vaccine supply from theft and fraud. In addition, great care and pre-planning must occur to minimize vaccine wastage that may result from improper handling and storage, and discarding prefilled syringes and partially used vials. Because of these factors, each and every dose and vial should be accounted for before and after each clinic session.

## 11. Communication Systems

Each clinic must have a working phone and computer facilities for e-mail traffic. If available, walkie-talkies and cell phones should be distributed to the clinic staff. Ideally, replacement batteries and/or battery chargers for each device also should be made available. A list of important land and cell phone numbers should also be distributed to all clinic staff.

## 12. Post Clinic Activities

Post-clinic activities are necessary to ensure that the event is documented for the public record, to determine the cost of the operation and to enhance efficiency for future efforts. In this context, evaluation of novel influenza clinics should include review of expenditures and in-kind cost incurred in the operation, identification of gaps and problems, recommended changes in emergency response plans, and a description of implications for public health infrastructure.

CS204940-D

# Pandemic Influenza Plan – Antiviral Medication Distribution and Dispensing

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## INTRODUCTION

The use of antiviral medications for management of influenza is an important component of a multi-faceted response to an influenza pandemic. Treatment with a class of agents called neuraminidase inhibitors has been shown to decrease severe complications of influenza, such as pneumonia and to reduce hospitalizations. Antiviral usage may be particularly important before vaccine is available and for those for whom vaccination may be medically contraindicated. The effect of antiviral medications is usually immediate and does not interfere with the response to inactivated influenza vaccines. It is also essential to avoid inappropriate use of antiviral medications because that may lead to influenza virus developing resistance to these medications. Ultimately, vaccination against the pandemic influenza virus is likely to provide the most durable protection against the illness, but pandemic vaccine may not be available in a timely manner.

Antiviral medications for treatment of influenza included in the Strategic National Stockpile (SNS) include the neuraminidase inhibitors, oseltamivir (Tamiflu<sup>®</sup>) and zanamivir (Relenza<sup>®</sup>). The Centers for Disease Control and Prevention (CDC) also has added peramivir for intravenous administration for patients who have severe, complicated, or progressive illness; are hospitalized; or who are unable to take oral medication or in whom oral medication appears to be ineffective.

## OBJECTIVES

- Describe plan for allocation, distribution, and administration of antiviral medications.
- Monitor antiviral medication use and safety during a pandemic.

## PLANNING ASSUMPTIONS

- The Missouri Department of Health and Senior Services/State Emergency Management Agency (DHSS/SEMA) will continue to follow the guidance issued by CDC regarding the use of antiviral medications. (Please see specific references in the resources section at the end of this annex.)
- Treatment with a neuraminidase inhibitor (oseltamivir [Tamiflu<sup>®</sup>] or zanamivir [Relenza<sup>®</sup>]) will be effective in decreasing risk of pneumonia, will decrease hospitalization by about half (as shown for inter-pandemic influenza), and will also decrease mortality.
- The effectiveness of antiviral medications against a new pandemic influenza strain cannot be completely predicted.
- The choice of particular antiviral medications will depend on what is known about the viral resistance pattern at the time of the pandemic, and on the availability of a particular drug.
- Antiviral resistance to the adamantanes (amantadine and rimantadine) may limit their use during a pandemic.
- Early treatment is a more efficient use of antiviral medications than prophylaxis.
- Early treatment after the onset of disease is most effective in decreasing the risk of complications and shortening illness duration. Generally, treatment should be given within the first 48 hours.

- Antiviral use will be most important during the time when vaccine is not yet available, when the supply of the new vaccine is limited, and while immunity from the vaccine is being developed.
- Within local communities, private providers, health care facilities, industry, and others may have purchased antiviral medication caches for protection of their workers.

## **EMERGENCY USE AUTHORIZATION (EUA)**

Section 564 of the Federal Food, Drug, and Cosmetic Act (the Act), amended by the Project BioShield Act of 2004, permits authorization of such products for use in diagnosing, treating, or preventing serious or life-threatening diseases or conditions caused by biological, chemical, radiological, or nuclear agents, if certain statutory criteria are met.

Should a pandemic occur, Missouri would follow the guidance and requirements issued by the federal government related to use of antiviral medications. It is anticipated the Secretary would declare a public health emergency; therefore the U.S. Food and Drug Administration (FDA) would have authority to issue an Emergency Use Authorization (EUA) for emergency use of Tamiflu<sup>®</sup> (oseltamivir) and Relenza<sup>®</sup> (zanamivir). More information on the EUA can be found at <http://www.fda.gov/RegulatoryInformation/Guidances/ucm125127.htm>.

In addition to the medical countermeasures supplied by the SNS, Tamiflu<sup>®</sup> and Relenza<sup>®</sup> that may be supplied via state and local governments are also covered by the EUA, if the terms and conditions of the EUA are met.

## **PUBLIC READINESS AND EMERGENCY PREPAREDNESS (PREP) ACT**

The PREP Act authorizes the Secretary of the Department of Health and Human Services (Secretary) to issue a declaration (PREP Act declaration) that provides immunity from tort liability (except for willful misconduct) for claims of loss caused, arising out of, relating to or resulting from administration or use of countermeasures to diseases, threats and conditions determined by the Secretary to constitute a present or credible risk of a future public health emergency to entities and individuals involved in the development, manufacture, testing, distribution, administration and use of such countermeasures.

## **WHAT THE LAW DOES**

### **Liability Protection**

The PREP Act confers immunity from liability on specified persons for certain activities related to covered countermeasures:

- **Persons Covered**—The PREP Act covers individual persons and entities. Covered persons may, at the secretary's discretion, include manufacturers, distributors, program planners (i.e., individuals and entities involved in planning and administering programs for the distribution of countermeasures), and qualified persons who prescribe, administer, or dispense countermeasures (i.e., healthcare and other providers). The United State officials, agents, and employees of any of these entities or persons are also covered persons.
- **Activities Covered**—Immunity applies to the development, manufacture, testing, distribution, administration, and use of countermeasures.

- **Countermeasures Covered**—Countermeasures can include vaccines, drugs, or medical devices to be used against chemical, biological, radiological, and nuclear (CBRN) agents of terrorism, epidemics, and pandemics.
- **Claims Covered**—The act provides immunity from tort liability except for willful misconduct. PREP Act immunity covers death and physical, mental, or emotional injury, illness, or disability, and the fear of these conditions. Liability protections also extend to claims made for medical monitoring as well as loss or damage to property, including business interruption. Claims that have a causal relationship to the development, distribution, administration, or use of the covered countermeasure are potentially included within the scope of PREP Act liability protections.

## Compensation Fund

The PREP Act authorizes an emergency fund in the United States Treasury to provide compensation for injuries directly caused by administration or use of a countermeasure covered by the secretary’s declaration. The Countermeasures Injury Compensation Program (CICP) is administered by the Health Resources and Services Administration (HRSA). For more information on CICP, go to:

<http://www.astho.org/Programs/Preparedness/Public-Health-Emergency-Law/Emergency-Use-Authorization-Toolkit/Emergency-Use-Authorization-Toolkit-Supplemental-Materials/#Countermeasures-Injury>

## What the Law Does Not Do

A PREP Act declaration by the U. S. Department of Health and Human Services secretary only provides immunity from liability for the persons, activities, and countermeasures specified in the declaration; it does not automatically protect everyone involved in any kind of medical response to an emergency. The act’s liability protections do not apply where the liability arose from willful misconduct. It also does not protect individuals who violate a person’s civil rights or who violate the Americans with Disabilities Act, among other exceptions stated in the act. The PREP Act does not confer any other immunities or liability protections. A PREP Act declaration is different from, and independent of, other federal emergency declarations. A separate public health emergency determination under Public Health Service Act Section 319 or another statute is not required to enable the PREP Act or for its immunities to take effect. See:

<http://www.astho.org/Programs/Preparedness/Public-Health-Emergency-Law/Emergency-Use-Authorization-Toolkit/Emergency-Use-Authorization-Toolkit-Supplemental-Materials/#Public-Health-Service>

## How the Law Works

Before issuing a PREP Act declaration, the secretary must determine that a disease, condition, or threat to health constitutes a public health emergency or a credible risk of a future public health emergency and find that the development of a countermeasure is desirable. The secretary then issues a PREP Act declaration that specifies, among other things:

- The countermeasures covered by the declaration.
- The category of diseases, health conditions, or health threats determined by the secretary to constitute a present or credible risk of a future public health emergency for which administration and use of the countermeasures is recommended.

- The effective time period of the declaration.
- The population of individuals receiving the countermeasure.
- Limitations, if any, on the geographic area for which immunity is in effect.
- Limitations, if any, on the means of distribution of the countermeasure.

Any additional persons identified by the secretary as qualified to prescribe, dispense, or administer the countermeasures.

## **DISTRIBUTION OF ANTIVIRAL MEDICATIONS IN MISSOURI**

- Antiviral medications purchased with publicly funded monies through the SNS are to be used for **treatment only**.
- The model of delivery will vary in local communities depending on each jurisdiction's dispensing plan and resources.
- In general, local public health agencies (LPHA's) will be required to pick up the antiviral medications from the designated Receiving Staging and Storage site.
- The amounts antivirals needed will be determined by the community's population size or numbers of persons at risk.
- DHSS/SEMA will continue to work closely with LPHAs to enhance specific distribution plans for these assets for communities utilizing available health care providers and resources.

LPHAs will utilize the SNS WebEOC system for ordering antiviral medications from the SNS stockpile. LPHA's will work closely with community partners to integrate plans for antiviral distribution into existing pandemic influenza plans and identify the best method of distribution and dispensing for their population.

LPHA's will identify community partners who can prescribe antiviral medications for treatment and who would be willing to dispense this medication and comply with other stipulations set forth by DHSS/SEMA and CDC regarding the dispensing of subsidized medications. Community partners could include hospital pharmacies, retail pharmacies, health care providers, Federally Qualified Health Centers, and other facilities with appropriate storage facilities, hours of operation, and staff to dispense the medication.

## **USING ANTIVIRAL MEDICATIONS TO TREAT HIGH-RISK INDIVIDUALS**

CDC is strongly encouraging state health departments to use assets provided by the states and the SNS for treatment of high-risk individuals. These individuals may not have routine access to medications through commercial pharmacy distribution systems and may be unable to purchase antiviral medications prescribed to them. High-risk individuals are defined as having increased risk of developing severe disease or complications from influenza. The high-risk groups include:

- Pregnant women.
- Individuals with chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), neurologic, neuromuscular, or metabolic disorders (including diabetes mellitus).
- Individuals with immunosuppression, including that caused by medications or by HIV.
- People younger than 19 years of age who are receiving long-term aspirin therapy.
- Children younger than 5 years old. The risk of severe complications from influenza is highest among children younger than 2 years old.
- Adults 65 years of age or older.

It is likely that current antiviral usage guidelines, including high risk groups and prioritization recommendations, will change when epidemiologic data on a specific pandemic virus becomes available or when supplies of antiviral medications are greatly increased.

Many communities have hospitals or clinic pharmacies that provide direct dispensing of medications or onsite prescription assistance programs for treatment of high-risk individuals that may not otherwise have affordable access. A broad, forward deployment of antiviral medications to these locations can help ensure that **underinsured or uninsured high-risk individuals with influenza** will be able to receive antiviral medications for treatment.

A forward deployment also can help ensure rapid dispensing of medication to those who might otherwise have limited or no access for obtaining medications through commercial pharmacies.

## **ANTIVIRAL MEDICATIONS ADVERSE EVENTS**

For information on recognizing adverse events (side effects) related to the use of each medical countermeasure, please refer to the respective EUA fact sheets for that product. Health care professionals and consumers may report serious adverse events (side effects) associated with the use of these products, or product quality problems, to the FDA's MedWatch Adverse Event Reporting program at <https://www.accessdata.fda.gov/scripts/medwatch/>.

Additionally, questions related to adverse reactions may be directed to DHSS' Emergency Response Center (ERC) by calling 800-392-0272.

## **RESOURCES**

Department of Health and Human Services. *Pandemic Influenza Plan – 2017 Update*  
<https://www.cdc.gov/flu/pandemic-resources/pdf/pan-flu-report-2017v2.pdf>

FDA. Emergency Use Authorization of Medical Products and Related Authorities: Guidance for Industry and Other Stakeholders  
<http://www.fda.gov/RegulatoryInformation/Guidances/ucm125127.htm>

CDC. Information for Health Care Professionals: Antiviral Drugs  
<https://www.cdc.gov/flu/professionals/antivirals/index.htm>

DHSS. Pandemic Influenza - Medical & Public Health Professionals  
<https://health.mo.gov/emergencies/panflu/panflu.php>

# Pandemic Influenza Plan – Community Mitigation

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## INTRODUCTION

Community mitigation measures and other non-pharmaceutical interventions (NPIs) are designed to limit the spread of influenza in the community or within certain high-risk populations and settings. The early use of NPIs that are strategically targeted, layered, and implemented in a coordinated manner across neighboring jurisdictions and tailored to pandemic severity is a critical component of a comprehensive strategy to reduce community disease transmission and mitigate illness and death during a pandemic. Because mitigation strategies call for specific actions by individuals, families, businesses and other employers and organizations, the planning and preparedness for NPI implementation is complex and requires participation by all levels of government and all segments of society. Pre-pandemic planning, along with community engagement, is an essential component of pandemic preparedness.

When a novel influenza A virus with pandemic potential emerges, NPIs can be used in conjunction with available pharmaceutical interventions (antiviral medications) to help slow its transmission in communities. These interventions are especially important before a safe and effective vaccine is available, or if the virus is not susceptible to available antiviral drugs. Due to current vaccine technology, it is likely that new influenza vaccine will not be available for up to 6 months.

In the early pandemic, antivirals such as Tamiflu<sup>®</sup> and Relenza<sup>®</sup> may become limited or antiviral resistance could increase as the pandemic progresses limiting their usefulness. There is also the possibility that large-scale use of these medications may induce resistance in the pandemic strain of influenza. Therefore, the limited amount of antivirals present early in a pandemic will likely be used for treatment of high-risk, sick patients, and not for widespread chemoprophylaxis.

In April, 2017, the Centers for Disease Control and Prevention (CDC) published new guidelines “*Community Mitigation Guidelines to Prevent Pandemic Influenza – United States, 2017*” based on the review of the latest scientific evidence and lessons learned from the 2009 H1N1 pandemic response. This chapter discusses Missouri’s community containment measures during pandemic influenza in concordance with those CDC guidelines.

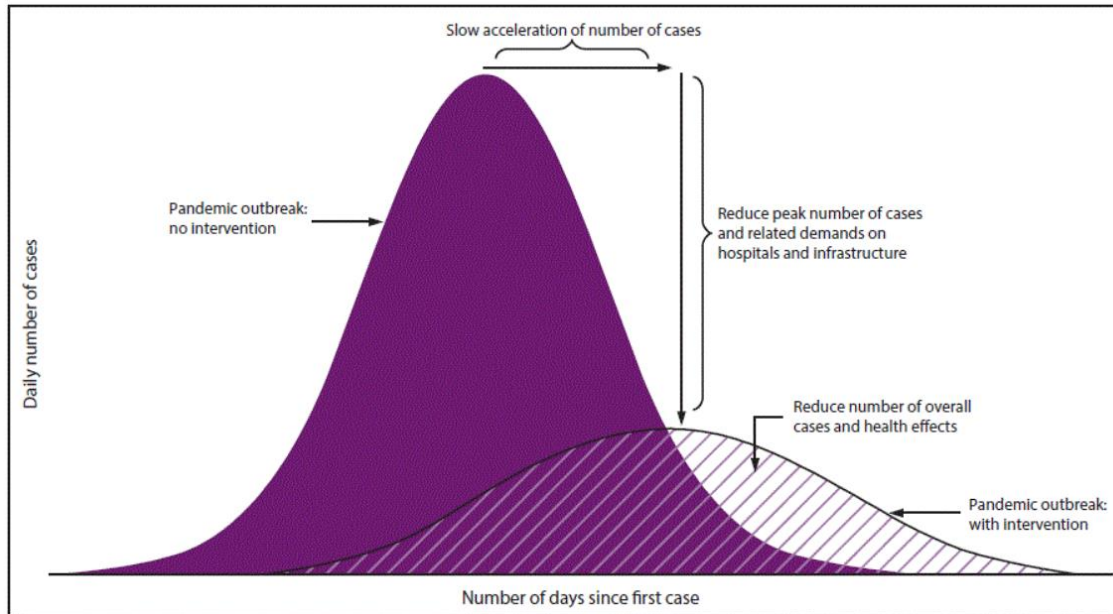
## NPI OBJECTIVES

- **To slow acceleration of the number of cases in a community** to buy time for the development, distribution, and wide-scale administration of a well-matched pandemic vaccine to targeted populations.
- **To reduce the peak number of cases during the pandemic and related health care demands on hospitals and infrastructure**, to the extent possible, by reducing peak daily cases of illness to put less stress on the healthcare system and to protect critical infrastructure and key resources (e.g., public health and healthcare systems and utility services) that might otherwise be affected by high rates of worker absenteeism.



- **To decrease overall cases and health effects** by reducing the overall risk of infection in the community and thereby protecting the most vulnerable from acquiring an infection that may lead to severe outcomes (See Figure 1.)

**Figure 1. Goals of community mitigation for pandemic influenza**



**Source:** CDC. Interim pre-pandemic planning guidance: community strategy for pandemic influenza mitigation in the United States—early, targeted, layered use of nonpharmaceutical interventions. Atlanta, GA: US Department of Health and Human Services, CDC; 2007.

### NPI Implementation

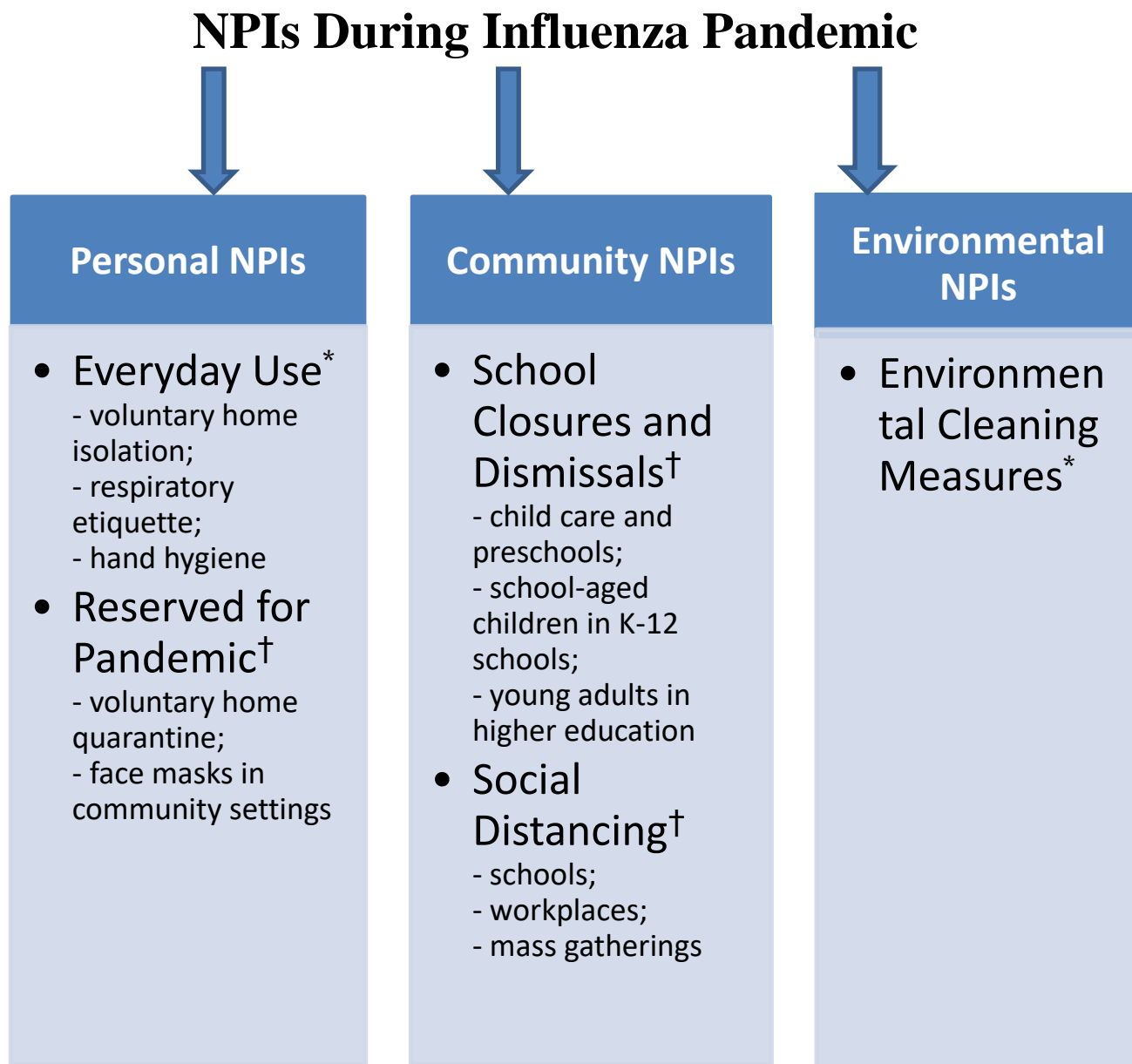
When a pandemic begins, public health authorities need to decide on an appropriate set of NPIs for implementation. The range of NPIs which will be used in Missouri during the influenza pandemic is shown in Figure 2. The especially difficult decision is how and when to implement community-level NPIs that are needed but are more disruptive for the communities. In Missouri, these decisions will be made by state and local health officials with guidance from CDC (according to pandemic severity and potential efficacy) but tailored to the specific conditions in respective jurisdictions. A variety of multiple factors will be considered before implementing NPIs during the influenza pandemic (See Attachment A.).

The Missouri Department of Health and Senior Services (DHSS) and the local public health departments (LPHAs) will use certain influenza surveillance indicators to help decide when to consider implementing NPIs, such as school closures and dismissals and other social distancing measures in schools, workplaces, and public settings during an influenza pandemic (See Table 1.). Depending on the availability and capacity of their public health resources, selection of influenza surveillance indicators will likely differ among LPHAs.

**Table 1. Possible NPI surveillance indicators for an influenza pandemic in Missouri**

<b>Key Influenza Indicator</b>	<b>Data Source</b>	<b>Measure of Influenza Activity</b>
<b>Indicators of spread or level of influenza activity</b>		
% of patient visits to health care providers for influenza like illness (ILI)	CDC Outpatient ILI Surveillance Network (ILINet)	CDC provides baseline values for the 10 U.S. Department of Health and Human Services (HHS) surveillance regions and for the United States <a href="https://www.cdc.gov/flu/weekly/overview.htm">https://www.cdc.gov/flu/weekly/overview.htm</a>  <a href="https://www.cdc.gov/flu/weekly/FluViewInteractive.htm">https://www.cdc.gov/flu/weekly/FluViewInteractive.htm</a>
ILI activity: % of outpatient visits for ILI in a state (minimal to high)	Missouri Outpatient ILI Surveillance Network (ILINet)  Additional: Flu Near You <a href="https://flunearyou.org/">https://flunearyou.org/</a>	Current ILI level in Missouri compared to the baseline levels calculated based on the historical data
Geographic spread of influenza in a state (none to widespread)	Missouri Weekly Influenza Report	Estimated weekly levels of geographic spread (local, regional, or widespread) of influenza activity in Missouri at <a href="http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php">http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php</a>  <a href="https://www.cdc.gov/flu/weekly/overview.htm">https://www.cdc.gov/flu/weekly/overview.htm</a>
Percentage of respiratory specimens that test positive for influenza viruses in the United States	State and Territorial Epidemiologists reports  U.S. World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System laboratories  Missouri Weekly Influenza Report	National and regional percentage of respiratory specimens testing positive for influenza viruses <a href="https://www.cdc.gov/flu/weekly/FluViewInteractive.htm">https://www.cdc.gov/flu/weekly/FluViewInteractive.htm</a>  <a href="http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php">http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php</a>
Absenteeism rates due to ILI in child care facilities, K–12 schools, or colleges and universities	ILI surveillance in child care facilities, K–12 schools, or colleges and universities	Increased absenteeism rates due to ILI in child care facilities, K-12 schools, or universities  Increases in laboratory-confirmed influenza cases among students, teachers, and staff members Laboratory-confirmed outbreaks of influenza in child care facilities, K–12 schools, or colleges and universities
<b>Indicators of clinical severity of influenza</b>		
Influenza-associated hospitalizations	Missouri Influenza Weekly Surveillance Report, Bureau of Reportable Disease Informatics, ESSENCE. Population data from DHSS Population MICA	Patients Hospitalized with Influenza and/or Pneumonia Syndromes from Participating Missouri Hospitals by age group <a href="http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php">http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php</a>  <a href="https://health.mo.gov/data/populationestimates/index.php">https://health.mo.gov/data/populationestimates/index.php</a>
% of deaths attributed to pneumonia and influenza	National Center for Health Statistics mortality surveillance system	% of death certificates indicating pneumonia and influenza compared with a seasonal baseline and epidemic threshold value calculated for each week at <a href="https://gis.cdc.gov/grasp/fluview/mortality.html">https://gis.cdc.gov/grasp/fluview/mortality.html</a>
Influenza-associated death among persons aged < 18 years	Influenza-Associated Pediatric Mortality Surveillance System	Any laboratory-confirmed influenza-associated deaths in children, all of which are reported through this system <a href="https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html">https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html</a>

Figure 2. NPIs for personal and community preparedness



\* Recommended at all times

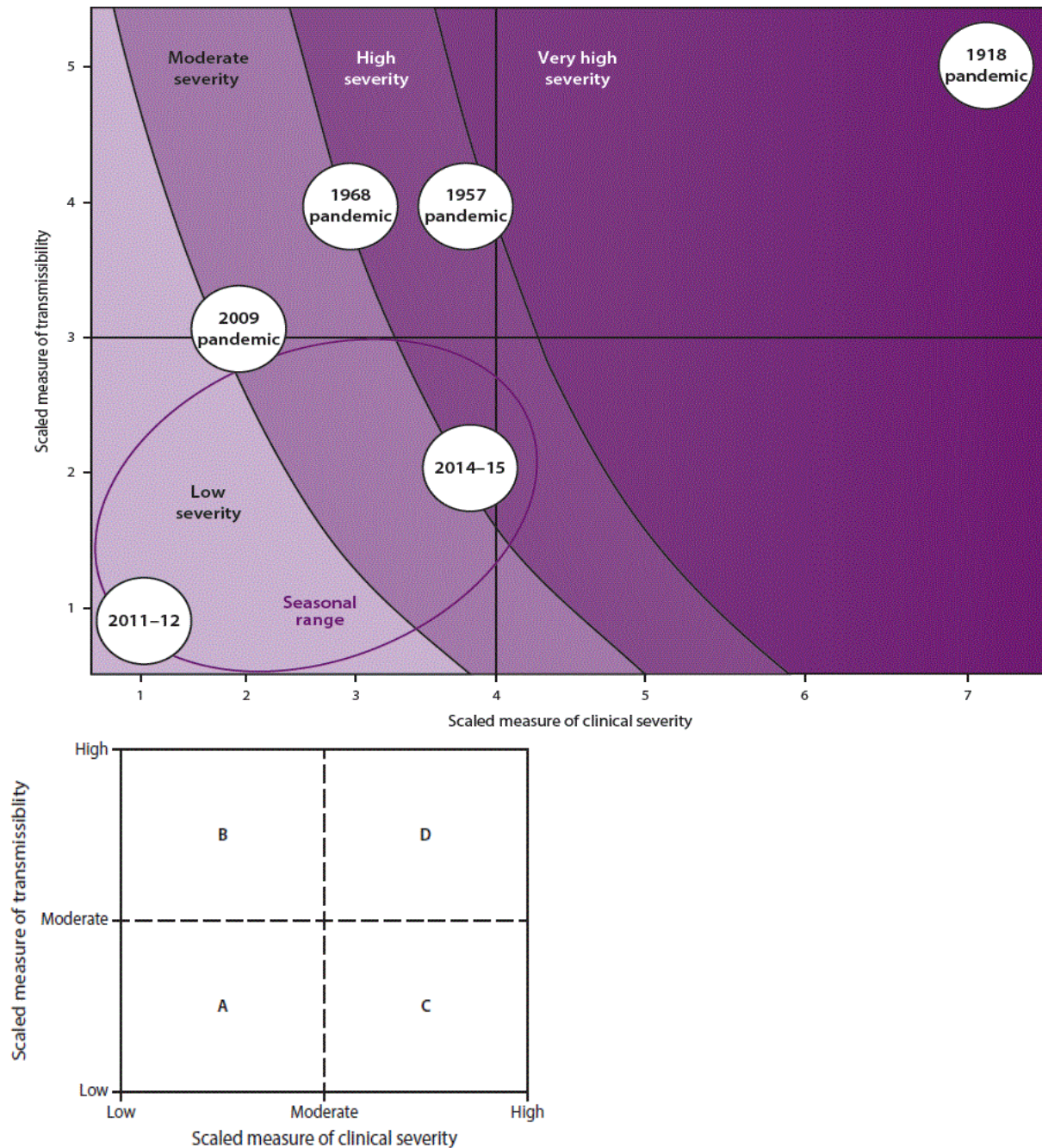
† Reserved for pandemics

When CDC’s Influenza Risk Assessment Tool (IRAT) indicates emergence of a novel influenza virus that can spread easily and efficiently and cause pandemic, CDC and partners will gauge its projected impact in order to recommend response. During the initial stages of a pandemic CDC will use the Pandemic Severity Assessment Framework (PSAF). The CDC will use PSAF scores of viral transmissibility and clinical severity to place the pandemic within one of four assessment “quadrants” (See Figure 3.):

- Quadrant A: Severity and transmissibility similar to an annual influenza season
- Quadrant B: Severity similar to an annual influenza season; transmissibility greater than an annual influenza season

- Quadrant C: Severity greater than an annual influenza season; transmissibility similar to an annual influenza season
- Quadrant D: Severity and transmissibility greater than an annual influenza season

**Figure 3. U.S. Department of Health and Human Services pandemic planning scenarios based on the Pandemic Severity Assessment Framework**



The PSAF tool will be used to prepare an **initial assessment** of pandemic severity that provides early guidance on use of NPIs. On the basis of the *initial assessment*, CDC will recommend that affected United States jurisdictions respond in accordance with one of the four Pre-pandemic Planning Scenarios (See Attachment B.).

These Scenarios are intended to provide state and local public health authorities with templates for rapid mobilization, including rapid selection of appropriate NPIs. Each scenario aligns with one of the four assessment quadrants. These planning scenarios are designed to facilitate state and local pre-pandemic planning for NPI implementation according to pandemic severity (as classified by PSAF) (See Table 2.). Scenario-based recommendations for NPI selection and use are provided in Table 2, in the context of an overall community mitigation strategy that also may include vaccines and antiviral medications (if available).

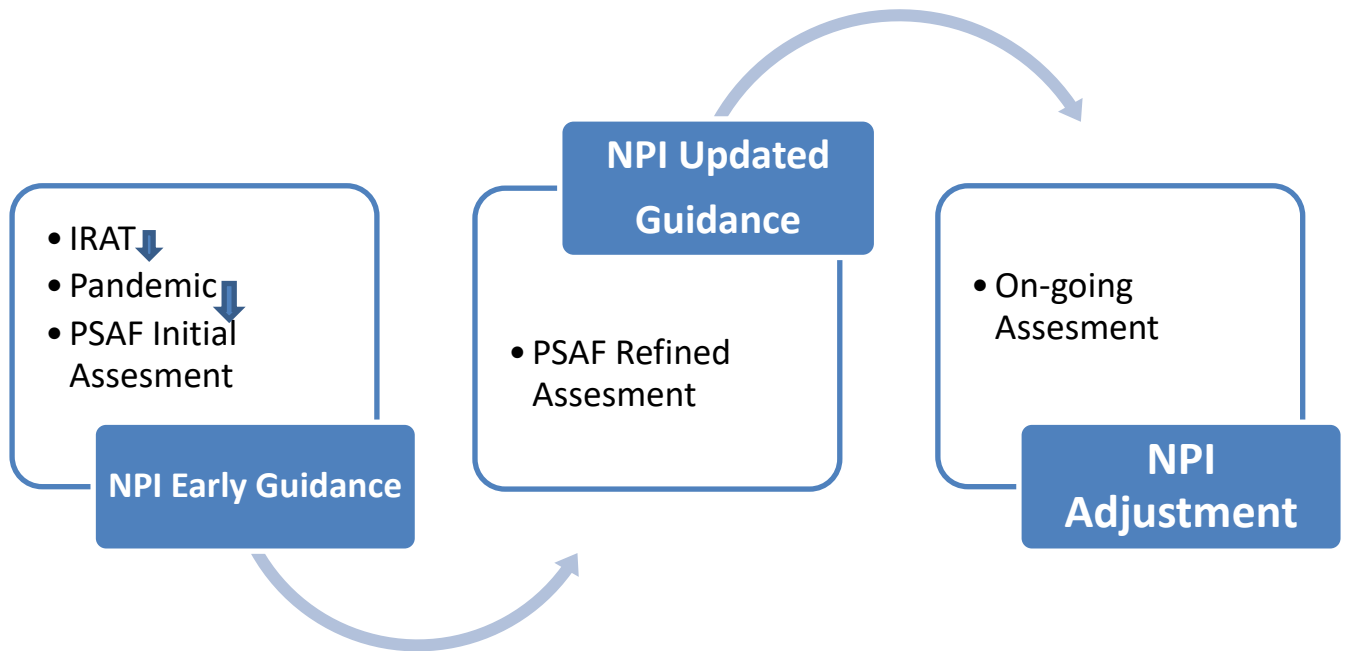
**Table 2. Recommended NPIs for influenza pandemics, by setting and pandemic severity**

Setting	Pandemic severity		
	Low to moderate severity (mild to moderate pandemic)	High severity (severe pandemic)	Very high severity (very severe to extreme pandemic†)
All	CDC recommends voluntary home isolation of ill persons, respiratory etiquette, hand hygiene, and routine cleaning of frequently touched surfaces and objects. <sup>§</sup>	CDC recommends voluntary home isolation of ill persons, respiratory etiquette, hand hygiene, and routine cleaning of frequently touched surfaces and objects.	CDC recommends voluntary home isolation of ill persons, respiratory etiquette, hand hygiene, and routine cleaning of frequently touched surfaces and objects.
Residences	CDC generally does not recommend voluntary home quarantine of exposed household members.	CDC might recommend voluntary home quarantine of exposed household members in areas where novel influenza virus circulates.	CDC might recommend voluntary home quarantine of exposed household members in areas where novel influenza virus circulates.
	CDC generally does not recommend use of face masks by ill persons.	CDC might recommend use of face masks by ill persons when crowded community settings cannot be avoided.	CDC might recommend use of face masks by ill persons when crowded community settings cannot be avoided.
Child care facilities, schools for grades K-12, and colleges and universities	CDC might recommend selective school dismissals in facilities serving children at high risk for severe influenza complications.	CDC might recommend temporary preemptive, coordinated dismissals of child care facilities and schools. <sup>¶</sup>	CDC might recommend temporary preemptive, coordinated dismissals of child care facilities and schools.
		If schools remain open, CDC might recommend social distancing measures. <sup>**</sup>	If schools remain open, CDC might recommend social distancing measures.
Workplaces	CDC generally does not recommend social distancing measures.	CDC might recommend social distancing measures. <sup>††</sup>	CDC might recommend social distancing measures.
Mass gatherings <sup>§§</sup>	CDC generally does not recommend modifications, postponements, or cancellations.	CDC might recommend modifications, postponements, or cancellations.	CDC might recommend modifications, postponements, or cancellations.

The initial assessment will necessarily involve a high degree of uncertainty because it will be based on limited data. Once sufficient data becomes available—which could take 4-8 weeks or longer, depending on the characteristics and capacity of the local surveillance systems where pandemic cases are first reported—CDC will prepare a refined and more robust assessment of pandemic severity, based on PSAF scores that use the clinical and epidemiologic measures.

On the basis of the *refined assessment*, CDC will issue new NPI guidance that is tailored more precisely to the specific pandemic situation. This guidance will address the selection, triggers, timing, and duration of NPIs and take into account the availability (or projected availability) of vaccines and antiviral medications. As the pandemic progresses—and more data become available—CDC will continue to update assessments of pandemic severity and revise its NPI recommendations accordingly (See Figure 4.).

**Figure 4. NPI Implementation**



## NON-PHARMACEUTICAL MITIGATION MEASURES

### I. Personal NPIs

#### A. Personal Protective Measures for Everyday Use

- 1. Voluntary Home Isolation of Ill Persons:** Most persons infected with an influenza virus might become infectious one day before the onset of symptoms and remain infectious up to 5-7 days after becoming ill. However, studies found that infants and immunocompromised persons might shed influenza viruses for prolonged periods (up to 21 days and a mean of 19 days, respectively). Voluntary home isolation prevents an ill person from infecting other people outside of their household. Persons with influenza should stay home for at least 24 hours after a fever or signs of a fever (chills, sweating, and feeling warm or flushed) are gone, except to obtain medical care or other necessities. To ensure that the fever is gone, temperature should be measured in the absence of medication that lowers fever (e.g. acetaminophen or ibuprofen). In addition to fever, common influenza symptoms include cough or chest discomfort, muscle or body aches, headache, and fatigue. Persons also might experience sneezing, a runny or stuffy nose, sore throat, vomiting, and diarrhea.
- 2. Respiratory Etiquette:** The preponderance of evidence points to the influenza virus being transmitted by contact and via large droplets. Respiratory etiquette reduces the dispersion of droplets contaminated with influenza virus being propelled through the air by coughing or sneezing. Persons should cover coughs and sneezes, preferably with a tissue, and then dispose of tissues and disinfect hands immediately after a cough or sneeze, or (if a tissue is not available) cough or sneeze into a shirt sleeve.

Touching the eyes, nose, and mouth should be avoided to help slow the spread of influenza.

3. **Hand Hygiene:** Hand hygiene reduces the transmission of influenza viruses that occurs when one person touches another (e.g., with a contaminated hand). Contamination also can occur through self-inoculation via fomite transmission (indirect contact transmission) when persons touch a contaminated surface and then touch their nose with a contaminated hand. Influenza viruses can live and potentially infect other people for up to 48 hours after being left behind on a surface. Influenza viruses can remain viable on human hands for 3-5 minutes. Persons should perform regular and thorough hand washing with soap and water (or use alcohol-based hand sanitizers containing at least 60% ethanol or isopropanol when soap and water are not available).

## **B. Personal Protective Measures Reserved for Pandemics**

1. **Voluntary Home Quarantine of Exposed Household Members:** Voluntary home quarantine of non-ill household members of persons with influenza (also called self-quarantine or household quarantine) helps prevent disease spread from households to schools, workplaces, and other households because those household members have been exposed to the influenza virus. Exposed household members of symptomatic persons (with confirmed or probable pandemic influenza) should stay home for up to three days (the estimated incubation period for seasonal influenza) starting from their initial contact with the ill person. If they become ill, they should practice voluntary home isolation. For certain exposed household members (e.g., those at high risk for influenza complications or with severe immune deficiencies), guidelines should be consulted regarding the prophylactic use of antiviral medications.
2. **Use of Face Masks in Community Settings when Ill:** Face masks (disposable surgical, medical, or dental procedure masks) provide a physical barrier that prevents the transmission of influenza viruses from an ill person to a well person by blocking large-particle respiratory droplets propelled by coughing or sneezing. Face masks are widely used by health care workers to prevent respiratory infections both in health care workers and patients. They also might be worn by ill persons during severe, very severe, or extreme pandemics to prevent spread of influenza to household members and others in the community.

The use of face masks by well persons in community settings is not routinely recommended due to lack of supporting evidence, however use of face masks by well persons might be beneficial in certain situations (e.g., when persons at high risk for influenza complications cannot avoid crowded settings or parents are caring for ill children at home). Face mask use by well persons also might reduce self-inoculation (e.g., touching one's own mucous membranes with the hand after touching a contaminated surface).

### **Recommendations:**

- **Voluntary home isolation** of ill persons (staying home when ill) year-round and especially during annual influenza seasons and influenza pandemics.

- **Respiratory etiquette and hand hygiene** in all community settings, including homes, child care facilities, schools, workplaces, and other places where people gather, year-round and especially during annual influenza seasons and influenza pandemics.
- **Voluntary home quarantine** of exposed household members as a personal protective measure during severe, very severe, or extreme influenza pandemics in combination with other personal protective measures such as respiratory etiquette and hand hygiene.
- If a member of the household is symptomatic with confirmed or probable pandemic influenza, then all members of the household should stay home for up to 3 days (the estimated incubation period for seasonal influenza) starting from their initial contact with the ill person, to monitor for influenza symptoms.
- **Use of face masks by ill persons:** CDC might recommend the use of face masks by ill persons as a source control measure during severe, very severe, or extreme influenza pandemics when crowded community settings cannot be avoided (e.g., when adults and children with influenza symptoms seek medical attention) or when ill persons are in close contact with others (e.g., when symptomatic persons share common spaces with other household members or symptomatic postpartum women care for and nurse their infants). Some evidence indicates that face mask use by ill persons might protect others from infection.
- **Use of face masks by well persons** not routinely recommended in the home or other community settings as a means of avoiding infection during influenza pandemics except under special, high-risk circumstances (<https://www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm>).

## II. Community NPIs

Statewide consistency regarding the use of social distancing measures and school closures and dismissals in the event of an influenza pandemic is of paramount importance for maintaining social stability, protecting public health and minimizing economic impact.

Missouri DHSS will promote following community NPIs consistent with recent CDC recommendations:

- **School closures and dismissals** including temporary closures and dismissals of child care facilities, K–12 schools, and institutions of higher education,
- **Social distancing measures** in schools, workplaces, and mass gatherings

**A. School closures and dismissals:** School systems represent an important element in pandemic influenza preparedness for several reasons, particularly since children easily transmit infectious diseases to one another due to their close proximity and their general lack of awareness and compliance with basic hygienic measures. Until a vaccine became available, students, teachers and staff would be highly susceptible to a novel virus. Therefore, in a pandemic, long-term and widespread absenteeism may occur due to the lack of immunity. This type of absenteeism occurs on a smaller basis annually due to seasonal influenza outbreaks. However, in a pandemic the impact would be much greater and the longer duration of the outbreak would create unique challenges.



As public health research shows, preemptive, coordinated school and child care dismissals, and closures and dismissals at higher education institutions can be implemented for several reasons:

- Children have higher influenza attack rates than adults and are infectious for a longer period than adults
- Influenza transmission is common in schools and contributes to school absenteeism and parental absenteeism from work
- The presence of school-aged children in a household is a risk factor for influenza virus infection in families
- Social contact and mixing patterns among school-aged children differ substantially depending on the grade and school level, during various periods of the school day, between weekdays and weekends, and between regular school terms and holiday breaks
- Physical floor plans and intergrade activities (e.g., cafeteria size and lunch breaks) also can affect in-school social mixing
- Schoolchildren can introduce the influenza virus into a community, leading to increased rates of illness among their household or community contacts.
- Influenza outbreaks on college and university campuses typically have high attack rates (44%–73%) and cause substantial morbidity.

Preventing the spread of disease in educational settings among children and young adults reduces the risk for infection for these age groups and slows virus transmission in the community. Depending on the severity of the pandemic, these measures might range from everyday preventive actions to preemptive, coordinated school closures and dismissals. *A school closure means closing a school and sending all the students and staff members home, whereas during a school dismissal, a school might stay open for staff members while the children stay home.* **Preemptive school dismissals** can be used to disrupt transmission of influenza before many students and staff members become ill. **Coordinated dismissals** refer to the simultaneous or sequential closing of schools in a jurisdiction. Thus, preemptive, coordinated school closures and dismissals can be used early during an influenza pandemic to prevent virus transmission in schools and surrounding communities by reducing close contact among children in child care centers and preschools, school-aged children and teens in K–12 schools, and young adults in institutions of higher education.

During a dismissal, the school facilities are kept open, which allows teachers to develop and deliver lessons and materials, thus maintaining continuity of teaching and learning, and allows other staff members to continue to provide services and help with additional response efforts. School closures and dismissals might be coupled with social distancing measures (e.g., cancelling sporting events and other mass gatherings) to reduce out-of-school social contact among children when schools are closed.

Components of the strategy might include preemptive, coordinated school closures and dismissals implemented during the earliest stages of a pandemic, before many students and staff members become ill. Preemptive, coordinated dismissals can be implemented by the following facilities: **child care** facilities, **K–12 schools**, and institutions of **higher education**.

Implementation of preemptive, coordinated school closures and dismissals during an evolving influenza pandemic has several public health objectives, according to the CDC:

- To gain time for an initial assessment of transmissibility and clinical severity of the pandemic virus in the very early stage of its circulation in humans (closures for up to 2 weeks)
- To slow down the spread of the pandemic virus in areas that are beginning to experience local outbreaks and thereby allow time for the local health care system to prepare additional resources for responding to increased demand for health care services (closures up to 6 weeks)
- To allow time for pandemic vaccine production and distribution (closures up to 6 months)

Other types of school closures and dismissals which might be implemented in Missouri are **selective** and **reactive**. These interventions do not slow disease spread in the community, and they are not considered NPIs.

- 1. Selective school closures and dismissals:** These might be implemented by schools that serve students at high risk for complications from infection with influenza especially when transmission rates are high. For example, a school that serves children with certain medical conditions or pregnant teens might decide to close while other schools in the area remain open. In addition, some communities or early childhood programs might consider closing child care facilities to help decrease the spread of influenza among children aged <5 years. Selective dismissals are intended to protect persons at high risk for influenza rather than to help reduce virus transmission within the community.
- 2. Reactive school closures and dismissals:** These might be implemented when many students and staff members are ill and not attending school or when many students and staff members are arriving at school ill and being sent home. For example, a child care center might close because it is unable to operate under these conditions. Reactive dismissals, which might occur during outbreaks of seasonal influenza and during pandemics, are unlikely to affect virus transmission because they typically take place after considerable, if not widespread, transmission has already occurred in the community.

Preemptive, coordinated school closures and dismissals are most likely to be implemented in Missouri when an influenza pandemic is **severe**, **very severe**, or **extreme**. Secondary consequences include missed work and loss of income for parents who stay home from work to care for their children and missed opportunities to vaccinate school-aged children rapidly unless other mechanisms are considered. While it may be necessary to eventually close schools, the goal of every Missouri community should be to keep schools open and safe whenever feasible. If closures are anticipated, it is important that the negative impacts of the closures on society, students, and staff be minimized by pre-planning for such an event. Communication structures must be enhanced and triggers for both closing and opening schools must be understood.

**Recommendations:**

In accord with the conclusions of the U.S. Community Preventive Services Task Force (<https://www.thecommunityguide.org/findings/emergency-preparedness-and-response-school-dismissals-reduce-transmission-pandemic-influenza>), CDC might recommend the use of **preemptive, coordinated school closures and dismissals** during **severe, very severe, or extreme** influenza pandemics.

**The task force found insufficient evidence to recommend for or against preemptive, coordinated school dismissals during a mild or moderate influenza pandemic.** In these instances, **jurisdictions** should make decisions that balance local benefits and potential harms.

For additional information about the school policies in Missouri, please, refer to the overview of Missouri school policies in Attachment C.

**B. Social Distancing Measures**

Social distancing measures can reduce influenza virus transmission by decreasing the frequency and duration of social contact among persons of all ages. Social distancing measures that reduce opportunities for person-to-person virus transmission can help delay the spread and slow the exponential growth of a pandemic. Social distancing measures can be implemented in diverse community settings, such as schools, workplaces, and public places where people gather. The choice of social distancing measure depends on the severity of the pandemic. It is important to implement social distancing measures simultaneously in places where persons gather. Multiple social distancing measures can be implemented simultaneously.

There are several reasons why social distancing is an important strategy:

- Children have higher influenza attack rates than adults, and influenza transmission is common in schools.
- More than half of all United States adults are in workforce, and workers often share office space and equipment and have frequent face-to-face contact. Influenza attack rates in working-age adults might be as high as 15.5% during a single influenza season.
- Major group events (concerts, festivals, and sporting events, etc.) bring people into close contact for extended periods. An infected traveler attending a mass gathering might introduce influenza to a previously unaffected area, and a person who becomes infected at the event can further spread the infection after returning home. Even when a circulating virus has a relatively low basic reproductive rate ( $R_0$ ), intensely crowded settings might lead to high secondary attack rates.

Examples of practical measures that might reduce face-to-face contact in community settings:

- If schools remain open during a pandemic, divide school classes into smaller groups of students and rearrange desks so students are spaced at least 3 feet from each other in a classroom.

- Offer telecommuting and replace in-person meetings in the workplace with video or telephone conferences.
- Modify, postpone, or cancel mass gatherings.

**Recommendations:**

CDC might recommend the simultaneous use of multiple social distancing measures to help reduce the spread of influenza in community settings (e.g., schools, workplaces, and mass gatherings) during severe, very severe, or extreme influenza pandemics while minimizing the secondary consequences of the measures. Social distancing measures include the following:

- Increasing the distance to at least three feet between persons when possible. This applies to apparently healthy persons without symptoms. In the event of a very severe or extreme pandemic, this recommended minimal distance between people might be increased.
- Persons in community settings who show symptoms consistent with influenza and who might be infected with (probable) pandemic influenza should be separated from well persons as soon as practical, be sent home, and practice voluntary home isolation.

**III. Environmental NPIs**

Even though only portion of influenza cases acquire infection through contact transmission (i.e., hand transfer of virus from contaminated objects to the eyes, nose, or mouth), this mode of transmission is a recognized route of influenza spread. Environmental surface cleaning measures can help eliminate influenza viruses from frequently touched surfaces and objects, such as tables, door knobs, toys, desks, and computer keyboards, and thus might reduce the spread of influenza viruses. These measures involve cleaning surfaces with detergent-based cleaners or disinfectants that have been registered with the U.S. Environmental Protection Agency (EPA).

Environmental surface cleaning measures can be used for prevention of seasonal influenza and in all pandemic severity scenarios.

**Recommendations:**

CDC recommends environmental surface cleaning measures in all settings, including homes, child care facilities, schools, and workplaces, to remove influenza viruses from frequently touched surfaces and objects.

(<https://www.cdc.gov/nonpharmaceutical-interventions/environmental/index.html>; <https://www.cdc.gov/oralhealth/infectioncontrol/index.html>).

Additional guidance is available from CDC:

- For health care facilities ([https://www.cdc.gov/hicpac/pdf/guidelines/eic\\_in\\_HCF\\_03.pdf](https://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf)),
- For schools (<https://www.cdc.gov/flu/school/cleaning.htm>),
- For airline, travel, and transportation industries (<https://www.cdc.gov/flu/pandemic-resources/archived/transportation-planning.html>).

## IV. Additional NPI Recommendations

### A. Colleges and Universities

- Ensure continuity of essential operations according to the developed pandemic flu plan.
- Inform students about plans and procedures for providing and completing course work.
- Plan to provide ongoing assignments by regular mail, e-mail, internet links, telephone, teleconferencing, or calling into a recorded message at the university.
- Develop a list of students' mailing addresses, telephone/cell numbers, and e-mail addresses.
- Encourage faculty to develop distance-learning instructional materials.
- Ensure access to college/university healthcare staff.
- Develop a plan for accommodating students who remain on campus during an influenza pandemic.
- Plan to inform families that students may be dismissed during a pandemic.
- Educate students why they are being dismissed and the importance of not congregating in the community, about the influenza spread, and the differences between seasonal and pandemic influenza.
- Develop communication plans for advising employees, staff, and families of the resumption of programs and activities.
- Develop the procedures, activities, and services needed to restore the learning environment.

### B. Workplace Policies

One of the primary needs during a pandemic will be to maintain essential governmental, community and business continuity. It is possible that 30 percent of the workforce may be absent due to illness and it may be difficult to maintain adequate staffing for many important functions. Many essential services may be disrupted if large numbers of public health, law enforcement, first responders, health care, communications, transportation and public utility personnel are not able to carry out critical functions due to illness. It is, therefore, extremely important that continuity of service plans be in place to minimize the impact. For additional pandemic influenza resources related to businesses visit <http://health.mo.gov/emergencies/panflu/panbusiness.php>.

### C. Faith-based Organizations

- Review pandemic flu plan with employees.
- Develop a way to communicate with your employees and volunteer staff during an emergency to provide information and updates.
- Where appropriate, align public health messages and recommendations with your organization's values and beliefs. Encourage staying at home when ill as well as the use of proper cough and sneeze etiquette and hand hygiene.
- Consider potential financial deficits due to emergencies when planning budgets.
- Develop collaborative efforts with other faith-based organizations to keep your organizations running.
- Develop plans for alternatives to mass gatherings, such as video and email messages, mailed newsletters, and pre-recorded messages.

- Identify activities, rituals, and traditions that may need to be temporarily suspended or modified during a pandemic.
- Identify people who are vulnerable and may need assistance in your community.
- Designate people from your organization to be responsible to check on specific vulnerable people or families in your community who may need assistance.
- Determine ways your facility might be used during a pandemic, such as a temporary care facility or a distribution site for providing meals, supplies, or medicine.
- Identify and meet with local emergency responders, health departments, and healthcare organizations to learn about their planning and educate them about your organization's planning.

#### **D. Return to the Workplace or to School**

In order to decrease the chance of spreading pandemic influenza to others, people who have been diagnosed with pandemic influenza by a health care provider **or** who believe that they have pandemic influenza based on symptoms of illness should follow the following guidelines to determine when it is safe to go back to work.

- 1. Stay home and away from others** as much as possible to protect others from the infection. The duration of time to stay home will depend upon the circumstances and guidance will be provided by CDC specific to the epidemiology of the circulating pandemic virus. Studies show you are most contagious and likely to spread influenza virus to others for up to 10 days after your first symptoms appeared and for up to 48 hours after your fever has ended. It is important to remember that the epidemiology of a new pandemic virus could be different, and that this knowledge will become available to the public as pandemic unfolds. Study of the pandemic H1N1 virus showed that the median shedding duration from fever onset by real-time reverse transcriptase polymerase chain reaction (rRT-PCR) was 6 days (range, 1–13) and 5 days (range, 1–7) by culture. Following fever resolution virus was isolated for a median of 2 days (range, 0–5). Overall, shedding duration in children and adults were similar to seasonal influenza viruses. However, because shedding is not completely resolved after fever, CDC recommendations indicate that patients should be reminded about their potential to spread influenza and to follow recommended hand and cough hygiene recommendations. Studies are needed to better understand the relationship between detectable shedding and infectiousness.
- 2. If you are immunosuppressed, consult with your health care provider** for guidance on when you may return to your workplace or school and on possible treatment with antiviral medications. Being immunosuppressed means your body's immune system may be weaker than normal. For example, from cancer or cancer treatment, organ or bone marrow transplants, HIV/AIDS or from treatment with drugs such as steroids. Studies show that an immunosuppressed person who is infected with influenza may be able to transmit virus for a longer time than a person who is not immunosuppressed.

3. **If you were or are taking antiviral medications for treatment of influenza, consult with your health care provider as to when to return to your workplace or school.** Antivirals for influenza are prescription drugs such as oseltamivir (Tamiflu<sup>®</sup>) and zanamivir (Relenza<sup>®</sup>). Specific guidance as to when a person can return to work or school will be provided by CDC based on the epidemiology of the circulating pandemic virus.

## **E. Public Transportation**

Public transportation systems that bring many people together in close proximity to one another provides an excellent opportunity to transmit infectious agents. It is essential at all times that vehicles be kept clean and sanitized to protect the public and transportation workers. In a pandemic, this becomes even more important. In planning for a pandemic, owners and operators of public transportation should make sure that policies and procedures for the appropriate cleaning/sanitizing of surfaces which come into contact with passengers, as well as prevention strategies for both workers and the public regarding handwashing, respiratory hygiene and other infection prevention strategies are in place. These policies and procedures should be consistent with state and local guidance and be based on the most current scientific information available. Since most public transportation is locally owned and operated, this information can best be obtained from LPHAs.

The following guidelines can be utilized to assist owners and operators of public transportation to develop policies and procedures for reducing the risk of infection while operating or riding in a public transportation vehicle:

### **1. Training and Education**

- Transportation personnel should be provided training and education regarding how influenza virus is transmitted and the appropriate precautions to take to reduce the risk to themselves and the public. This information can be found in the first section of this document where handwashing, respiratory hygiene and other infection prevention measures are discussed. They should also receive training regarding proper cleaning/sanitizing products and methodologies. They should be aware of the signs and symptoms of influenza infection and recognize the need to stay home when they are ill during the pandemic.
- Public education advisories and public education materials should be provided which outline proper procedures to protect themselves and others from exposure to influenza. Samples of materials that can be used for these purposes can be obtained from LPHAs or found in the DHSS **Pandemic Influenza Community Preparedness Toolkit** found at <http://health.mo.gov/emergencies/panflu/pangroups.php>. These materials provide information about pandemic influenza, hand hygiene, respiratory hygiene and basic infection control messages. There are brochures, posters, fact sheets, DVDs and a variety of other guidance documents available in this toolkit. LPHAs will also provide current local information to make sure the information is applicable to the current situation.

## **F. International Travel**

DHSS will develop and implement travel recommendations based on assessment of risks to travelers and/or current CDC international travel guidelines.

## **G. Education of the Public**

Community preparedness can best be accomplished when the public is well informed about the dangers of pandemic influenza and the benefits of the containment measures.

To this end, DHSS has developed a website

(<http://health.mo.gov/emergencies/panflu/pangen.php>) where information and educational tools regarding all aspects of pandemic influenza can be found. In addition, educational booklets, DVDs, posters, signs and PowerPoint presentations have been widely disseminated throughout the state through LPHAs, schools, faith-based organizations, businesses and government agencies. Many of these tools are being used presently to assist communities in local planning. Their use will be expanded in pre-pandemic phases and throughout a pandemic as appropriate.

LPHAs will be responsible for educating the public when cases of pandemic influenza arise in their communities and they will monitor compliance with prevention strategies such as voluntary isolation and quarantine along with infection control strategies such as handwashing and respiratory hygiene in order to determine where further education is necessary. Contact tracing early in a pandemic will be done by LPHAs until no longer practical. The decisions regarding whether to perform contact tracing and how to manage the patients will be made on a case by case basis and will be made by LPHAs and/or DHSS. With limited personnel and the short incubation period of influenza, the feasibility of conducting contact tracing will be limited in most communities. Further information about pandemic influenza surveillance can be found in the Pandemic Influenza Surveillance annex.

Educating the public regarding voluntary isolation and quarantine will include information regarding the risk of disease development, protection of others and the duration of isolation or quarantine. In order for these measures to be effective, LPHAs, and communities in general, are being instructed to support persons in isolation or quarantine by developing local systems to assure that food, water, supplies and medicines are available to those who are homebound. Special considerations must be given to children and those with special needs.

## **V. Conclusion**

As demonstrated by 2009 pandemic influenza, NPIs can be a critical component of pandemic influenza mitigation. Even though pandemic vaccines remain the main tool in reducing the risk of pandemic influenza and in controlling the spread of a virus, vaccines might not be widely available for up to 6 months after the emergence of a pandemic due to current vaccine production technology. The 2009 H1N1 pandemic also has shown that antiviral medications might be prioritized for treatment but not used for widespread chemoprophylaxis because of concerns about antiviral resistance and limited stockpiles of antiviral medications.

Due to the above mentioned factors, NPIs might be the only prevention tools readily available for persons and communities to help slow transmission of an influenza virus during the initial stages of a pandemic. However, individual NPIs might be only partially effective



in limiting community transmission when implemented alone. Thus, the most efficient implementation involves early, targeted, and layered use of multiple NPIs in Missouri. Some community-level NPIs that potentially have the greatest epidemiologic effects on pandemic influenza virus transmission in communities, especially school closures and dismissals, also are most likely to be associated with unwanted consequences. Therefore, pre-pandemic planning, including engaging communities in planning activities well ahead of the next pandemic, is critical to enable appropriate local decision-making during the early stages of a pandemic.

In preparing strategies discussed in this Community Mitigation plan, many individuals, agencies and organizations from the public and private sectors were consulted. Examples include: large and small businesses, faith-based organizations, law enforcement, emergency response, education experts, government agencies, LPHAs, mental health, home health, hospitals, long-term care, media (including television, radio, newsprint and magazines), laboratorians, public representatives, legal authorities, legislators and others. In developing the school policies, the Missouri Department of Homeland Security's School Safety Subcommittee, which is comprised of representatives from 26 school-focused organizations, participated in and approved the policies. These groups included the Missouri Department of Secondary and Elementary Education (DESE), Missouri School Board Association (MSBA), Missouri Association of School Nurses (MASN), School Administrators, Parent Teacher's Association and other key leaders in the education sector. DHSS brought together leaders from the business community from all over Missouri to assist in developing practical guidelines for businesses large and small.

Special pandemic planning booklets were developed and disseminated to small and medium businesses with limited resources. A business toolkit to supplement the planning booklet was developed to assist small to medium businesses in developing pandemic plans. These tools were placed on the DHSS website for downloading. Campaigns have been launched to make sure this information is widely disseminated to the state's partners. The products that have been developed to educate the community, businesses and others have been placed on the DHSS web site at <http://health.mo.gov/emergencies/panflu/pangen.php>. These products include toolkits, PowerPoint presentations, DVDs, booklets, pamphlets, posters and other written materials.

Further updates of these guidelines will be developed and issued by the DHSS when significant new information and evidence emerges about the effectiveness and feasibility of NPIs in mitigating the impact of pandemic influenza.

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**Factors to Consider Before Implementing Non-pharmaceutical Interventions  
During an Influenza Pandemic**

<b>Planning Factors</b>	<b>Planning Goals</b>	<b>Activities</b>
Ethical considerations	<ul style="list-style-type: none"> <li>• Community engagement in prepandemic planning</li> <li>• Equitable distribution of public health resources during a pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Promoting public input into NPI planning</li> <li>• Ensuring that NPIs benefit all groups within a community</li> <li>• Carefully considering and justifying any restrictions on individual freedom needed to implement NPIs (e.g., voluntary home quarantine of exposed household members)</li> </ul>
Feasibility of NPI implementation	<ul style="list-style-type: none"> <li>• Minimal interruption of regular programs and activities</li> <li>• Selection of NPIs that are practical to implement within each community</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying practical obstacles to NPI implementation and considering ways to overcome them. Examples include the following:               <ul style="list-style-type: none"> <li>○ Educational issues (e.g., missed educational opportunities or loss of free or subsidized school meals because of school dismissals)</li> <li>○ Financial issues (e.g., workers who cannot afford to stay home when they are ill or to care for an ill family member because they do not have paid sick leave)</li> <li>○ Legal issues (e.g., local jurisdictions that do not have the legal authority to close schools or cancel mass gatherings for public health reasons)</li> <li>○ Workplace issues (e.g., access to clean water, soap, or hand sanitizer and flexible workplace policies or arrangements)</li> </ul> </li> </ul>
Activation triggers, layering, and duration of NPIs	<ul style="list-style-type: none"> <li>• Optimal implementation of NPIs during a pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Maximizing the effectiveness of NPIs by taking the following actions:               <ul style="list-style-type: none"> <li>○ Identifying activation triggers to ensure early implementation of NPIs before explosive growth of the pandemic</li> <li>○ Planning for simultaneous use of multiple NPIs because each NPI is only partially effective</li> <li>○ Planning for long-term duration of school dismissals and social distancing measures</li> </ul> </li> </ul>

Planning Factors	Planning Goals	Activities
<p>Selecting NPIs for groups at risk for severe influenza complications and for those with limited access to care and services</p>	<ul style="list-style-type: none"> <li>• Protection of persons most at risk for severe illness or death during a pandemic</li> <li>• Protection of persons who might need additional assistance during a pandemic response, including persons with disabilities and other access and functional needs</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying strategies for implementing NPIs among groups at high risk for severe influenza-related complications, including the following: <ul style="list-style-type: none"> <li>○ Pregnant women</li> <li>○ Persons aged &lt;5 yrs and ≥65 yrs</li> <li>○ Persons with underlying chronic diseases</li> <li>○ Persons in institutions</li> </ul> </li> <li>• Identifying strategies for implementing NPIs among groups who might experience barriers to or difficulties with accessing or receiving medical care and services, including the following: <ul style="list-style-type: none"> <li>○ Persons who are culturally, geographically, or socially isolated or economically disadvantaged</li> <li>○ Persons with physical disabilities, limitations, or impairments</li> <li>○ Persons with low incomes, single-parent families, and residents of public housing</li> <li>○ Persons who live in medically underserved communities</li> </ul> </li> </ul>
<p>Public acceptance of NPIs</p>	<ul style="list-style-type: none"> <li>• Active participation in NPI implementation during a pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Promoting public understanding that individual action is essential for effective implementation of NPIs in every pandemic scenario. In many scenarios, both personal and community NPIs might be recommended. NPI recommendations might change as new knowledge is gained.</li> <li>• Identifying key personnel to disseminate emergency information (e.g., alerts, warnings, and notifications) and establishing communication channels that enable members of the public to ask questions and express concerns (e.g., call centers or social media sites)</li> <li>• Ensuring that school dismissals and other NPIs are acceptable to the community during a pandemic</li> <li>• Coordinating with local partners to support households complying with voluntary home quarantine (e.g., providing necessary food and supplies)</li> <li>• Identifying strategies for mitigating the secondary consequences of school dismissals and other social distancing measures (e.g., modifications or cancellations of mass gatherings)</li> <li>• Minimizing intervention fatigue* during a pandemic</li> </ul>

Planning Factors	Planning Goals	Activities
Balancing public health benefits and social costs	<ul style="list-style-type: none"> <li>• Maximization of NPI public health benefits and minimization of social and economic costs during a pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Estimating economic and social costs of NPIs and their secondary (unintended or unwanted) consequences</li> <li>• Balancing those costs against public health benefits, with reference to different prepandemic planning scenarios</li> <li>• Identifying strategies for reducing the cost of NPI implementation</li> </ul>
Monitoring and evaluation of NPIs	<ul style="list-style-type: none"> <li>• Ongoing guidance during a pandemic on optimal NPI implementation, maintenance, and discontinuation</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying ways to monitor and evaluate the following: <ul style="list-style-type: none"> <li>○ Degree of transmission and severity of the evolving pandemic</li> <li>○ Type and degree of NPI implementation</li> <li>○ Level of compliance with NPI measures and the emergence of intervention fatigue</li> <li>○ Effectiveness of NPIs in mitigating pandemic impact</li> <li>○ Secondary consequences of NPIs and the effectiveness of strategies to mitigate them</li> </ul> </li> </ul>

**Source:** Adapted from: Barrios LC, Koonin LM, Kohl KS, Cetron M. Selecting nonpharmaceutical strategies to minimize influenza spread: the 2009 influenza A (H1N1) pandemic and beyond. *Public Health Rep* 2012;127:565–71.

## Prepandemic influenza planning scenarios to guide implementation of non-pharmaceutical interventions, by severity of pandemic and the Pandemic Severity Assessment Framework quadrant

Severity of pandemic and PSAF quadrant	Implications of clinical severity and transmissibility in this scenario*	Possible no. of hospitalizations and deaths if unmitigated, <sup>†</sup> by age group			Historical experience
		Age groups (yrs)	No. of hospitalizations	No. of deaths	
Low to moderate severity (mild to moderate pandemic) PSAF quadrant: A	<ul style="list-style-type: none"> <li>Clinical severity and transmissibility similar to the range seen during annual influenza seasons.</li> <li>Estimated overall attack and case-fatality rates: 18% and 0.03%, respectively. Rates of severe outcomes are greater among younger persons than during influenza seasons.</li> </ul>	<b>All ages</b> 0–18 18–64 ≥65	<b>340,000</b> 50,000 135,000 155,000	<b>17,000</b> 1,000 6,000 10,000	<b>2009 pandemic</b> <ul style="list-style-type: none"> <li>First detected in North America, the 2009 H1N1 pandemic quickly spread to all continents. In the United States, persons at high risk for severe complications included pregnant women and those with neuromuscular disease, lung disease, morbid obesity, and other chronic conditions.</li> <li>An estimated 43–89 million people in the United States became ill with H1N1 from April 2009 through April 2010, and approximately 12,000 people died.<sup>§</sup> A total of 87% of deaths were among persons aged ≤65 yrs, with a mean age of 43 yrs.<sup>¶</sup> During typical influenza seasons, 80%–90% of deaths are among persons aged ≥65 yrs, and the mean age of influenza-related deaths is approximately 76 yrs.**</li> </ul>
Moderate to high severity (moderate to severe pandemic) PSAF quadrant: B	<ul style="list-style-type: none"> <li>Clinical severity similar to the range seen during annual influenza seasons. Transmissibility greater than during influenza seasons.</li> <li>Estimated overall attack and case-fatality rates: 22% and 0.05%, respectively. Rates of severe outcomes are greater than during influenza seasons, especially among younger persons.</li> </ul>	<b>All ages</b> 0–18 18–64 ≥65	<b>550,000</b> 80,000 220,000 250,000	<b>35,000</b> 2,500 12,000 20,000	<b>1968 pandemic</b> <ul style="list-style-type: none"> <li>First detected in Hong Kong in July 1968, a new influenza virus (H3N2) spread worldwide.</li> <li>The first cases in the United States were detected in September 1968. The 1968 influenza pandemic resulted in approximately 30,000 deaths in the United States, with approximately half among those aged ≥65 yrs.<sup>††,§§</sup></li> </ul>
High severity (severe pandemic) PSAF quadrant: B	<ul style="list-style-type: none"> <li>Clinical severity similar to the range seen during annual influenza seasons. Transmissibility greater than during influenza seasons.</li> <li>Estimated overall attack and case-fatality rates: 28% and 0.1%, respectively. Rates of severe outcomes are greater than during influenza seasons.</li> </ul>	<b>All ages</b> 0–18 18–64 ≥65	<b>1,100,000</b> 150,000 450,000 500,000	<b>86,000</b> 6,000 30,000 50,000	<b>1957 pandemic</b> <ul style="list-style-type: none"> <li>A new influenza virus, H2N2 (the Asian strain), emerged in China in February 1957 and spread to approximately 20 countries, including the United States, by June 1957.</li> <li>An estimated 25% of the U.S. population became ill with the new pandemic virus strain. U.S. infection rates were highest among school-aged children and adults aged ≤40 yrs, with most (64%) of the approximately 70,000 deaths occurring among older adults.<sup>††,§§,¶¶</sup></li> </ul>
Very high severity (very severe to extreme pandemic) PSAF quadrant: D	<ul style="list-style-type: none"> <li>Both clinical severity and transmissibility are greater than during annual influenza seasons.</li> <li>Estimated overall attack and case-fatality rates: 30% and 1.5%, respectively. Rates of severe outcomes are greater than during influenza seasons, especially among young adults.</li> </ul>	<b>All ages</b> 0–18 18–64 ≥65	<b>7,500,000</b> 1,000,000 3,000,000 3,400,000	<b>1,400,000</b> 100,000 500,000 800,000	<b>1918 pandemic</b> <ul style="list-style-type: none"> <li>The 1918 pandemic resulted in death for 2%–3% of those infected, a case-fatality rate that was much greater than the rate during an average influenza season. The pandemic virus was easily transmitted.</li> <li>Approximately one fourth of the U.S. population became ill, and approximately 500,000 died; 99% of deaths occurred in persons aged ≤65 yrs.<sup>††,***</sup></li> </ul>

**Abbreviation:** PSAF = Pandemic Severity Assessment Framework.

\* Based on PSAF (Source: Reed C, Biggerstaff M, Finelli L, et al. Novel framework for assessing epidemiologic effects of influenza epidemics and pandemics. *Emerg Infect Dis* 2013;19:85–91).

<sup>†</sup> Point estimates for hospitalizations and deaths, by age group, are based on the estimated overall attack and case-fatality rates provided in the second column (clinical severity and transmissibility). Age-specific point estimates of hospitalizations and deaths are based on U.S. Census 2010 population data.

<sup>§</sup> Source: Shrestha SS, Swerdlow DL, Borse RH, et al. Estimating the burden of 2009 pandemic influenza A (H1N1) in the United States (April 2009–April 2010). *Clin Infect Dis* 2011;52(Suppl 1):S75–S82.

<sup>¶</sup> Source: Fowlkes AL, Arguin P, Biggerstaff MS, et al. Epidemiology of 2009 pandemic influenza A (H1N1) deaths in the United States, April–July 2009. *Clin Infect Dis* 2011;52(Suppl 1):S60–S68.

\*\* Source: Viboud C, Miller M, Olson DR, Osterholm M, Simonsen L. Preliminary estimates of mortality and years of life lost associated with the 2009 A/H1N1 pandemic in the U.S. and comparison with past influenza seasons. *PLoS Currents* 2010;2:RRN1153.

<sup>††</sup> Source: Simonsen L, Clarke MJ, Schonberger LB, Arden NH, Cox NJ, Fukuda K. Pandemic versus epidemic influenza mortality: a pattern of changing age distribution. *J Infect Dis* 1998;178:53–60.

<sup>§§</sup> Source: Cox NJ, Subbarao K. Global epidemiology of influenza: past and present. *Annu Rev Med* 2000;51:407–21.

<sup>¶¶</sup> Source: Henderson DA, Courtney B, Inglesby TV, Toner E, Nuzzo JB. Public health and medical responses to the 1957–58 influenza pandemic. *Biosecur Bioterror* 2009;7:265–73.

\*\*\* Source: Collins SD. Age and sex incidence of influenza and pneumonia morbidity and mortality in the epidemic of 1928–29 with comparative data for the epidemic of 1918–19. *Public Health Rep* 1931;46:1909–37.



## Overview of Missouri School Policies

The policies outlined below should be integrated as part of the school district's overall crisis plan. Besides being effective in an influenza pandemic, the same policies will be helpful in averting many other crises. School districts can take steps prior to a pandemic that will reduce the spread of all communicable diseases. The first step is education. Students, staff and community need to understand how infectious diseases are transmitted. The second step is training. Along with being taught how disease is transmitted, staff and students must be taught techniques to reduce the chance of transmission, such as proper handwashing, how to cover a cough or sneeze, standard precautions, the importance of annual flu vaccinations, etc. Educational materials and tools for this purpose have been developed and can be found in the **DHSS Pandemic Influenza Community Preparedness Toolkit** at <http://www.health.mo.gov/emergencies/panflu/pangroups.php>. Staff and students must be encouraged to stay home when they, or other members of the household are ill with flu-like symptoms, and maintenance staff must be taught how to properly clean and disinfect.

These policies also cover what the school district should do in case prevention methods fail. Most districts are prepared to deal with short-term school closures. However, in the case of a pandemic, schools may be closed for months at a time. School districts have to be prepared so that they can continue to communicate with staff, students and the community and deliver education and other services to students.

In addition, school districts must also be prepared for the psychological impact of a pandemic. People may be fearful but those who have been educated will be less so. Fears will be abated and tensions eased if the students, staff and the community know the district has a plan. The period after a pandemic is also important. School districts must be prepared to deal with the return of grieving students and staff. Many children receive their only meals, or only hot meals, at school. In the case of a long-term school closure, these students may not have enough to eat. This policy encourages school districts to explore the possibility of continuing food service in some manner. It may require bulk purchasing and storage of certain supplies and may not be possible for some school districts. There is a booklet "Assuring Food Supplies During an Influenza Pandemic or Other Hazard: A Guide for Community Leaders" located at: <http://health.mo.gov/emergencies/panflu/pdf/foodprogrambooklet.pdf>, and another resource available at: <http://health.mo.gov/emergencies/panflu/pdf/panflubusinessstoolkit.pdf>.

The following information is provided to assist Missouri school districts in planning for an influenza pandemic.

### A. Pandemic Influenza School Closure Policies

Goal: To keep schools open and safe whenever possible.

#### School Closure Trigger Points

- Student absenteeism - when it is not economically prudent to keep the school open.
- Teacher/staff absenteeism - when the number of staff available to supervise and instruct students drops below what is necessary to maintain a safe learning environment.
- To protect the public health and safety - when advised to close by state or local public health/safety authorities.

Prior to considering whether to close, it is important that every school district be prepared in advance to deal with these adverse consequences.

## **B. Authority to Close Schools**

- In a pandemic, where closures would affect multiple jurisdictions and there is a need for consistency throughout the state, schools, child care centers, etc. may be closed and/or opened **only** by order of the director of DHSS or his/her designee. See 19 CSR 20-20.050 (3).
- The School Superintendent would have authority to close and/or open school for absenteeism due to School Closure Trigger Points as noted above.
- In Missouri, local public health agencies (LPHAs) would have the authority to close and/or open schools in their counties for the purpose of protecting the public health as noted in the safety trigger points above.

Schools may be closed to all staff and students or just students. If schools are closed only to students, staff members are expected to work regular schedules or use appropriate leave.

The superintendent may cancel all activities on district property by outside groups even if some schools in the district remain open. When a school is closed, activities scheduled at that school, including use by community groups, will be canceled. Activities held at another location that involve students and staff from a closed school may cancel at the discretion of the building principal in consultation with local health authorities and the school nurse.

Schools will be reopened by the superintendent but in cases where schools were closed by DHSS or an LPHA, only the director of DHSS, his/her designee, or the LPHA may authorize the reopening of schools. Schools will be reopened only when the situation that caused the schools to be closed has sufficiently abated.

## **C. Recommendations for School Closings**

- School closings for the purpose of protecting the public health and safety will be directed by LPHAs and local school authorities. However, in a pandemic where closures would affect multiple jurisdictions, the director of DHSS will direct the closures.
- School closings for student or teacher absenteeism should occur as necessary and the LPHA and school authorities will direct the closings.
- As stated in the information above, the effectiveness of closing schools to slow pandemic still requires further study and depends on multitude of factors. Schools should follow closure recommendations based on specific circumstances of a particular type of the pandemic virus. School districts should have plans in place to:
  - Close schools as necessary as well as plans for reopening them.
  - Recognize trigger points for closing and opening schools.
  - Understand lines of authority in the community/state for closing and opening schools.

## **D. School Surveillance and Reporting**

In a pandemic, enhanced surveillance of influenza cases is imperative to track the disease and to assist in making mitigation decisions.

Notice of school closing, reopening or cancellation of activities will be publicized through local media, the school district's web site and the school district's information line.

In Missouri, the school superintendent or designee is charged with monitoring reportable diseases in schools and reporting to public health authorities in accordance with the law. See 19 CSR 20-20.020 (8).

During a school closing, the school nurse will be responsible for compiling data relating to the health of individuals. The nurse will be responsible for appointing and training a staff member to receive and compile this health information in situations where the nurse is unavailable. If possible, another nurse will be selected before any non-medical personnel are used. Other staff members will be involved as necessary to monitor the health and academic progress of students and other staff members.

- <https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/planning-guide.pdf>
- <https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/basic.pdf>

#### **E. School Restrictions**

If incidences of contagious disease are high, the school nurse or designee may recommend that the superintendent impose appropriate social distancing rules, such as limiting or prohibiting individuals who are not students, staff and contractors providing services to the district from being in district facilities.

- Child Care and Preschool Pandemic Influenza Planning Checklist:  
[https://www.cdc.gov/flu/pandemic-resources/pdf/child\\_care.pdf](https://www.cdc.gov/flu/pandemic-resources/pdf/child_care.pdf)
- School District (K-12) Pandemic Influenza Planning Checklist  
<https://www.cdc.gov/flu/pandemic-resources/pdf/schoolchecklist.pdf>
- Colleges and Universities Pandemic Influenza Planning Checklist:  
[https://www.cdc.gov/flu/pandemic-resources/pdf/colleges\\_universities.pdf](https://www.cdc.gov/flu/pandemic-resources/pdf/colleges_universities.pdf)
- Emergency Planning: Influenza Outbreak (United States Department of Education):  
<https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/more.html>
- Pandemic Flu: A Planning Guide for Educators:  
<https://www2.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/planning-guide.pdf>
- Legal Preparedness for School Closures in Response to Pandemic Influenza and Other Emergencies (Center for Law and the Public's Health at Georgetown & Johns Hopkins Universities):
- Ready in 3: Schools  
<http://health.mo.gov/emergencies/readyin3/schools.php>

#### **F. School Communications**

In an emergency such as a pandemic, information will generally flow from DHSS to the Commissioner and/or the Deputy Commissioner of DESE who are responsible for coordinating the state agency response. It would then be disseminated to superintendents, who would share with principals and then to school nurses. However, this chain may differ slightly in some communities (not all have school nurses on site) and will depend upon local plans. In Post-Secondary Schools (PSS) the information would flow from DHSS to the Commissioner to the Public Information Officer (PIO) and out to the individual PSS

contacts. The Administrator of the DHSS Section for Child Care Regulation would provide information to child care centers.

DESE and the Missouri Department of Higher Education will communicate information at all levels of a pandemic, including recovery, using their respective PIO or Commissioner for both media relations and communicating with their constituents.

The superintendent or designee will develop a communication system for the exchange of information between the school district and staff, students, parents and others when schools are closed. The system will be used to monitor the health of students and staff, deliver instruction and support services and to provide health and other appropriate information.

The system will include a variety of methods such as internet, digital answering machines, e-mail, traditional mail, fax, etc. and designate individuals responsible for receiving and compiling information received. Each school district relies on their local resources for notifying parents of dismissal from classes or child care, communication during dismissal and re-opening. Smaller school districts may use phone trees or other methods of communication. Each school district is responsible for having such a system in place.

In an emergency, DESE will communicate with local educational authorities through blanket e-mails to superintendents, the DESE web site, and follow-up e-mails to supervisors. Redundancy is accomplished through the Missouri Alert Network, phone trees, and media (radio, TV, newspapers).

## **G. Continuity of Education**

In the case of a school closing due to a declared pandemic, every effort will be made to continue instruction through alternative methods. In case contemporaneous instruction is not possible, instructional staff will prepare a grade level or subject area supplemental unit of studies that students and parents can implement with minimal assistance from staff. District administration in cooperation with instructional staff will oversee the development and collection of these units and determine an appropriate delivery system. In the case of a long-term school closing, the school board may waive local graduation requirements.

Continuity of education planning is primarily a local responsibility, and activation of continuity of education plans will vary by school because their size and assets differ. The triggers for activating these specific plans should be contained in the all-hazards emergency plan of the individual schools. DESE will assist in delivering educational content that would be provided to students across the age spectrum primarily through the technological resources described here.

Using technological resources DESE has developed several initiatives, which will assist in providing continuity in education during an emergency such as a pandemic. Two current examples of these initiatives include the “Virtual School Initiative” and “SuccessLink”. A description of each is provided below:

### **1. Virtual School Initiative**

Missouri was the 25th state to implement the virtual public school system by the state board of education. The virtual public school offers instruction in a virtual setting using

technology, intranet, and/or internet methods of communication. Any student, kindergarten through grade twelve, who resides in Missouri, is eligible to use this system regardless of the student's physical location. In a pandemic, this system would be well suited to reach large numbers of homebound children and provide a system that would help to ensure the continuity of education.

## **2. SuccessLink**

This is a valuable resource for Missouri educators. Funded through DESE and other public and private funds, SuccessLink disseminates and promotes the best teaching ideas throughout Missouri. Teaching activities and exemplary programs are recognized and shared freely throughout the state.

The SuccessLink web site has a database filled with lessons written by Missouri teachers. Lessons are searchable by subject/grade, Show Me Standards, Grade Level Expectations and keywords. Lessons are performance-based, aligned to state standards and most have an assessment component.

Many other valuable programs are offered through SuccessLink. These include Proven Practices for Student Success, SuccessLink Technology Initiatives, SuccessLink Curriculum Initiatives, Missouri Teacher Mentoring Blog Community and [www.moteachingjobs.com](http://www.moteachingjobs.com). Special Education training will be provided through the same networks with the assistance of the special education division.

PSS will utilize online interactive lessons through a variety of sites, as well as through their website. Educational content for PSS will depend upon local resources and will be coordinated by individual schools.

## **H. School Confidentiality**

Staff health information will be kept confidential and only released in accordance with school board policy and law. Student health information will be shared with state and local public health officials in accordance with the Family Educational Rights and Privacy Act (FERPA) and state law. School districts may provide individually identifiable student information to local or state public health authorities in conjunction with reporting a Category 1 disease under the health and safety emergency exception of FERPA. Individually identifiable student information received from any source, including state and local public health authorities, will be maintained and disclosed in accordance with FERPA and school board policy.

## **I. School Maintenance**

The superintendent or designee will develop a cleaning/disinfecting checklist according to guidance from DHSS and the U.S. Department of Health and Human Services (HHS) to be completed by staff responsible for building maintenance. DHSS recommends that school authorities mandate staff or contracted janitorial services follow this guidance to best protect health in the school.

## **J. School Materials and Supplies**

Handwashing conveniences will be available to students, staff and visitors to school district facilities. The superintendent will ensure that each district facility is equipped with adequate cleaning and Environmental Protection Agency (EPA) approved disinfecting materials and that each bathroom in the school district is equipped with soap, hot water and a system to dry hands. Waterless hand sanitizer may be used as a substitute only when it is impractical to provide soap and hot water. <https://www.cdc.gov/flu/school/index.htm>

The superintendent will investigate whether the school district can continue to provide meals to students on free and reduced lunch programs when schools are closed. To determine if such a program is practically and financially feasible, the superintendent will consult with food service personnel regarding purchasing supplies, facility staff to determine storage options and local emergency planners to develop a preparation and delivery system.

## **K. School Staff Leave**

Staff members who are ill or have members of their household ill with pandemic influenza are encouraged to stay home to promote healing and reduce the risk of infecting others. In the case of school closure due to a pandemic or other significant health event, the school board may provide additional paid leave to staff members based on the length of the closure and the financial condition of the school district. However, staff members who are not ill may only use available leave in accordance with school board policy.

## **L. School Board Meetings**

The school board president and superintendent will establish alternative methods for holding meetings that do not require face-to-face contact. Any method must be implemented in accordance with the Missouri Sunshine Law.

## **M. School Counseling**

In the case of a pandemic, students and staff will face illness and death of friends and family. School district counselors, school social workers, and school psychologists must be prepared to provide support to students and staff when schools reopen after a pandemic. In addition, counselors must develop support programs that can be accessed while schools are closed. These programs will be part of the overall emergency plan and be developed in conjunction with the communication system used to monitor the health of students and staff and deliver instruction and support services.

## **N. Emergency Use of School Facilities**

In the case of an influenza pandemic or other health event, the school district's facilities may be used as staging areas, shelters or to otherwise serve the community in accordance with school board policy and law. The superintendent will maintain an accurate inventory of property that may be useful in an emergency situation including, but not limited to, medical supplies, food, water, ice, vehicles, tools, communication devices, generators, building materials, cleaning supplies and bedding. The use of K-12 facilities for emergencies is governed at the local level. DESE can provide contact phone numbers and information for groups who are interested. The use of PSS facilities during an emergency is also controlled locally.

## **O. DESE and PSS Coordination**

In a pandemic, the persons responsible for coordinating the pandemic influenza response and the person the Governor would contact are:

- DESE - Commissioner of Education and/or the Deputy Commissioner,
- PSS - Representative that serves on the state level pandemic planning team is the Director of Administration and/or the Office Service Assistant.

# Pandemic Influenza Plan – Mass Fatality Management

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## INTRODUCTION

Current Missouri state plans include the Missouri State Emergency Operations Plan (SEOP), Emergency Support Function (ESF) 8 Public Health and Medical Plan, the Missouri Department of Health and Senior Services (DHSS) Emergency Operations Plan, Annex K.1.9 – Mass Fatality Management, and the Missouri Pandemic Influenza Response Plan that contains this annex.

The SEOP, ESF-8 Plan describes capability of Missouri Mortuary Operations Response Team (MO MORT 1), to include the Victim Information Center (VIC) and deployment of advance team and references MO MORT 1 Morgue Standard Operating Guidelines (SOG's) and the state's VIC Plan.

The DHSS Emergency Operations Plan, Annex K.1.9 – Mass Fatality Management outlines the basic response actions to be taken by the department during a mass fatality/mortuary affairs event. (See Annex K.1.9 – Mass Fatality Management for specific details.)

The Missouri Pandemic Influenza Response Plan, that contains this annex, outlines the pandemic specific response actions to be taken by DHSS during a mass fatality/mortuary affairs event.

## OBJECTIVE

To meet the demand for disposition of human remains during a pandemic influenza in order to allow communities and health care facilities to focus on protecting the health of the living.

## BACKGROUND

The State of Missouri has a mixed medical legal death investigation system. This system is made up of county level coroners in the rural areas of the state, and in some cities such as Jefferson City, Joplin, St. Joseph and Cape Girardeau, with medical examiners covering the metropolitan areas of Kansas City, Columbia, Springfield, and St. Louis. These county coroners and medical examiners (MEs) are responsible for investigating sudden or violent deaths and providing accurate, legally defensible determinations of the manner and cause of these deaths. These vital duties require very close interaction with judicial, public safety and local public health agencies (LPHAs). There are slight variances in the statutory descriptions of the coroner/medical examiner duties and responsibilities. See Chapter 58, RSMo (<http://revisor.mo.gov/main/OneChapter.aspx?chapter=58>) for further information. Missouri does not have a state medical examiner, but would ask for the appointment of a State Medical Examiner by Executive Order in the event of a severe pandemic to assure coordination of mortuary services across the state.

The coroner is an elected position, every four years, at the county level. State of Missouri statutes do not require elected coroners to possess medical licensure or maintain any medical legal certifications. Any such requirements are the self-imposed responsibility of the individual holding the office. Missouri statutes outline the type of reportable cases, jurisdictional requirements and authority for the appointment of deputy coroners. See Chapter 58, RSMo (<http://revisor.mo.gov/main/OneChapter.aspx?chapter=58>) for further information.



The medical examiner is an appointed position by the county/city governing body. State of Missouri statutes specify that a medical examiner must be a physician duly licensed to practice by the Missouri State Board of Healing Arts. Missouri statutes also outline the type of reportable cases, jurisdictional requirements and authority for the appointment of medical examiner assistants. See Chapter 58, RSMo (<http://revisor.mo.gov/main/OneChapter.aspx?chapter=58>) for further information. A forensic pathologist usually performs any autopsies requested or required by a coroner/medical examiner office. The forensic pathologist is a licensed physician with certifications by the American Board of Pathology in anatomic/clinic pathology and forensic pathology.

The determination as to whether an autopsy will be performed or not is at the sole discretion of the county coroner/medical examiner from whose jurisdiction the deceased is located or was transported from excluding any requirements outlined in the Missouri Child Fatality Review Panel (CFRP) system (<http://revisor.mo.gov/main/OneChapter.aspx?chapter=58>). The State of Missouri mandated the CFRP system in 1991. This system ensures that child deaths (birth through age 17) are comprehensively reviewed.

### **GENERAL CONSIDERATIONS**

In the event of influenza pandemic, local jurisdictions may have to be prepared to handle a rapidly escalating increase in the number of fatalities. The total number of fatalities (including influenza and all other causes) occurring within any local jurisdiction during a severe six to eight week pandemic wave may be as high as that which typically occurs over six months in the inter-pandemic period.

Due to the prolonged time frame and the scope of area affected by a severe pandemic event, it is likely that regional, state, and federal resources will be limited in their ability to provide assistance. Therefore, it is the intent of this plan to not only outline issues, processes and actions to be taken at the state level within the DHSS and the State Emergency Management Agency (SEMA), but also to provide information and action steps, specific to a moderate to severe pandemic event, that local jurisdiction representatives like coroners/medical examiners, LPHAs, hospitals, funeral directors, elected officials and religious representatives can utilize to assist them in local planning efforts to prepare for such a situation.

In order to identify planning needs for the management of mass fatalities during a pandemic, it is important to examine each step in the management of a body under normal circumstances and then to identify what the limiting factors will be when the number of bodies increase over a short period of time. The table in Attachment A identifies the usual steps. Possible solutions or planning requirements are discussed in further detail in this chapter.

In a mass fatality/mortuary affairs event primary responsibility falls to the local coroner/medical examiner. However, in a pandemic event people will die from a known disease process, influenza. Therefore, it is possible that once a pandemic event has occurred, many cases will be identified as natural deaths and coroner/medical examiner jurisdiction will be waived. Deceased that are found at home or outside of an approved health care facility will still need to be reported to the local coroner/medical examiner, but most likely jurisdiction will be waived unless there are indications found of a suspicious death or other unusual circumstance.

Public health, vital records registrars, hospitals, funeral directors, embalmers and cemetery service providers all have secondary roles and responsibilities that are crucial to the overall success of any response and handling of a pandemic mass fatality/mortuary affairs event.

In order to develop guidelines or adjust existing plans to suit the pandemic situation, local pandemic planners should ensure that the following persons are involved in mass fatality planning:

- Coroner/Medical Examiner.
- LPHA Administrator/Director and the local vital records registrar.
- Sheriff and/or local law enforcement.
- First Responder community providing emergency medical services.
- Representatives of the mortuary services and/or the local funeral director.
- Representatives from local health care facilities.
- Representatives of local religious and ethnic groups.
- Social Service agencies and non-governmental organizations providing such services.
- Mental health representatives.

Existing disaster plans may include provisions for mass fatalities but should be reviewed and tested regularly to determine if these plans are appropriate for the relatively long period of increased demand which may occur in a pandemic, as compared to the shorter response period required for most disaster plans.

## **CONTINUITY OF OPERATION PLANS**

In preparation for emergencies, it has become an essential activity for all public and private entities to develop and maintain Continuity of Operation Plans (COOP). Therefore, it is recommended that pandemic planning efforts include development of COOP plans. These plans would not only address internal failures and compromises of infrastructure, but would provide guidance to continuing daily activities and essential vital records functions in the event a large portion of an entity's employees are unable to attend work. (See Attachment A.)

## **ROLES AND RESPONSIBILITIES**

### **Missouri Mortuary Operations Response Team (MO MORT 1)**

According to the current SEOP, ESF-8 Public Health and Medical Plan, when a local mass fatality event surpasses the capabilities of local resources, assistance can be requested through the local Emergency Management Agency from SEMA for the MO MORT 1. The MO MORT 1 is an Emergency Support Function 8 resource supported by DHSS, and in the event of a severe pandemic that overwhelms local resources, the MO MORT 1 would be deployed through the State Emergency Operations Center (SEOC) under the direction of SEMA and DHSS. In the event multiple local jurisdictions were overwhelmed, SEMA and DHSS would ask for the appointment through Executive Order of a State Medical Examiner to oversee local activities, the MO MORT 1, and any deployed federal mortuary assets. The MO MORT 1 maintains a large cache of equipment and supplies that would be released to backfill local supply shortages, and trained personnel could assist local jurisdictions in assessing needs and in providing expert advice and technical consultation in response.

## **Funeral Directors**

It is recommended that all funeral directors coordinate with their local coroners/medical examiners and become involved in their disaster and pandemic planning activities with respect to the management of mass fatalities at the local level. Accepted practice for pandemic influenza planning has recommended that funeral directors consider it a part of their professional standards to make contingency plans for what would happen if they were incapacitated or overwhelmed.

### Pre-pandemic interval

- Become knowledgeable in local integrated pandemic influenza mass fatality plan.
- Develop a surge plan to address staffing, temperature controlled temporary storage space, and supplies needed for the expected mass fatality.
- Coordinate with LPHA infection control practices to be employed during a pandemic influenza.
- Ensure that system is in place to track the disposition and location of all remains released.
- Understand the proper death certificate completion and filing protocols.

### Pandemic interval

Implement the surge plan.

- Adhere to infection control guidelines including Personal Protective Equipment (PPE)
- Communicate with healthcare facilities, coroners/MEs, and cemeterians.
- Implement death certificate completion and filing protocols in accordance with the local pandemic influenza mass fatality plan.
- Keep the Coroner/ME informed about the capacity to accept new remains.

## **Funeral Homes and Crematoriums**

In a severe pandemic, each individual funeral home could expect to handle about six months work within a six to eight-week period. That may not be a problem in some communities, but funeral homes in larger cities may not be able to cope with the increased demand.

Individual funeral homes should be encouraged to make specific plans during the pre-pandemic period regarding the need for additional human resources during a pandemic situation.

Crematoriums will also need to look at the surge capacity within their facilities. Most crematoriums can handle about one body every four hours and could probably run 24 hours to cope with increased demand. Cremations have fewer resource requirements than burials and, where acceptable, this may be an expedient and efficient way of managing large numbers of bodies during a pandemic. Geographic Information System (GIS) mapping of funeral directors in Missouri is located at: <http://arcg.is/1Sh4YRB>.

## **Health Care Facilities**

### Pre-pandemic interval

- Healthcare facility mass fatality plans should be included in the local jurisdiction's integrated pandemic influenza mass fatality plan and must also integrate with the healthcare facility's overall pandemic influenza plan.
- Since a marked increase in deaths in hospitals, nursing homes and other institutions is likely, facilities should plan for more rapid processing of bodies.

- Facilities should evaluate their current morgue capabilities, including cooler space, as well as assess what their surge capabilities are and where additional temporary morgue space can be established.
- Health care entities should also work with the LPHA pandemic planners, coroner/medical examiner office and funeral directors to ensure that they have access to the additional supplies (e.g., body bags) and preplan what can be done to expedite the steps, including the completion of required documents (e.g., vital records), necessary for efficient deceased management during a pandemic.

During the pandemic interval, the health care facilities should:

- Implement the plan for identifying, tagging, tracking and storing remains until their release to funeral firm or coroner/ME.
- Ensure that each death certificate is medically certified.
- Keep coroner/ME informed on the number of remains awaiting removal.
- Promptly report required mortality data to the DHSS.

### **Coroners and Medical Examiners**

County Coroners, Medical Examiners, and Troop (Region) Directors are identified at the Missouri Coroners' and Medical Examiners' website at: <http://www.mcmea.org/>.

Coroner/Medical Examiner mutual aid is described in the Missouri System Concept of Operational Planning for Emergencies (MOSCOPE). Annex E is currently under revision.

Pre-pandemic interval:

- Develop a continuity of operations plan (COOP).
- Develop a surge plan addressing staff and supply needs, including PPE, body bags necessary to identify, tag, track, collect, store, and transfer remains resulting from a pandemic.
- Consult with LPHA regarding infection control practices to be employed during a pandemic influenza.
- Assess the capacity of the existing morgue facilities to provide adequate temperature controlled space for storage and processing of remains.
- Work with the local emergency management to identify a suitable temporary mortuary facility.
- Plan for:
  - Recovery of remains within jurisdiction from all places of death including residence, healthcare facility, penal institute and other locations.
  - Designating a space within the morgue to be set aside for the identification of unknown decedents.
  - Protocol for release of remains to funeral firms for burial or to cemeterians for cremation or temporary interment.
  - Maintenance of records for each remain released.
- Clearly understand and educate staff about the death certificate completion as defined in the plan for use during a pandemic.

During the pandemic interval:

- Implement COOP, operational and surge plans.
- Open temporary morgue facility(ies) where indicated.

- Implement infection control guidelines according to the current Centers for Disease Control and Prevention (CDC) and DHSS recommendations.
- Timely inform LPHA if remains begin to accumulate to unsafe levels.
- Ensure remains are identified, tagged, tracked and stored until released to funeral directors or cemeterians.
- Timely complete and file death certificates according to the established protocol in the pandemic influenza mass fatality plan.

### **Missouri DHSS**

For the mass fatality management, DHSS will utilize the Emergency Response Plan, SEOP (ESF-8 Public Health and Medical), and the processes of response as outlined in the Concept of Operations of the Pandemic Influenza Response Plan to guide the health response.

#### Pre-pandemic period

- Coordinate with coroner/medical examiner on support for influenza-related preparations. (SEOP, ESF-8 Public Health and Medical).
- Work with county coroner/medical examiner and mortuary service providers to review resources and evaluate need for activation of local Emergency Operations Plan (EOP) and local Mass Fatality Plan.
- Review mass fatality/mortuary affairs related public information messaging templates for most current and accurate information.
- Coordinate mass fatality/mortuary affairs related public information messaging with DHSS Public Information Officers (PIO).
- Prepare Executive Order for the activation of a State Medical Examiner.
- Identify potential regulatory and statutory barriers to mass fatality management.
- Inform relevant professional groups and health care facilities about the process for completing and filing death certificates during a pandemic.
- Develop a plan to promptly collect mortality information due to pandemic influenza from healthcare facilities.
- Review requirements for autopsy and post-mortem testing in the context of a pandemic.
- Conduct trainings and exercises.

#### Pandemic Interval

- Implement procedures for filing death certificates and burial permits.
- Work with county coroner/medical examiner and mortuary service providers to locate resources in the community to meet unanticipated needs and issues.
- Share event related Health Alert information and updates with county coroner/medical examiner and mortuary service providers.
- Coordinate mass fatality/mortuary affairs related public information messaging with DHSS PIOs and Joint Information Center (JIC).
- Continue work with county coroner/medical examiner and mortuary service providers and Emergency Medical Departments (EMDs) on mass fatality needs and resources and assist with obtaining and establishing alternate morgue sites as required.
- Deploy MO MORT 1 resources and personnel to assist local communities.
- Activate State Medical Examiner to provide coordination of response through SEOC.
- Request Federal Assistance and assistance from other states, as needed and available.

## **PLANNING FOR TEMPORARY MORGUES**

Additional temporary cold storage facilities may be required during a pandemic for the storage of bodies prior to their transfer to funeral homes. Each municipality should preplan, in cooperation with hospitals, funeral homes and adjacent jurisdictions, to identify sites that are suitable for temporary morgues or collection sites based on local availability and requirements. The resource needs (e.g., body bags) and supply management for temporary morgues should also be addressed.

A temporary morgue must be maintained between 35-39 degrees F. Examples are vacant public buildings, warehouses and hangers that can be cooled and secured. Communities should avoid schools, churches and other facilities that may have an emotional impact on the community. If a food establishment is used, the building may never be used for food again, so consider the cost in loss of business and resulting liability for any business. Community planners should include all funeral home establishments in their area in planning efforts to help determine their capacity to store remains. Other types of temporary cold storage to be considered may include refrigerated trucks, cold storage lockers or arenas.

Refrigerated trucks can generally hold 25 to 30 bodies without additional shelving. To increase storage capacity, temporary wooden shelves can be constructed of sufficient strength to hold the bodies. Shelves should be constructed in such a way that allows for safe movement and removal of bodies (i.e., storage of bodies above waist height is not recommended). If shelving is used a mechanical lift system will most likely need to be in place. To reduce any liability for business losses, municipalities should avoid using trucks with markings of a supermarket chain or other companies, as the use of such trucks for the storage of bodies may result in negative implications for business.

Consideration should be given to rooms that can be cooled down or that can be cooled by portable air-cooling units. Memorandum of Understandings (MOUs) with local generator and refrigeration equipment providers should be sought to provide equipment for surge capacity. If nothing else is available, consideration can be given to freezer use.

To establish a temporary morgue, the following information should be considered for space:

- Facility availability for timeframe necessary.
- Non-porous flooring or disposable flooring.
- Room for office space.
- Hot and cold water.
- Heat and/or air-conditioning.
- Electricity.
- Communication capabilities (multiple phone lines, fax line).
- Tractor-trailer accessible.
- Security for site and especially for entrances.
- Removed from public view.
- Ability to retrofit for cold storage.

Remember, the decomposition process begins immediately following death, cooling a body only slows the process. If the body is not going to be cremated, plans to expedite the embalming process should be considered since, in the case of a pandemic, bodies may have to be stored for an extended period of time.

**Note:** Embalming is not required by law, so consideration can also be given to natural burials which do not require embalming.

Knowing your community's and surrounding communities' surge capacity will assist planning efforts. A survey was conducted in March 2007 of hospitals across the State of Missouri regarding their refrigerated morgue capacity, temporary on-site capacity, and temporary off-site capacity. A table in Attachment C outlines this information.

Consider family concerns regarding temporary holding. A number of religious and ethnic groups have specific directives about how bodies are managed after death, and such needs should be considered. Different religious groups, and others with specific cultural requirements, have specific directives for the treatment of bodies and for funerals. If remains are held in temporary holding locations, relatives should be notified of the process and how their decedent is identified and tracked so that future funeral services and burials may be planned by the families when normal funeral operations are able to resume. Consult the Mental Health Annex of this plan for additional considerations.

### **CAPACITY OF AND ACCESS TO VAULTS**

A vault is a non-insulated storage facility for remains that have already been embalmed, put into caskets and are awaiting burial. Once embalmed or cremated there is no reason to store the bodies. The bodies are either interred or given to the families for final disposition.

In preparation for a pandemic, each community should identify the capacity of existing vaults and address access issues for temporary storage. In addition, the need for the creation of new temporary vaults to meet the increased demand during a pandemic should be addressed. These temporary vaults should be non-insulated, have some security features, such as covered windows, and locks on doors.

Twenty (20) body refrigerated trailers and twenty-four (24) body Mortuary Enhanced Remains Cooling (MERC) cooling systems are pre-positioned throughout the state. GIS mapping of trailers is located at: <http://arcg.is/1Sh4YRB>.

### **DEATH REGISTRATION**

Death registration is a local public health/vital records responsibility and each agency has state laws, and regulations, as well as local administrative practices to register a death. Moreover, there is a distinction between the practices of pronouncing and certifying a death. In Missouri, only physicians and coroners/medical examiners may certify death.

In a pandemic situation, with the increased number of deaths, each jurisdiction must have a body collection plan in place to ensure that there is no unnecessary delay in moving a body to the (temporary) morgue. If the person's death does not meet any of the criteria for needing to be reported to a coroner/medical examiner, then the person could be moved to a holding area soon after being pronounced dead. Then, presumably on a daily basis, a physician could be designated to complete the death certificate.

Funeral directors generally have standing administrative policies that control when they may collect a body from the community or an institution such as a hospital. Evaluation of the current

processes and identification of answers should include consideration of the regional differences in resources, geography and population.

## **AUTOPSIES**

The county coroner/medical examiner will be responsible for remains. If the decedent was hospitalized, hospital care usually provides enough information to complete a Certificate of Death without performing an autopsy. However, just because a death was unattended does not mean an autopsy is necessary. Many deaths in a pandemic will not require autopsies since autopsies are not indicated for the confirmation of influenza as the cause of death. The county coroner/medical examiner will make the final decision regarding the need for an autopsy after discussions with the LPHA, local law authorities and/or the forensic pathologist(s) that perform their autopsies.

When a family/next of kin requests an autopsy to determine if influenza was a contributing cause of death, it is important to note that post mortem testing at the State Public Health Laboratory is relatively unproductive when used on deceased persons and will not be considered in most cases. Any questions regarding this should be referred to the Medical Epidemiologist or the State Epidemiologist.

Autopsies may be ordered for the first few cases in a geographic area. Pathology samples to go to the CDC are to be coordinated through the State Epidemiologist and State Public Health Laboratory Virology Unit.

At the point when the LPHA determines that no further information will be obtained by continued autopsies, the remains will be maintained in the counties as planned by each county. This decision will be made after consultations with the DHSS and the county/city public health agency, pathologists and coroners/medical examiners. Coroner/medical examiners' offices where autopsies are performed will be unable to store or dispose of remains and, without prior agreement, will immediately return remains to the county sending the case. Collection sites described later in this guide should be established for counties that are unable to handle their fatalities.

Further guidance will be available at the medical examiner's offices where autopsies are done and through local public health agencies.

Increased fatality situations may obscure homicides as deaths occur in homes. Suspected homicides, accidents, suicides, violent and sudden deaths and other unexpected or suspicious deaths are required to be reported as usual to the local coroner/medical examiner and referred for autopsy as required.

## **INFECTION CONTROL**

Infection control and occupational health guidelines provide general recommendations on infection control for health care facilities and non-traditional sites during a pandemic. In general human remains pose no threat with regard to pandemic influenza to the community or those who handle them provided universal precautions are observed. It should also be noted that dead bodies do not cause epidemics. Nonetheless, personnel who handle human remains should receive proper vaccinations for both seasonal and pandemic influenza when the vaccine is available and if they have no contraindications for vaccination. Health care workers are expected



to be a priority risk group for vaccination during a pandemic. The Occupational Safety and Health Administration (OSHA) pandemic influenza plan designates mortuary scientists as health care workers.

Funeral homes should take special precautions with deaths from influenza. Visitations could be a concern in terms of influenza transmission among attendees, particularly in smaller communities. It is the responsibility of public health to place restrictions on the type and size of public gatherings if this seems necessary to reduce the spread of disease. This may apply to funerals and religious services. The LPHA should plan in advance for how such restrictions would be enacted and enforced, and for consistency and equitability of the application of any bans. Families requesting cremation of their deceased relative are much less likely to request a visitation, thus reducing the risk of spreading influenza through public gatherings.

Individuals who are assigned to transport and care for the deceased should be provided the following information and necessary PPE:

- Routinely wear single layer gloves and a surgical/procedure mask (a particulate respiratory mask if handling the body immediately after death).
- If there is risk of splash or spray from blood/body fluids, wear a disposable long-sleeved, cuffed protective gown that is waterproof. The cuffs should be covered by gloves. A surgical cap and eye/face barrier should also be worn. Wear waterproof shoe covers if required.
- Do not smoke, eat or drink when handling the body.
- Avoid wiping your eyes, mouth or nose with your hands.
- Remove all PPE after handling each body and wash hands thoroughly.
- Decontaminate all surfaces and any equipment used to transport the dead body with an U.S. Environmental Protection Agency (EPA) registered disinfectant:  
[www.epa.gov/oppad001/chemregindex.htm](http://www.epa.gov/oppad001/chemregindex.htm).

## **POSTMORTEM CARE**

Human remains should be placed and transported in an enclosed plastic pouch. If a pouch is not available, one can cover or wrap the body with a sheet to eliminate the possibility of any leakage escaping into the environment. The complete name of the deceased, address of death scene, county of death, time of death, next of kin phone number and other pertinent information should be printed clearly on a tag that is securely affixed to the exterior of the pouch or cover. In the absence of a tag, this information should be written on the exterior of the pouch or cover with a magic marker.

Following containment of the body, PPE should be removed and placed in a Bio Hazard bag or plastic bag marked “Bio Hazard” and the bag disposed of in an authorized manner or container.

Upon arrival of the removal vehicle at the collection point or funeral home, removal equipment should be properly sanitized.

## **TRANSPORTATION**

Under normal conditions, bodies are usually removed from the death scene by a coroner/medical examiner designee or by the funeral home of the next of kin’s choice. However, in a pandemic situation, it may be necessary to utilize additional transport sources and types of vehicles. No special vehicle or driver license is needed for transportation of a body. Emergency medical

services should not be contacted solely for the transportation of persons who have been pronounced legally dead.

Chapter 194, RSMo, addresses the transportation of remains by common carriers (such as passenger trains, buses and airplanes), but does not address transportation by family members. Transporting and disposing of remains by other than family members or for business purposes is deemed to be the practice of funeral directing and is subject to Chapter 333, RSMo, and attendant regulations. Therefore, there are no restrictions on family members transporting bodies of family members, if they have an official copy of the death certificate.

Records should be kept identifying the names of personnel that transported the body and the location where the body was transferred. Bodies should be covered so they are out of public view during transport. Transportation of remains to other states or countries for disposition requires compliance with the laws of other states or countries and applicable federal laws. Contact the DHSS Bureau of Vital Records or the LPHA for additional guidance.

Transportation of bodies from their place of death to their place of burial in rural and isolated communities may become an issue, especially if this requires air transport. Local pandemic planners should consult existing plans for these communities and determine what changes can be made to meet the increased demand during a pandemic.

## **SUPPLY MANAGEMENT**

This plan does not recommend that funeral directors order excessive amounts of supplies such as embalming fluids, body bags, etc., but that they have enough on hand in a rotating inventory to handle the first wave of the pandemic (that is enough for six months of normal operation). Fluids can be stored for years, but body bags and other supplies have a limited shelf life. Cremations generally require fewer supplies since embalming is not required. Families having multiple deaths are unlikely to be able to afford multiple higher-end products or arrangements. Funeral homes could quickly run out of lower-cost items (e.g. inexpensive caskets such as cloth and some wooden caskets) and should be prepared to provide alternatives. Through funding from the federal government directed through DHSS, the Missouri Mortuary Operations Response Team (MOMORT-1) purchased and has available for a mass fatality event significant quantities of supplies, including approximately 7,000 body bags.

## **MENTAL HEALTH ISSUES**

Medical examiners, coroners, responders, funeral home personnel and others working with decedents, may feel overwhelmed by the numbers of deaths occurring, working with family members of the deceased and personal effects that serve as reminders of the living. Self-care and reaching out to others in the profession for support are vital. When responders are overwhelmed, taking needed brief healthful breaks and time for family will assist them in staying emotionally fit and responsive. Needed support may be provided by one's faith community, family or through professional mental health resources available through local mental health providers. The list of community mental health centers is available at: <https://dmh.mo.gov/mental-illness/help/community-mental-health-centers>. The Missouri crisis hotline number available 24 hours per day for persons in a mental health crisis is called the Access Crisis Information Line.

## **SPECIAL POPULATIONS**

A number of religious and ethnic groups have specific directives about how bodies are managed after death, and such needs must be considered as a part of pandemic planning. Different religious groups, and others with specific cultural requirements, have specific directives for the treatment of bodies and for funerals. The wishes of the family will provide guidance, however, if no family is available local religious or ethnic communities can be contacted for information. The following resources may also be of assistance:

- National Resource Center for Advancing Emergency Preparedness for Culturally Diverse Communities at [www.diversitypreparedness.org/](http://www.diversitypreparedness.org/).

As a result of these special requirements, some religious groups maintain facilities such as small morgues, crematoriums and other facilities, which are generally operated by volunteers. Religious groups should be contacted to ensure these facilities and volunteers are prepared to deal with pandemic issues. Religious leaders should be involved in planning for funeral management, bereavement counseling and communications, particularly in ethnic communities with large numbers of people who do not speak the official languages.

## **RESOURCES:**

The following data sets will be added to this plan as a linked resource through the GIS as they are completed.

- Missouri Cemeteries
  - Data compiled from:
    - U.S. Geological Survey-GNIS
    - Missouri Department of Economic Development –Professional Registration: Cemetery Registration
      - ❖ Endowed
      - ❖ Non-Endowed
      - ❖ Not-for-profit
      - ❖ Municipal
- Missouri Parks
  - Data compiled from:
    - U.S. Geological Survey-GNIS
- Missouri Ice Rinks/Arenas
  - Data compiled from:
    - Internet Search
- Missouri Licensed Funeral Homes
  - Data compiled from:
    - Missouri Department of Economic Development –Professional Registration
- Missouri Licensed Crematoriums
  - Data compiled from:
    - Missouri Department of Economic Development –Professional Registration
- Missouri Coroners/Medical Examiners
  - Data compiled from:
    - Missouri Coroner/Medical Examiner Website
- Missouri Licensed Funeral Directors
  - Data compiled from:
    - Missouri Department of Economic Development –Professional Registration

- Missouri Licensed Embalmers
  - Data compiled from:
    - Missouri Department of Economic Development –Professional Registration

#### **ADDITIONAL REFERENCES**

1. Canadian Pandemic Influenza Plan, “Guidelines for the Management of Mass Fatalities During an Influenza Pandemic”, February 2004.
2. Southwest Public Health District, Albany, GA.; “Pandemic Influenza Response Plan, Mass Fatality Plan”, June 15, 2006.
3. Guidance on Preparing Workplaces for an Influenza Pandemic, US Department of Labor, Occupational Safety and Health Administration, OSHA 3327-05R, 2009  
[www.osha.gov/Publications/OSHA3327pandemic.pdf](http://www.osha.gov/Publications/OSHA3327pandemic.pdf) (accessed August 19, 2009).

#### **STATUTORY CITATIONS**

1. Missouri Revised Statutes, Chapter 58, Coroners and Inquests.

## **Continuity of Operations**

### **Essential Vital Records Needs and Functions in a Mass Fatality Event**

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The following is intended to provide suggestions in the development of Continuity of Operation (COOP) plans for local public health/vital records in the event of mass fatalities resulting from major disasters or a pandemic.

A COOP plan should include recognition of the need to relocate operations to another location. This need may occur from either facility compromise or a need to function out of a satellite location. Action should be taken to identify possible pre-designated sites. Remember: sites utilized for other activities such as Mass Care and Point of Distributions (PODs) have similar characteristics, so beware of the same locations being designated with multiple roles. The primary and back-up sites should include, or have available, equipment and materials necessary to operate until primary site is functional again. Copies of the COOP plan should be available at designated primary site and any pre-designated alternate site. Listed below is a list of basic office supply items that should be considered for a vital records go-kit.

#### **Local Registrars**

Local registrars might expect to continue registration of death certificates and issuance of certified copies depending on the incident and availability of staff and resources. In the event, these activities can be performed, the following items should be considered for a vital records go-kit.

#### **Supplies**

- Supply of Computer Birth/Death Certificates.
- Copier.
- Hand Seal.
- Certification Statements.
- Registrar's signature stamp.
- Date stamps.
- Black ink pads, black ink.
- Supply of birth/death applications
- Basic office supplies (stapler, black pens, pencils, white paper, steno pad, etc.).
- Envelopes (window, plain, brown).
- Receipt books.
- Lock box.

#### **Registration**

Certificates registered with the local registrar will be maintained and secured at that facility until such time as they are able to forward originals to the Bureau of Vital Records office.

#### **Fees**

Local Registrar will be responsible for securing fees taken in for their facility.

## **State Vital Records Office**

Staff in the State Vital Records Office would maintain the following primary duties:

### **Primary Vital Records Duties**

- Registration of birth and deaths.
- Issuance of certified copies and collection/securing fees.
- Training (non-vital records personnel to assist in an emergency).
- Missouri Electronic Vital Records (MoEVR) Help Desk support for data providers.

### **Supplies**

- Laptop computer and portable printer if available.
- Supply of Standard Certificate of Death forms.
- Supply of Computer Birth/Death Certificates.
- Copier.
- Hand Seal.
- Certification Statements.
- Registrar's signature stamp.
- Date stamps.
- Black ink pads, black ink.
- Map of Missouri.
- Reference book including: "Where to Write for Out-of-State Vital Records", listings of Missouri funeral home establishments, hospitals, coroners/medical examiners, LPHAs and Missouri statutes and regulations pertaining to vital records.
- Supply of birth/death applications
- Basic office supplies (stapler, black pens, pencils, white paper, steno pad, etc.).
- Envelopes (window, plain, brown).
- Receipt books.
- Lock box.
- Flashlight and batteries.

### **Registration**

- Bureau of Vital Records staff will assist as assigned by the coroner/medical examiner in the collection of information pertaining to registration of death certificates.
- Bureau of Vital Records staff will assist local registrars in performing same functions as needed.
- Assigned Vital Records staff will be responsible for maintenance and security of all completed death certificates.
- Certificates will be processed and registered as soon as reasonably possible.
- Certificates registered with the local registrar will be maintained and secured at that facility until such time as they are able to forward originals to the Bureau of Vital Records office.
- Bureau of Vital Records staff will provide troubleshooting assistance to data providers using MoEVR.

## **Issuance of Certificates**

- Assigned vital records staff will be responsible for issuance of certified copies of death certificates for victims of mass fatalities. Other requests will be processed according to established procedures, if functional at primary site.
- At primary site, if mainframe system is unavailable for daily operations to issue computer certifications, applications and fees for certified copies may be taken and mailed at the earliest possible convenience.
- Suspension of 24-hour issuance of death certificates may be effective in major disasters. Local registrars may continue to issue certified copies for additional certificates if possible upon request.

## **Fees**

- If primary site is not functional, two assigned Bureau of Vital Records staff should be responsible for securing fees, signing and issuing receipts and balancing. Both will balance and sign balance sheet.
- Local Registrar will be responsible for securing fees taken in for their facility.

## **Training**

- A resource manual that includes basic training should be accessible if vital records staff is limited. Functions that could be performed by non-vital records staff are:
  - Review of paper certificates for completeness and accuracy.
  - Duplicate copies from copier.
  - Certify documents.
  - Mail certificates.
  - Number and date stamp certificates.
  - Answer phone.
  - Review of entries on certificates for blanks and/or inconsistencies, (such as age not calculated to agree with date of birth on death certificates, or no age given but a date of birth is).
  - Provide information on how to obtain copies of certificates and fees using guide sheet that should be available.
  - Provide information on obtaining certificates from other offices using reference list that should be available with out-of-state vital records offices, other local registrars, etc.

## Usual Process for Deceased Management

Steps	Requirements	Limiting Factors	Planning for Possible Solutions/Expediting Steps
<b>Pronounced</b>	Person legally authorized to perform this task.	If death occurs in the home, then one of these people will need to be contacted.  Availability of people able to do this task.	Provide public education on how to activate or access medicolegal systems in place.  Consider best utilization of medical and EMS resources currently in place.  Consider planning for on-call system 24/7 specifically for this task.
<b>Death Certified</b>	Person legally authorized to perform this task.	Legally, may not necessarily be the same person that pronounced the death.	Consider having one authorized person perform this task en masse to improve efficiency. Ensure redundant backup is identified and outlined in plan.  Consider need for or ability to do faster scene processing.  Consider possible time delay between scene processing/certification and body pickup.  Consider need for public education on altered standards due to pandemic event.
<b>Body Pickup</b>	Person(s) trained and authorized to perform this task.	Staffing and transport conveyance availability.  Contracted transport resource availability.	Consider best utilization of resources “collecting” bodies and time associated with response and transport.
<b>Body Wrapped</b>	Person(s) trained to perform this task.  Body bags	Supply of human and physical (body bags) resources.	Consider developing a rotating six-month inventory of body bags, given their shelf life.  Consider training or expanding the role of current staff to include this task if not already a part of duties.  Consider providing this service at location where body is found, in conjunction with pronouncement, if legally authorized. Otherwise, include in body pickup and transportation.



<b>Steps</b>	<b>Requirements</b>	<b>Limiting Factors</b>	<b>Planning for Possible Solutions/Expediting Steps</b>
<b>Morgue Storage</b>	Suitable facility that can be maintained between 35-39° F.	Capacity of such facilities.	Identify and plan for possible temporary morgue sites.  Consider unavailability of reefer units.  Consider portable air coolers and tents.
<b>Autopsy if required</b>	Person qualified to perform autopsy and suitable facility with equipment.	Availability of human and physical resources may be required in some circumstances.	Ensure that physicians and families are aware that an autopsy is not required for confirmation of influenza as cause of death.
<b>Cremation*</b>	Suitable vehicle of transportation from morgue to crematorium.  Availability of cremation service.  A cremation certificate.	Capacity of the crematorium/speed of process.  Availability of coroner/medical examiner to issue certificate for cases under their jurisdiction.	Identify alternative vehicles that could be used for mass transport.  Examine the capacity and surge capacity of crematoriums within the jurisdiction.  Discuss and plan appropriate storage options if the crematorium becomes backlogged.  Discuss and plan expedited cremation certificate completion process.
<b>Embalming**</b>	Suitable vehicle for transportation to the morgue.          Trained person.  Suitable location.	Availability of human and physical resources.          Capacity of facility and speed of process.	Consult with service provided regarding the availability of supplies and potential need to stockpile or develop a rotating six-month inventory of essential equipment/supplies.  Consider what to do if shortage of embalming fluid occurs in pandemic event.  Discuss capacity and potential alternate sources of human resources to perform this task e.g. retired workers or students in training programs.  Consider “recruiting” workers that would be willing to provide this service in an emergency.

<b>Steps</b>	<b>Requirements</b>	<b>Limiting Factors</b>	<b>Planning for Possible Solutions/Expediting Steps</b>
<b>Death Certificate Issuance</b>	Person legally authorized to perform this task.	Legally, may not necessarily be the same person that pronounced or certified the death.	Consider having appropriate amount of authorized person(s) to perform this task to improve efficiency and speed processing.  Ensure redundant backup is identified and outlined in plan.  Consider need for public education on altered standards due to pandemic event.
<b>Funeral Service</b>	Appropriate location(s), casket (if not cremated), funeral director.	Availability of caskets.  Availability of location for service and visitation.	Contact suppliers to determine lead time for casket manufacturing and discuss possibilities for rotating six-month inventory.  Consider what to do if shortage of caskets occurs in pandemic event.  Locate and acquire additional locations for surge and visitation.  Consider alternate plans if Isolation/Quarantine issues arise.
<b>Transportation to temporary vault or burial site</b>	Suitable vehicle and driver.	Availability of human and physical resources.	Identify alternate vehicles that could be used for this purpose.  Consider use of volunteer drivers.
<b>Temporary vault storage</b>	Access to and space in a temporary vault.	Temporary vault capacity and accessibility.	Expand capacity by increasing temporary vault sites.
<b>Burial</b>	Grave digger, space at cemetery.	Availability of grave diggers and cemetery space.	Identify sources of supplementary workers.

\* Cremated bodies are not usually embalmed; families may choose to have a funeral service followed by cremation or to have the body cremated first and a memorial service later.

\*\* Bodies to be buried may be embalmed, but legally are not required to be. Consideration should be given to need to be stored in a temporary vault prior to burial.

**Hospital Regions: Body Storage Capacity**

<b>Region</b>	<b>Number of Hospitals</b>	<b>Morgue Refrigerated Storage Capacity</b>	<b>Temporary On-Site Capacity</b>	<b>Temporary Off-Site Capacity</b>
A	34	61 bodies	152 bodies	103 bodies
B	8	6 bodies	74 bodies	112 bodies
C	47	115 bodies	402 bodies	132 bodies
D	26	10 bodies	117 bodies	315 bodies
E	10	16 bodies	54 bodies	2 bodies
F	15	119 bodies	148 bodies	518 bodies
G	4	3 bodies	6 bodies	0 bodies
H	9	2 bodies	143 bodies	114 bodies
I	5	7 bodies	26 bodies	0 bodies

# Pandemic Influenza Plan – Psychosocial Services Preparedness

For more information contact Beckie Gierer at [Beckie.gierer@dmh.mo.gov](mailto:Beckie.gierer@dmh.mo.gov) or 573 751-8136

## OVERVIEW

The response to an influenza pandemic will pose substantial physical, personal, social and emotional challenges to healthcare providers, public health workers, emergency responders, and the general public. The risk most likely will remain elevated for as long as the pandemic continues in the community. Prior experience with disaster relief efforts indicates that enhanced workforce support activities can help them remain effective during emergencies. A practical plan to address psychological aspects of pandemic is needed to ensure that hospitals, public health agencies, emergency responders, and providers of essential services are prepared to help their employees in strengthening personal resilience and professional performance. An essential part of this planning effort involves creation of alliances with community-based organizations and nongovernmental organizations with expertise in and resources for psychosocial support services or training. The Mental Health Response section addresses the needs of public health and healthcare workers, emergency personnel, their families, and the general public.

## OBJECTIVES

- To assist workers and the general public in managing emotional stress and related personal, professional and family issues during the response efforts to an influenza pandemic.

## BEST PRACTICES

Although planning must be premised on assumptions of success, the mental health and behavioral implications of failure must also be anticipated and considered as part of planning. Planning issues are highlighted in the chart below.

Preparedness and Planning	Initial Onset of Pandemic	Pandemic and Recovery
<ul style="list-style-type: none"> <li>○ Public education</li> <li>○ Leadership preparation</li> <li>○ Sustained preparedness</li> <li>○ Leadership functions</li> </ul>	<ul style="list-style-type: none"> <li>○ Communication</li> <li>○ Tipping points</li> <li>○ Surges in health care demands</li> </ul>	<ul style="list-style-type: none"> <li>○ Community structure</li> <li>○ Stigma &amp; discrimination</li> <li>○ Management of fatalities</li> </ul>

Three general goals and associated activities have been identified for the public health and mental health fields to appropriately address the potential emotional and behavioral issues that would likely emerge in a pandemic event and are summarized in the chart below.

Measures to shape adaptive behaviors	Measures to reduce social and emotional deterioration and improve functioning	Measures to support key personnel in critical infrastructure functions
Guidance <ul style="list-style-type: none"> <li>○ that maximizes public trust and effective communication strategies</li> <li>○ Guidance to maximize adaptive behavior change</li> </ul>	Public information, guidance and support that <ul style="list-style-type: none"> <li>○ Increases hope</li> <li>○ Enhances safety</li> <li>○ Promotes calm</li> <li>○ Encourages connectedness</li> <li>○ Improves personal and community efficacy</li> </ul>	<ul style="list-style-type: none"> <li>○ Maximizing performance and resilience</li> <li>○ Managing grief, exhaustion, anger, fear, family &amp; self-care issues and resolving ethical issues</li> </ul>

See Attachment A for public health and individual intervention strategies to support communities and individuals in coping with a disease outbreak. Attachment A is a matrix that provides a roadmap for the oversight, management and coordination of public mental health efforts in a pandemic outbreak.

### **PRE-PANDEMIC PERIOD**

Mental health providers should focus on addressing the mental health issues associated with seasonal influenza as well as planning for those that may be generated by a pandemic. Collaborative efforts with community and faith-based organizations facilitate culturally appropriate mental health planning, preparedness, and response. Mental health providers should coordinate planning and response activities with government and non-government agencies.

#### **Potential Activities**

- Develop public education tools and materials in collaboration with public information specialists.
- Identify and develop pandemic influenza-specific educational tools and materials regarding the signs of distress, traumatic grief, coping strategies, and building and sustaining personal and community resilience.
- Identify and list behavioral and psychological support resources.
- Increase awareness of potential mental health implications of an influenza pandemic.
- Provide information about psychological reactions to public health emergencies and recommendations for positive coping strategies.
- Maintain an updated website containing information about pandemic influenza-related mental health issues.
- Share resources through social media and other various outlets as appropriate.

#### **Support mental health disaster training**

Training strategies will need to consider ways to motivate stakeholders to invest in preparedness training and to evaluate the cost-benefit. Training content areas suggested for the various audiences are included as Attachment B. Some of the training resources available in Missouri are listed in Attachment C.

#### **Faith-Based Organizations**

The involvement of faith-based partners during a pandemic event will be crucial to promote well-being and spiritual, social and emotional strength for Missouri's citizens.

Descriptions of the partnering strategies that will benefit faith-based ministries in supporting mental health needs in a public health emergency follow:

1. Preparedness and planning for congregation, staff and community.
  - Use Centers for Disease Control and Prevention (CDC) checklist to plan for congregation.
  - Recognize the emotional and physical impact that a pandemic may have on a congregation.
  - Learn risk communication and learn best methods to communicate with congregants.
2. Develop partnerships.
  - Call the Local Public Health Agency (LPHA) to see if there are groups/congregations meeting to plan for a public health emergency and join those groups.

- Discuss and plan with Ecumenical groups such as the Ministerial Alliance. Consider developing a Local Emergency Pastoral Care Committee to provide mutual support, staffing, etc. in a pandemic.
- Identify other resources available through your congregational affiliation such as counseling centers, parish nurses, etc.
- Develop memos or letters of understanding outlining the agreed upon activities and outreach between partnering faith-based organizations/congregations.
- Members of a faith that has specific cultural practices during grief periods or whose members may limit medical interventions due to their beliefs should work with public health authorities in advance of an emergency to promote understanding and to plan for responses that diminish inappropriate interventions.

## **MENTAL HEALTH INTERVENTIONS**

Content areas:

### Goals of Intervention

- Promote preparedness.
- Develop resilience.
- Mitigate risk factors.

### Role of all Mental Health Staff

- Planning.
- Public education.
- Communication.
- Workforce preparedness and training.
- Resource development.
- Community development.

### Community Mental Health Role at Local Level

- Collaboration.
- Inform and influence policy.
- Set structures for assistance and develop surge capacity.
- Integrate substance use counseling with at-risk individuals.
- Assess interoperability of communications technologies, i.e. phone, telecommunication, etc.
- Advocate for at-risk populations and those with functional needs and/or access issues.

### *Workforce Development*

- Leadership preparation and functions.
- Promote awareness and increase capacity for personal and work-related preparedness, i.e. human resource policies.
- Train responders in evidence-based mental health response skills. (Workforce Materials are listed in Attachment C: Current Status of Resources).
- Promote resilience building, stress management and self-care.

In Missouri, psychosocial support services are becoming institutionalized within health care and first responder organizations due to continued psychological first aid (PFA) training throughout the state for diverse groups. Educational materials are prepared for employees and ready to be distributed through health care partnerships during public health emergencies. Other materials to be developed as needed.

#### Public Education

- Cultivate relationships with and educate media.
- Promote preparedness campaigns that address safety and resilience rather than imminent threat.
- Promote mental health and prevention efforts to build emotional resilience.
- Target at-risk groups and integrate substance use and relapse prevention efforts.

#### Community Development:

- Partner to address needs of disability community and other at-risk groups.
- Develop resources for and partnerships with diverse cultures within communities.

#### Public Mental Health Authority at State Level

- Interagency collaboration to develop guidance.
- Policy development and leadership preparation.
- Infrastructure support for rapid assistance.
- Plan and develop infrastructure for Implementation of Federal Emergency Management Agency (FEMA) Crisis Counseling Program (CCP), if available, or other fiscal resources.
- Mutual aid strategies among community mental health centers, with American Red Cross (ARC), other Volunteer Organizations Active in Disaster (VOAD) agencies.

#### *Workforce Development:*

- Continuity planning.
- Training for public health, other health care providers such as hospitals and primary care, mortuary workers, mental health, etc.
- Involvement in state sponsored exercises.
- Competency-based workforce standards (self-care, cultural competencies and use of interpreters, licensure and certification standards).
- Ongoing resource development.
- Agencies should develop alliances with community based organizations and non-governmental organizations with expertise in and resources for psychosocial support, services and training.

## **PANDEMIC PERIOD**

Persons who believe they have been exposed may out-number those actually exposed. Communication and planning for the needed messages and behavioral responses will be important public health activities to prevent the medical response capacity from being overwhelmed.

**In early pandemic responses**, the Center for the Study of Traumatic Stress, *Mental Health and Behavioral Guidelines for Response to a Pandemic Flu Outbreak*, recommends preparing for three following responses:

**Communication:** Wide dissemination of materials that normalize stress reactions and emphasize hope, resilience and natural recovery. Collaborate with media to clearly and repeatedly inform the public about the rationale and mechanism for distribution of limited supplies.

**Tipping Points:** Certain events may occur that will either increase or decrease fear and helpful or risk behaviors. Deaths of vulnerable individuals such as children, unexpected or new risk factors, and shortages in supplies are typical.

**Support Mental Health Disaster Training:** The training content can be adapted to fit the current status of the disease. Content areas that should be considered for the pandemic period are listed in Attachment B, II. *Pandemic*.

## **MENTAL HEALTH INTERVENTIONS**

The following content areas have been identified for use during a pandemic:

### Goals of intervention:

- Safety and survival;
- Meet basic needs;
- Effective communication;
- Effective risk communication incorporating of skills for the “new normal” including safe behavioral practices and routines such as social distancing.

### Role of Mental Health Staff:

- Protection.
- Reduction of stress and arousal.
- Reassurance.

### Community Mental Health Role:

- Basic Needs.
- Psychological First Aid.
- Monitor environment and identify tipping points.
- Technical assistance, consultation and training.

### Public Mental Health Authority

- Establish linkages with State Emergency Management Agency (SEMA), The Missouri Department of Health and Senior Services (DHSS), FEMA and Center for Mental Health Services (CMHS) to authorize availability of FEMA immediate services program and to identify tipping points.
- Activate mental health response consistent with functions listed above.
- Utilize crisis counselors if applicable.
- Provide hotline as response and referral resource.
- Disseminate mental health outreach materials.
- Participate in Missouri VOADs and the Governor’s Faith-based and Community Service Partnership for Disaster Recovery (Governor’s Partnership).
- Coordinate service delivery and develop linkages with mental health services offered by ARC, Salvation Army and other VOADs.
- Authorize and fund use of interpreters.



- Establish communications with Community Mental Health Centers (CMHCs) in affected areas.
- Assess impact on populations with access and functional needs.
- Explore availability of FEMA Regular Services Program and explore other grant resources for behavioral health outreach.

#### *Work Force Development*

- Incorporate psychosocial support services into occupational health and emergency preparedness planning and through PFA training for a variety of responders.
- Provide mental health messages to DHSS to be included within the DHSS Health Alert/Health Updates disseminated statewide to health care workers during a pandemic.
- Provide mental health messages to DHSS public information officers for inclusion within letters from the Director of DHSS to employees.
- Provide informational materials to Missouri Department of Mental Health (DMH) and DHSS staff.
- Encourage use of the State Employee Assistance Plan (EAP) as needed for psychosocial support services for employees and their families.
- Provide informational resources for the mental health hotline numbers.
- Encourage implementation of workforce resilience programs.
- Provide resiliency materials developed by the CDC, Health Resources & Services Administration (HRSA), National Institute of Health (NIH), Substance Abuse and Mental Health Services Administration (SAMHSA) and others that address healthcare and training issues
- Provide *Behavioral Health Emergency Plan Template for Healthcare Agencies* to health care organizations.

**In later pandemic** response and recovery, the Center for the Study of Traumatic Stress in *Mental Health and Behavioral Guidelines for Response to a Pandemic Flu Outbreak* emphasizes the management of the community structure, stigma and discrimination, and fatalities.

**Community Structure:** Maintaining the formal and informal community social support is important, even if conducted electronically or virtually. Web, social media, telephone, television and radio will be important communication tools to instill normalcy, plan for regular activities and manage community and organizational distress and behaviors. The Center encourages providing tasks for community action that can supplement needed work resources, decrease helplessness and instill optimism.

**Stigma and discrimination:** Stigma and discrimination may marginalize and isolate certain groups and impede recovery. Address stigmatization through information and training. Attention to managing social conflicts in the immediate response and recovery period will take on added significance.

**Management of fatalities:** The community must anticipate and plan for response to mass fatalities and to the management of bodies. Local officials must be aware that containment measures related to bodies may conflict with religious rituals of burial and the usual process of grieving which may have a negative impact on a community.

## **MENTAL HEALTH INTERVENTIONS**

The following content areas have been identified for the pandemic period:

### Goals of intervention:

- Adjustment.
- Appraisal.
- Effective risk communication.
- Incorporation of skills for the “new normal” including safe behavioral practices and routines.

### Role of all Mental Health Staff:

- Provide information and assistance to orient affected parties.
- Needs assessment.
- Referral or service provision.

### Community Mental Health Role:

- Culturally competent needs assessment to determine status and how well needs are being addressed for all populations as well as the recovery environment.
- Conduct mental health surveillance to inform response and recovery efforts.
- Foster resilience.

### Public Mental Health Authority

- Establish linkages with SEMA, DHSS, FEMA and CMHS.
- Work closely with VOAD organizations including ARC and National Organization of Victim Assistance (NOVA).
- Support the risk communication effort of DHSS by providing mental health specific information.
- Monitor DMH Access Crisis Intervention Hotline to determine if calls are received due to the Pandemic. Look for tipping points regarding the need for a separate hotline to solely concentrate on stress issues related to the pandemic.
- Work with DHSS regarding the mental health risk communication messages that need to be delivered during mass vaccination. Stress management tips, information for at-risk groups, and information on where and how to seek professional assistance.
- Support the workforce coping with large numbers of deaths. Train supervisors how to support workers who have losses.
- Establish communications links with CMHCs in affected areas.
- Conduct needs assessment for FEMA crisis counseling program application if available.
- Explore other federal grant resources that may be available for behavioral health outreach

## **Supporting Families Coping with Death**

Recommendations for supporting individuals and families experiencing deaths are listed below. Address emotional aspects of a positive death experience regarding rituals, communication, support and assistance during the period when death is imminent and after death anticipate the following:

- How to help children and others in the household learn coping skills.

- How to recognize potential for survivor guilt and blame and when to seek professional mental health help.
- Self-care tips for caregiver’s physical and emotional health.
- Provide pro-active information about state and local requirements regarding what to do in the event of a death in the home.
- Provide hotline tailored to death issues, staffed by people prepared to deal with issue.
- Partner with faith communities and funeral industry for consistency of message, in providing emotional support and dissemination of factual information about bodies and grief.
- Encourage volunteer activities that are safe and do not promote contagion such as delivery of food and other items with no personal contact (i.e. drop-offs).
- Encourage “flu recovered” individuals who now have immunity to assume responsibility for those aspects of life requiring exposure to contagion, taking care not to place adult responsibilities on children.

#### *Work Force Development*

- Make available phone, web and other social media supports for a long response.
- Continue to offer educational materials regarding the cognitive, physical, behavioral, spiritual and emotional reactions that might be exhibited by patients, their families and by staff. Include reactions that indicate a mental health referral is needed.
- Provide communication materials that assist with sensitivity to cultural issues.
- Provide *Behavioral Health Emergency Plan Template for Healthcare Agencies*. Stress employee support during planning and reemphasize during the pandemic period.
- Offer information for health care agencies regarding developing stress control/resilience teams and their purpose and function.
- Supply confidential telephone support lines staffed by behavioral health specialists.
- Encourage work places to develop services for the families of employees, especially support services that might be needed for employees with sick family members.

## **RECOVERY PERIOD**

### **Support Mental Health Disaster Training**

Training materials need to focus on referral and treatment, grief and bereavement, and resilience and recovery. Content areas by audience for the recovery period are identified in Attachment C: III. *Recovery*.

#### **Partner with Faith-Based Organizations:**

- Use partnerships to support the community through memorials, special events, etc., to help rebuild the fabric of the community and to support families and individuals who have lost loved ones or who will have long term effects from the illness due to disabilities, etc.
- Celebrate your congregation’s ability to meet together again if public services were canceled.
- Plan programs to support those recovering. Consider the long term physical, emotional, social and economic impact of the emergency on families such as disabilities, loss of income, inability to meet basic needs, etc. and how faith organizations can respond.
- For congregations suffering great losses of members, consider meeting with sister congregations to work together toward recovery.
- Initiate support groups to assist those with longer term disabilities as a result of illness, their family members and those in grief over losses.

- Learn the signs of depression, and suicide risks. When needed, refer to pre-identified mental health professionals.

## MENTAL HEALTH INTERVENTIONS

Content areas:

### Community Mental Health Role:

- Monitor the recovery environment.
- Foster resilience and recovery.
- Community development – encourage development of Long-Term Recovery Committees.
- Public education.
- Traditional mental health services.

### Public Mental Health Authority:

- Assess need for FEMA regular services program, CMHS’ SAMHSA Emergency Response Grant funds or other funding streams available.
- If regular services grant not pursued, participate in and coordinate with the Governor’s Partnership.
- Coordinate with Suicide Prevention Project, DMH for materials and outreach.
- Conduct data collection and analysis to inform program management and future mental health response efforts.

### Work Place Recovery:

- Supply materials about grief and bereavement in the work place to assist in recovery.
- Review policies and how they support or hinder grieving workers in their recovery.
- Consider support groups to assist with healing.
- Celebrate getting back to a “normal” schedule while remaining flexible for those who need it.

## Long-Term Recovery

The recovery phase will be an extension of on-going mental health response. The planning framework out-lined in the DMH Community Mental Health Response Plan for disaster events is the *Missouri Model for Mental Health Response and Recovery After A Public Health Event* matrix available at <https://dmh.mo.gov/media/pdf/missouri-model-mental-health-response-and-recovery-after-public-health-event>. This document is intended to provide a procedural approach to managing the mental health response throughout a pandemic. Specific activities for the recovery phase include but are not limited to:

- Re-establishing pre-event functional abilities and a new “norm” for post-pandemic social behaviors.
- Helping families and individuals cope with traumatic grief issues.
- Adjustment to family reconfiguration and adjustment due to death, disability and economic difficulties.
- Community activities that promote social cohesion and unity such as recognition and appreciation rituals and memorials, community “self-help” activities and partnerships that strengthen mutual and natural support efforts, and “anniversary” events to assist individuals and communities to move forward in their recovery.

- Resilience development strategies that promote individuals and communities efficacy.
- Resource development for long term mental health services and supports for large numbers of individuals dealing with emotional recovery such as depression, substance use, anxiety, and Post Traumatic Stress Disorder (PTSD).

For links to comprehensive information on pandemic influenza, go to:  
<https://health.mo.gov/emergencies/panflu/panflu.php>

## Public Health and Individual Intervention Strategies

The following chart summarizes both public health and individual intervention strategies to support communities and individuals coping with a pandemic disease outbreak. This framework provides a roadmap for the oversight, management and coordination of public mental health efforts in a pandemic outbreak.

	PUBLIC HEALTH	INDIVIDUAL
<b>PROMOTE SENSE OF SAFETY</b>	<ul style="list-style-type: none"> <li>▪ Establish which environments are safest.</li> <li>▪ Educate people how to make their own surroundings safe</li> <li>▪ Provide an accurate, organized public voice to help circumscribe threat</li> <li>▪ Inform the media to convey safety and resilience rather than imminent threat</li> <li>▪ Encourage individuals to limit media exposure                             <ul style="list-style-type: none"> <li>○ Recommend limiting time talking about trauma if anxious and depressed</li> <li>○ Educate parents regarding limiting and monitoring news exposure for children</li> </ul> </li> </ul>	<p><u>Goals</u></p> <ul style="list-style-type: none"> <li>▪ Make choices between safe and unsafe activities, environments</li> <li>▪ Increase sense of safety. Incorporate skills for “new normal” to maintain changes in behavior and routines that are “safer”</li> </ul> <p><u>Techniques</u></p> <ul style="list-style-type: none"> <li>▪ Use of imagery techniques in natural settings</li> <li>▪ Use of techniques to help people keep their minds based in reality</li> <li>▪ Understand discrimination practices in the face of trauma</li> <li>▪ Develop awareness of trigger events</li> </ul>
<b>PROMOTE CALM</b>	<ul style="list-style-type: none"> <li>▪ Help people directly solve concerns</li> <li>▪ Give information about safety of family and friends and their status in terms of risk</li> <li>▪ Large-scale community outreach and psycho-education about the following topics                             <ul style="list-style-type: none"> <li>○ Post-trauma reactions that are understandable and expectable</li> <li>○ Anxiety management techniques for common post-trauma problems</li> <li>○ Signs of severe dysfunction</li> <li>○ Limiting media exposure for those with mid-level problems of anxiety</li> <li>○ Receiving brief news reports from a friend or family member, for those with more severe emotionality</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Therapeutic grounding (for those re-experiencing symptoms) such as “you are in a safe environment now”</li> <li>▪ Breathing retraining</li> <li>▪ Deep muscle relaxation</li> <li>▪ Understanding stress reactions to reduce anxiety associated with reactions</li> <li>▪ Stress management training</li> <li>▪ Cognitive reframing – changing focus, sense of time, thoughts and beliefs to change to positive actions</li> </ul>
<b>PROMOTE SELF AND COMMUNITY EFFECTIVENESS</b>	<ul style="list-style-type: none"> <li>▪ Provide people with outside resources</li> <li>▪ Create a way to manage and orchestrate people’s resources</li> <li>▪ As much as possible, involve victims in decision-making regarding policy</li> <li>▪ Promote activities that are implemented by the community such as                             <ul style="list-style-type: none"> <li>○ Religious activities</li> <li>○ Meetings</li> <li>○ Rallies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Remind individuals of their strengths and skills</li> <li>▪ Encourage active coping</li> <li>▪ Enhance sense of control over traumatic stressors</li> <li>▪ Help to readjust expectations and goals</li> <li>▪ Teach individuals to problem-solve and set achievable goals</li> </ul>

	<b>PUBLIC HEALTH</b>	<b>INDIVIDUAL</b>
	<ul style="list-style-type: none"> <li>○ Collaboration with local healers</li> <li>○ The use of collective healing and mourning rituals</li> <li>▪ Foster competent communities that: <ul style="list-style-type: none"> <li>○ Encourage the well-being of citizens</li> <li>○ Provide safety</li> <li>○ Make material resources available for rebuilding and restoring order</li> <li>○ Share hope for the future</li> <li>○ Support families who are the main provider of mental health care after disasters</li> </ul> </li> <li>▪ Foster the perception that others are available to provide support, which: <ul style="list-style-type: none"> <li>○ Mitigates the perception of vulnerability</li> <li>○ Emboldens individuals to engage in adaptive activities they might otherwise see as risky</li> </ul> </li> </ul>	
<b>PROMOTE SOCIAL CONNECTEDNESS</b>	<ul style="list-style-type: none"> <li>▪ Identify those who <ul style="list-style-type: none"> <li>○ Lack strong support</li> <li>○ Are likely to be more socially isolated</li> <li>○ Have a support system providing undermining messages</li> </ul> </li> <li>▪ Help individuals identify and link with loved ones</li> <li>▪ Increase the quantity, quality and frequency of supportive transactions</li> <li>▪ Address potential negative social influences (<i>i.e., mistrust, in-group/out-group dynamics, impatience with recovery, exhaustion, etc.</i>)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Train people how to access support</li> <li>▪ Provide formalized support</li> <li>▪ Address discordance among family members</li> </ul>
<b>INSTILL HOPE</b>	<ul style="list-style-type: none"> <li>▪ Provide services to individuals to help them get their lives back in order</li> <li>▪ Develop advocacy programs to aid victims</li> <li>▪ Support rebuilding of local economies</li> <li>▪ Media, schools, and universities, and natural community leaders (e.g., churches, community centers) should help people to: <ul style="list-style-type: none"> <li>○ Link to resources</li> <li>○ Share experiences and hope</li> <li>○ Memorialize and make meaning</li> <li>○ Accept that life and everything around them may have changed</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify, and concentrate on building strengths</li> <li>▪ Normalize responses</li> <li>▪ Indicate that most people recover spontaneously</li> <li>▪ Highlight already exhibited strengths and benefit-finding</li> <li>▪ Manage extreme avoidance behavior</li> <li>▪ Develop awareness to reduce self-defeating self-statements</li> <li>▪ Discourage risk taking behaviors</li> <li>▪ Encourage positive coping behaviors</li> <li>▪ Encourage appreciation and recognition for family “heroes”</li> <li>▪ Encourage short &amp; long term goal-setting</li> </ul>

## Content of Training

### I. Preparedness and Planning

This will be the most intense period of training to prepare various audiences for the emotional, behavioral, cognitive, and spiritual consequences of a pandemic event.

#### **Training Content – All Audiences:**

- Human behavior and reactions to public health emergencies and containment measures.
- Planning for surges in demand in high emotion circumstances.
- Risk communication principles and skills especially related to “tipping points” that might lead to social disruption or unrest.
- Psychological first aid skills (including trauma-informed assessments) with attention to grief and bereavement issues.
- Referral indicators, strategies, and contact information.
- Stress management and self-care.
- Fact sheets to disseminate regarding stress, grief, coping in public health emergency.

*Target Audience Content: Public Health, Other Health and Mental Health Care Workers (public and private sector) and Hotline Workers*

- Systemic interventions to promote safety, calm, confidence, connectedness and hope consistent with best practices.
- Importance of sharing psycho-education and resource materials.
- Strategies and best practices in pandemic.

*Target Audience Content: Emergency Responders, Coroners, Medical Examiners and Funeral Directors*

- Systemic and individualized interventions to promote safety, calm, confidence, connectedness and hope in the context of traumatic grief and loss.
- Need to accommodate religious and cultural preferences to extent possible and advance planning with community.

*Target Audience Content: General Public and Populations with Access and Functional Needs– including culturally diverse groups*

- Resilience.
- Familiarity with behaviors that promote safety in contagious disease.
- Preparedness and planning for social distancing and containment measures such as shelter-in-place, quarantine and school closures.

*Target Audience Content: Schools*

- Fact sheet resources for children and caregivers to educate regarding stress reactions, self-care, etc. consistent with guidance described in best practices.
- Mental health referral agreements.
- School preparedness flu planning guidance.
- Plans for continuity of education.



- Strategies for maintaining friendships while practicing social distancing.
- Encouraging healthy use of electronic networking with parental involvement.

*Target Audience Content: Faith-Based Leaders and Communities*

- Unique role of faith communities in mass fatality scenario.
- Identifying and working with at-risk populations.

*Target Audience Content: Civic/Service Organizations (volunteers, care-givers and natural helpers)*

- Volunteer role in assuring accurate and consistent information is communicated.
- Identifying and working with at-risk populations.

*Target Audience Content: Large Employers and Human Resource Professionals*

- Mental health referral and EAP agreements.
- Workplace preparedness.
- Human resource policies regarding sick leave, family leave, etc.

*Target Audience Content: Government Leaders, Public Officials and Public Information Officers*

- Systemic interventions to promote safety, calm, confidence, connectedness and hope consistent with best practices in previous section.

## II. Pandemic

Training content would depend on the seriousness and spread of the pandemic based on Missouri surveillance. The following content areas are suggestive of some issues that may need to be addressed within training for various audiences. Training may need to be provided during this period through webinars, telecasts, etc. to decrease and prevent exposure.

### **Training Content – All Audiences:**

- Public education that promotes safety, calm, self-efficiency, connectedness and social cohesion, and hope.
- Psychological first aid skills (including trauma-informed assessments) with attention to grief and bereavement issues and mass fatality scenarios.
- Paper and electronic resource brochures and fact sheets related to stress, grief, etc.
- Referral inventory of phone numbers (voice and fax) for additional mental health needs and referral form for ease of referral and follow-through.
- Accurate, up-to-date social media sites.
- Self-care and peer care training and fact sheets.

*Target Audience Content: Health Care Workers*

- Strategies to manage surge demand and mitigate panic and disruption for managing highly distressed individuals and minimizing further exposure to trauma.
- Psychological first aid assessments and skills checklists including guidelines for death notifications.

*Target Audience Content: Mental Health Workers – including public and private sector*

- Mental health intervention strategies and best practices in pandemic as described in previous section such as cognitive behavior therapy, exposure management and desensitization techniques, etc.

*Target Audience Content: Public Health*

- Risk communications tools, prepared scripts and public education materials to instruct the public from both physical and emotional perspectives on how to promote safety, calm, confidence, connectedness and hope.
- Dissemination of public education materials that integrate resilience and mental health strategies including website addresses.
- Activation of pre-planned EAP strategies including resource lines for public health workers facing increased demand.

*Target Audience Content: Emergency Responders, Human Service Organizations, Civic and Service Organizations, including volunteers, caregivers and natural helpers*

- Self-care fact sheets, checklists and buddy-forms for peer care.
- Activation of pre-planned EAP strategies including resource lines to handle increased demand.
- Rumor control hotline.

*Target Audience Content: Large Employers and Human Resource Professionals*

- Checklists for changes to workplace environment and policies.
- Rumor control hotline and consideration of positive, accurate use of social media.
- Activation of pre-planned EAP resource lines.

*Target Audience Content: Government Leaders, Public Officials and Public Information Officers*

- Risk communication checklists and toolkits.
- Prepared scripts and public education materials to promote safety, calm, confidence, connectedness and hope.
- Checklist of tipping points that indicate potential for social unrest or panic.

*Target Audience Content: Coroners, Medical Examiners and Funeral Directors*

- Mental health guidelines for death notifications.
- Activation of pre-planned EAP resources and information lines.

*Target Audience Content: Schools*

- Checklist of school continuity activities that incorporate strategies to promote safety, calm, confidence, connectedness and hope.
- Activation of pre-planned resource lines for handling increased stress of school personnel.

*Target Audience Content: Faith-Based Leaders and Communities*

- Checklists of faith-based activities, rituals and traditions that promote safety, calm, confidence, connectedness and hope.
- Rumor control hotline.

### III. Recovery Period

The following content areas have been identified for the pandemic recovery periods.

#### **Training Content – All Audiences:**

- Trauma informed mental health assessments including checklists of at-risk populations and characteristics.
- Suicide risk information and suicide prevention strategies with contact lists and resources.
- Paper and electronic resource brochures and fact sheets.
- Referral numbers (voice and fax) for specialized mental health needs and referral form.
- Resilience building checklists and recommendations for self-care, peer care and supervisors.

#### *Target Audience Content: Health Care Workers*

- Best practice guidelines for referral and treatment of chronic stress and mental health conditions associated with trauma (depression, anxiety, PTSD, etc.) as well as traumatic grief recovery.

#### *Target Audience Content: Mental Health Workers – including public and private sector*

- Consultation checklists to advise organizations regarding systemic level interventions to promote recovery and hope.
- Guidelines for referral and treatment of chronic stress and mental health conditions associated with trauma (depression, anxiety, PTSD, etc.).

#### *Target Audience Content: Public Health*

- Mental health indicators to monitor that are predictive of chronic public health needs.
- Research participation guidance and contact lists for public health workers and clientele.

#### *Target Audience Content: Emergency Responders Coroners, Medical Examiners and Funeral Directors*

- Continued EAP or other insurance program access giving special attention to at-risk responder groups (younger, other losses, etc.), substance use and relapse prevention, and family systems.
- Self-care fact sheets, checklists and buddy-forms for peer care.
- Activation of pre-planned EAP strategies resource lines.

#### *Target Audience Content: General Public*

- Public education that promotes connectedness and social cohesion, establishing new normal (including reconfigured families), addressing survivor guilt, “trigger events”, and hope.

#### *Target Audience Content: Human Service Agencies Active in Recovery, Civic and Service Organizations – including volunteers, caregivers and natural helpers*

- Paper and electronic resource brochures and fact sheets related to recovery including domestic violence and substance use.
- Referral numbers (voice and fax) for specialized mental health needs.

*Target Audience Content: Large Employers and Human Resource Professionals*

- Checklists for changes to workplace environment and policies.
- Activation of pre-planned EAP resource lines.

*Target Audience Content: Government Leaders, Public Officials and Public Information Officers*

- Risk communication checklists and toolkits.
- Prepared scripts and public education materials to instruct the public from both physical and emotional perspectives about promoting safety, calm, confidence, connectedness and hope.
- Checklist of tipping points that indicate potential for social unrest or panic.

*Target Audience Content: Schools*

- Checklist developed as part of the Mental Health Annex in the Missouri Emergency Response Information Plan for schools, for recognition activities and strategies to promote safety, calm, confidence, connectedness, hope and sensitivity for survivors and remembrance for students and staff who died.
- Activation of pre-planned EAP resource lines.

*Target Audience Content: Faith-Based Leaders and Communities*

- Checklists of faith-based activities, rituals and traditions that promote safety, calm, confidence, connectedness and hope.

## Current Status of Resources

### Plans:

*Department of Mental Health Emergency Operations Plan:* This plan addresses the outreach to communities after a disaster or terrorism event. This Pandemic Influenza Plan-Mental Health is an appendix to the Emergency Operations Plan (EOP).

### Training curriculums developed in coordination with the Missouri Department of Mental Health and St. Louis University Heartland Centers include

- Disasters and Mental Health: A Basic Approach for Health Care Workers.
- Disasters and Mental Health: A Basic Approach for Schools.

*(These curriculums include considerations for infectious disease.)*

### Training curriculums developed by the Missouri Department of Mental Health

- Disasters and Mental Health: A Basic Approach for Faith Communities.
- Psychological First Aid (PFA). Includes portions of the above curriculums plus the 8 principles of PFA. 6 hour curriculum plus a 1.5 hour introduction used at conferences. (Portions of this training are based on the manual *Second Edition of Psychological First Aid Field Operations Guide.*)

### At-Risk Population: Presentations developed

- Training on PFA for Federally Qualified Health Centers (FQHC) and long term assisted living (1.5 hr. presentation).
- Responding to Children with Special Considerations (1-hour presentation for Emergency responders).
- Children in Disasters: How Children Cope and How Responders Can Help (1-hour presentation).
- The Flu and You: An educational presentation for individuals with Developmental Disabilities and their support systems, by Kim Stock, DMH Division of Developmental Disabilities.

### Other Tools

#### Schools

- Mental Health Annex as part of Emergency Response and Information Plan (ERIP) includes planning for pandemic.
- Checklist Appendix 9: Pandemic Influenza School Crisis Plan Checklist, a part of the ERIP mental health annex.

#### Health Care

- DMH developed planning document: *Hospital Preparedness Plans, Recommended Mental Health Components Annotated Outline: Mental Health and Behavioral Concerns in Emergencies*. Shared with the Missouri Hospital Association for distribution.
- DMH also developed a presentation entitled *Behavioral Health Emergency Planning for Hospitals and Regions*, presented at the DHSS Annual Public Health Conference in 2007.
- *Mental Health issues in Palliative Pandemic Planning*, a PowerPoint presentation for the Palliative Care Sub-committee of the Alternative Standards Committee.

### Faith Communities

- A Checklist for Planning for the Emotional and Supportive needs of Your Faith Community during a Pandemic Influenza.
- Behavioral Health Emergency Plan Template for Healthcare Agencies, 2011.

### **Communication:**

- *Missouri Department of Mental Health Disaster Communications Guidebook; Preparedness and Public Education: Response and Recovery Planning for Public Leaders and Spokespersons with new Pandemic Flu Section* (revised December 2007). Provides emotional well-being messages by audience and event. Named promising practice by Center for Infectious Disease Research and Policy (CIDRAP).
- *Missouri Department of Mental Health Pandemic Communications Guidebook; Preparedness and Public Education: Response and Recovery Planning for Public Leaders and Spokespersons* (December 2007). A stand-alone guidebook with pre-event messages, event and recovery communications.

### **Workforce Materials:**

- The Disaster Mental Health courses offered to various audiences including health and mental health include a component on “Self-Care – Team-Care.”
- Training for providers is developed, entitled *Community Providers, Pandemic Flu Planning* and presented to various provider groups to address continuity planning.
- Competencies for disaster mental health workers are listed on the DMH website <http://dmh.mo.gov/disaster/plans.htm>
- Refer state workers to the State Employee Assistance Program <https://www.magellanassist.com/default.aspx>.
- *Behavioral Health Emergency Plan Template for Healthcare Agencies, 2011.*

### **Brochures and Tip Sheets**

Various brochures have been developed that address coping in a pandemic including:

- *Pandemic Flu, A Behavioral Health Guide.*
- *Coping with Grief and Loss (adapted).*

Other brochures: provide information about stress reactions and provide recommendations for coping:

- *Emotional First Aid for Children* (by developmental level).
- *Emotional First Aid for Adults.*
- *TIPS for First Responders* – when responding to persons with access and functional needs.
- Coping fact sheets for various audiences: children, adults, older adults, individuals with access and functional needs, first responders, etc.

# Pandemic Influenza Plan – Public Communications

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For more information contact the Office of Public Information at [MediaInfo@health.mo.gov](mailto:MediaInfo@health.mo.gov) or 573-751-6003

## PURPOSE

The Missouri Department of Health and Senior Services (DHSS) public information staff will coordinate and deliver public health and risk assessment information during an influenza pandemic. To achieve this, DHSS public information staff will work closely with the Missouri State Emergency Management Agency's (SEMA) public information staff, other state agency public information officers and with local public health agencies (LPHAs).

Overall objectives:

- To help protect the health and well-being of Missourians by providing information that is accurate, timely and pertinent.
- To ensure informed, prudent public action.
- To meet the needs of the news media.
- To coordinate with other agencies involved in responding to the pandemic and providing information to the public.

## EMERGENCY RESPONSIBILITIES

The Public Information Team includes:

- Chief, Office of Public Information (OPI)
- One Public Information Coordinator, OPI
- One video production specialist, OPI
- Health and Senior Services Manager-B1
- Office support staff in OPI

The lead DHSS public information officer (Lead PIO) will be designated by DHSS leadership and emergency response command staff based on PIO availability. The Lead PIO will work in coordination with other state and federal officials, and will:

1. Use the news media and various other communication systems (e.g., social media) to inform and instruct individuals, families, businesses and industries about health and medical factors involved in the influenza pandemic.
  - a. Fact sheets, key messages and other resources, which can be used in preparing pandemic-related information, will be maintained in the Missouri Department of Health and Senior Services' Emergency Response Center (ERC) information O drive.
  - b. The Lead PIO will ensure that DHSS uses its website to provide important health and safety information for targeted groups. Groups will include the general public, health care providers, first responders, school officials, child care providers, business leaders, nursing home staff and residents and at-risk populations. Information posted on the site will include news releases, fact sheets, advice on how to limit the spread of influenza and other pertinent health information.
  - c. The Lead PIO will coordinate with LPHAs and PIOs from other state and federal agencies to ensure that consistent messages are delivered.
  - d. All messages and other public information activities will be coordinated with the State Emergency Operations Center (SEOC) Joint Information Center (JIC), if and when it is activated, according to Incident Command System (ICS) protocol.

2. Ensure the accuracy, timeliness and appropriateness of all health and medical information before being released to the media.
3. Respond to and record requests for health or medical information from the SEOC JIC and/or other emergency response partners as appropriate.
4. Assist SEOC JIC as requested.
5. Update DHSS staff and LPHAs, including the LPHA PIOs, with messages released to the media.
6. Update the DHSS director or designee regularly and/or as requested on public information activities.

## **STANDARD OPERATING PROCEDURES**

1. Primary Public Information Responsibility:
  - a. The Public Information Office works with OPI chief or designated Lead PIO to make staffing decisions (including shifts and locations) for PIOs assigned to the DHSS ERC and to the SEOC JIC, based on staff availability.
2. Staff Assignments:
  - a. According to established DHSS emergency response plans and protocols, DHSS PIOs are trained to serve on emergency response teams in the DHSS ERC (in the Public Information Section) and/or at the SEOC JIC—some PIOs have been pre-assigned to either a DHSS ERC or SEOC JIC team and will report to their assigned location as directed and based on his/her availability.
  - b. The OPI chief may also deploy members of the public information staff to obtain, evaluate and coordinate available data and information at other locations including (but not limited to):
    - ❖ Strategic National Stockpile (SNS) distribution or dispensing sites.
    - ❖ Regional or district offices and/or the site of the bioterrorism event.
    - ❖ The need for clerical support will be evaluated and assignments made accordingly.
3. The PIO on duty in the ERC will offer support to LPHAs as needed. If possible, the state will provide a PIO on-site at a LPHA.
4. The OPI Chief will designate staff for the SEOC, as well as any other JIC that may be established during emergency response operations.
5. The PIO on duty in the ERC will participate in all briefings and daily staff updates.
6. During an influenza pandemic, it may be necessary for members of the Public Information Team to work from home. OPI staff are assigned laptops, which allows them to continue operations off-site.
7. Public Information Distribution (news releases, public health statements, fact sheets).
  - a. As necessary and appropriate, DHSS ERC public information staff will draft news releases and other public health information using information provided by program staff, verify the information provided and obtain all necessary approvals. Approval for all outgoing public information must be obtained from the DHSS director, the director's designee, the DHSS ERC Branch Director and the DHSS OPI chief.
  - b. Staff will ensure that messages provided to the public are consistent, coordinated and timely and shared with appropriate state and local partner agencies. If the SEOC JIC is activated, all public information will be sent to the JIC for final coordination, approval and release. The OPI chief will determine the distribution procedures that best fit the situation. The DHSS OPI maintains the following lists:
    - All media.



- Regional Media. In the rare case that a news release would be sent only to a certain region of the states, a list of regional media can be extracted from the All Media list.
- c. Completed news releases will be posted on the DHSS website with the assistance of the technology staff in the Office of Administration, Information Technology Services Division (ITSD). The Web group staff is available through a call-down list 24 hours a day, seven days a week.
- d. News releases will be distributed to the Governor’s Office, SEMA, LPHAs, partner agencies, appropriate DHSS staff, lawmakers and others, as applicable.

## MESSAGE COORDINATION FORUM

- Mental Health Key Messages. Hard copy available at Public Information workstation in ERC or on the Missouri Department of Mental Health’s website at: <https://dmh.mo.gov/media/pdf/pandemic-communications-guidebook>.
- LPHAs and stakeholders will be notified that the webpage is a resource for media inquiries.
- The DHSS Public Information Team will ensure that messages are kept up-to-date and will contact Pandemic Influenza stakeholders for updated messages.
- A webpage will be created with messages regarding emotional and mental health aspects of an influenza pandemic. A link to that page will be made available on the DHSS main influenza webpage.
  1. Public Information Activities Status.
    - a. According to current DHSS media relations policy, all incoming media calls will be referred to/through the OPI for Department response. If necessary, DHSS PIOs and additional support staff will be requested by the OPI chief or designee to assist with addressing media calls and requests. In the absence of the OPI chief, the designated Lead PIO will work closely with the DHSS Director’s Office, State Lead PIO and/or Governor’s Office to develop and approve appropriate media responses and public messages.
    - b. If the SEOC JIC is activated, all media calls will be referred to the JIC according to established protocols and in coordination with the OPI. The DHSS ERC Public Information Section will assist with media relations as requested by the SEMA JIC.
    - c. During an emergency, the public information staff or support staff will ensure that all e-mail messages received through the DHSS website are answered.
  2. DHSS ERC.
    - a. The DHSS ERC Public Information Team leader will coordinate, in consultation with the OPI chief and/or DHSS Lead PIO, schedules and manage continuity of Public Information Section activities.
    - b. Each ERC team member will keep record of activities during shifts worked, according to current ERC protocol and as directed by the ERC Branch Director.
    - c. All additions to the emergency webpages will be routed through the Lead PIO or designee for review following established procedures.
  3. News Conferences.
    - a. All media requests will be referred to the SEOC JIC and any contact with the media will be in close coordination with the JIC.
  4. Website.
    - a. News releases, fact sheets, health alerts and other pertinent health information will be posted on the DHSS web-site in a timely basis.
    - b. During an emergency, DHSS staff will be reassigned duties to respond to e-mail received through the DHSS website and to monitor residents’ concerns and questions.

- All uploads to the DHSS website during an emergency situation will be routed through the OPI and after hours through the DHSS ERC Public Information Section. When the ERC is activated, the LPHA Management workstation may be using a special LPHA emergency webpage. The Public Information Section will review any DHSS information for posting to this webpage and then forward to the website staff. This will ensure consistency with the department's webpage. The LPHA Management workstation will monitor the webpage and answer questions from the LPHAs. Only information that does not require immediate response will be posted to the LPHA emergency webpage.
5. Translations.
    - a. DHSS will use the Missouri statewide contract for translating messages and materials into other languages.
      - More information on the translation contract is available in the Emergency Response Communications Plan Chapter 9 or on the O Drive at O:\CERT\++++DSR Work Stations++++\DSR Public Info\EMERGENCY Public Information\DHSS\_Communications\_Plan\09. Translation.
    - b. The website will provide links to basic information in other languages, providing the information is from a credible source, such as CDC, the World Health Organization (WHO) and other states' health departments. The Public Information Team will be responsible for ensuring that the messages are consistent with policies adopted by the DHSS director and the Office of the Governor.
    - c. For phone calls, the ERC Duty Officer will transfer non-English speaking residents to LanguageLine. See the ERC Procedures Manual for details.
    - d. The top five languages spoken in Missouri: 1. Spanish; 2. Bosnian; 3. Korean; 4. Vietnamese; and 5 Somali. Information for specific language needs in metropolitan areas should be coordinated with appropriate LPHA PIOs.
    - e. General fact sheets on what to do before, during or after an emergency are available in Spanish, Bosnian, Vietnamese, Korean and Somali on the DHSS website <http://www.health.mo.gov/emergencies/readyin3/factsheets.php>.
    - f. The *Ready in 3 Family Safety Guide and Preparing for Pandemic Flu: A Community Guide* booklets are available in Spanish, Bosnian and Braille. The emergency threats brochure is printed in Spanish. <http://www.health.mo.gov/emergencies/panflu/pangen.php>.
    - g. A video aimed at motivating Missourians who use American Sign Language to prepare in advance for emergency situations is available in DVD and VHS format. <http://health.mo.gov/emergencies/readyin3/videos.php>.
  6. Emergency Alert System (EAS).
    - a. SEMA has a system in place to broadcast messages through the EAS. DHSS will work with SEMA Communications Section, 573-526-9201.
  7. Archived Health Alerts, Advisories, Updates, and Guidances are found at: <http://health.mo.gov/emergencies/ert/alertsadvisories/index.php>.

## Pandemic Influenza Resources

### Latest Information/Internet Resources

Title	Source	Address
Latest Information on the Pandemic Flu	Office of the Governor	<a href="https://governor.mo.gov/">https://governor.mo.gov/</a>
	Missouri Department of Health and Senior Services	<a href="http://www.health.mo.gov/">http://www.health.mo.gov/</a>
Pandemic Influenza	Centers for Disease Control and Prevention	<a href="https://www.cdc.gov/flu/pandemic-resources/">https://www.cdc.gov/flu/pandemic-resources/</a>
Influenza pandémica	Centers for Disease Control and Prevention	<a href="https://espanol.cdc.gov/enes/flu/pandemic-resources/index.htm">https://espanol.cdc.gov/enes/flu/pandemic-resources/index.htm</a>
Pandemic Influenza Information	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/pange n.php">http://health.mo.gov/emergencies/panflu/pange n.php</a>
	Centers for Disease Control and Prevention	<a href="https://www.cdc.gov/flu/pandemic-resources/basics/index.html">https://www.cdc.gov/flu/pandemic-resources/basics/index.html</a>
Pandemic Influenza	World Health Organization	<a href="http://www.who.int/csr/disease/influenza/en/index.html">http://www.who.int/csr/disease/influenza/en/index.html</a>
Pandemic Influenza Information for Medical Professionals	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/panflu .php">http://health.mo.gov/emergencies/panflu/panflu .php</a>
Pandemic Influenza Information for Planners	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/panflu .php">http://health.mo.gov/emergencies/panflu/panflu .php</a>
Pandemic Influenza Information for Business	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/panbu siness.php">http://health.mo.gov/emergencies/panflu/panbu siness.php</a>
State and Local Government Planning	Centers for Disease Control and Prevention	<a href="https://www.cdc.gov/flu/pandemic-resources/planning-preparedness/state-local-government-planning.html">https://www.cdc.gov/flu/pandemic-resources/planning-preparedness/state-local-government-planning.html</a>
School Planning	U.S. Department of Health and Human Services	<a href="http://www2.ed.gov/admins/lead/safety/emerg encyplan/pandemic/planning-guide/planning-guide.pdf">http://www2.ed.gov/admins/lead/safety/emerg encyplan/pandemic/planning-guide/planning-guide.pdf</a>

**Printed Materials & Tools**

<b>Title</b>	<b>Source</b>	<b>Address</b>
Preparing for Pandemic Flu: A Community Guide, English	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/pangen.php">http://health.mo.gov/emergencies/panflu/pangen.php</a> <a href="http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#english">http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#english</a>
Preparing for Pandemic Flu: A Community Guide, Spanish	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/pangen.php">http://health.mo.gov/emergencies/panflu/pangen.php</a> <a href="http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#spanish">http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#spanish</a>
Preparing for Pandemic Flu: A Community Guide, Bosnian	Missouri Department of Health and Senior Services	<a href="http://health.mo.gov/emergencies/panflu/pangen.php">http://health.mo.gov/emergencies/panflu/pangen.php</a> <a href="http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#bosnian">http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#bosnian</a>
Preparing for Pandemic Flu: A Community Guide, Braille	Missouri Department of Health and Senior Services	<a href="http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#braille">http://www.health.mo.gov/emergencies/readyin3/mainreadyform.php#braille</a>

### DHSS and Stakeholders Spokespersons for Pandemic Influenza

Agency	Spokesperson / Backup	Title/Area of Expertise	Phone	Fax	Email
Department of Health and Senior Services	Chief, Office of Public Information	Chief, Office of Public Information	573-751-6003	573-751-6041	<a href="mailto:MediaInfo@health.mo.gov">MediaInfo@health.mo.gov</a>
	Jeremy Wilson	Emergency Response Coordinator	573-526-3784	573-526-8389	<a href="mailto:Jeremy.Wilson@health.mo.gov">Jeremy.Wilson@health.mo.gov</a>
Department of Public Safety/State Emergency Management Agency	Mike O'Connell	Director of Communications	573-751-4819	573-751-5399	<a href="mailto:Mike.oconnell@dps.mo.gov">Mike.oconnell@dps.mo.gov</a>
Department of Agriculture	Sami Jo Freeman	Communications Director	573-751-2969	573-751-1784	<a href="mailto:samijo.freeman@mda.mo.gov">samijo.freeman@mda.mo.gov</a>
Missouri Department of Conservation (MDC)	Dr. Sherri Russell	MDC Veterinarian	573-291-7695	573-526-5582	<a href="mailto:Sherri.Russell@mdc.mo.gov">Sherri.Russell@mdc.mo.gov</a>
	Doreen Mengel	Waterfowl Ecologist	573-815-7901, ext. 2938	573-815-7902	<a href="mailto:Doreen.Mengel@mdc.mo.gov">Doreen.Mengel@mdc.mo.gov</a>
	Andrew Raedeke	Waterfowl Ecologist	573-815-7901, ext. 2939	573-815-7902	<a href="mailto:Andrew.Raedeke@mdc.mo.gov">Andrew.Raedeke@mdc.mo.gov</a>
Missouri Hospital Association	Dave Dillon	Vice President of Public and Media Relations	573-893-3700 x1311	573-893-2809	<a href="mailto:ddillon@mhanet.com">ddillon@mhanet.com</a>
	Mary Becker	Senior Vice President of Strategic	573-893-3700 x1303	573-893-2809	<a href="mailto:mbecker@mhanet.com">mbecker@mhanet.com</a>

Agency	Spokesperson / Backup	Title/Area of Expertise	Phone	Fax	Email
		Partnerships and Communications			
American Red Cross	Stacy Burks	State Relations Representative	417-832-9500 Ex. 3101		<a href="mailto:stacy.burks@redcross.org">stacy.burks@redcross.org</a>
	JoAnn Woody	External Relations Program Manager	918-852-0757		<a href="mailto:JoAnn.Woody@redcross.org">JoAnn.Woody@redcross.org</a>
	Kath Mayne	Disaster Program Manager	573-291-0776		<a href="mailto:Kath.Mayne@redcross.org">Kath.Mayne@redcross.org</a>
Department. of Elementary and Secondary Education	Nancy Bowles	Communications Coordinator	573-751-3469		<a href="mailto:Nancy.Bowles@dese.mo.gov">Nancy.Bowles@dese.mo.gov</a>
Missouri Chamber of Commerce	Karen Buschmann	VP of Communications	573-634-3511	573-634-8855	<a href="mailto:kbuschmann@mochamber.com">kbuschmann@mochamber.com</a>
	Dan Mehan	President and CEO	573-634-3511	573-634-8855	<a href="mailto:dmehan@mochamber.com">dmehan@mochamber.com</a>
Local Public Health Agencies	Contact your Local Public Health Agency				Directory of LPHAs can be found at <a href="http://health.mo.gov/living/lpha/lphas.php">http://health.mo.gov/living/lpha/lphas.php</a>

<b>Message Development Worksheet for Emergency Communication</b>
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**First, consider the following:**

Audience:	Purpose of Message:	Method of delivery:
<input type="checkbox"/> Relationship to event <input type="checkbox"/> Demographics (age, language, education, culture) <input type="checkbox"/> Level of outrage (based on risk principles)	<input type="checkbox"/> Give facts/update <input type="checkbox"/> Rally to action <input type="checkbox"/> Clarify event status <input type="checkbox"/> Address rumors <input type="checkbox"/> Satisfy media requests	<input type="checkbox"/> Print media release <input type="checkbox"/> Web release <input type="checkbox"/> Through spokesperson (TV or in-person appearance) <input type="checkbox"/> Radio <input type="checkbox"/> Other (e.g., recorded phone message)

**Six Basic Emergency Message Components:**

1. Expression of empathy: \_\_\_\_\_

2. Clarifying Facts/Call for Action:

Who \_\_\_\_\_

What \_\_\_\_\_

Where \_\_\_\_\_

When \_\_\_\_\_

Why \_\_\_\_\_

How \_\_\_\_\_

Add information on what residents should do or not do at this time \_\_\_\_\_

3. What we don't know: \_\_\_\_\_

4. Process to get answers: \_\_\_\_\_

5. Statement of commitment: \_\_\_\_\_

6. Referrals: \_\_\_\_\_

For more information: \_\_\_\_\_

Next scheduled update: \_\_\_\_\_

**Finally, check your message for the following:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Positive action steps</li> <li>• Honest/open tone</li> <li>• Applied risk communication principles</li> <li>• Test for clarity</li> <li>• Use simple words, short sentences</li> </ul> | <ul style="list-style-type: none"> <li>• Avoid jargon</li> <li>• Avoid judgmental phrases</li> <li>• Avoid humor</li> <li>• Avoid extreme speculation</li> </ul> |
|---|--|

Source: CDC–Crisis and Emergency Risk Communication, CDCynergy