

Pandemic Influenza Plan – Community Containment

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INTRODUCTION

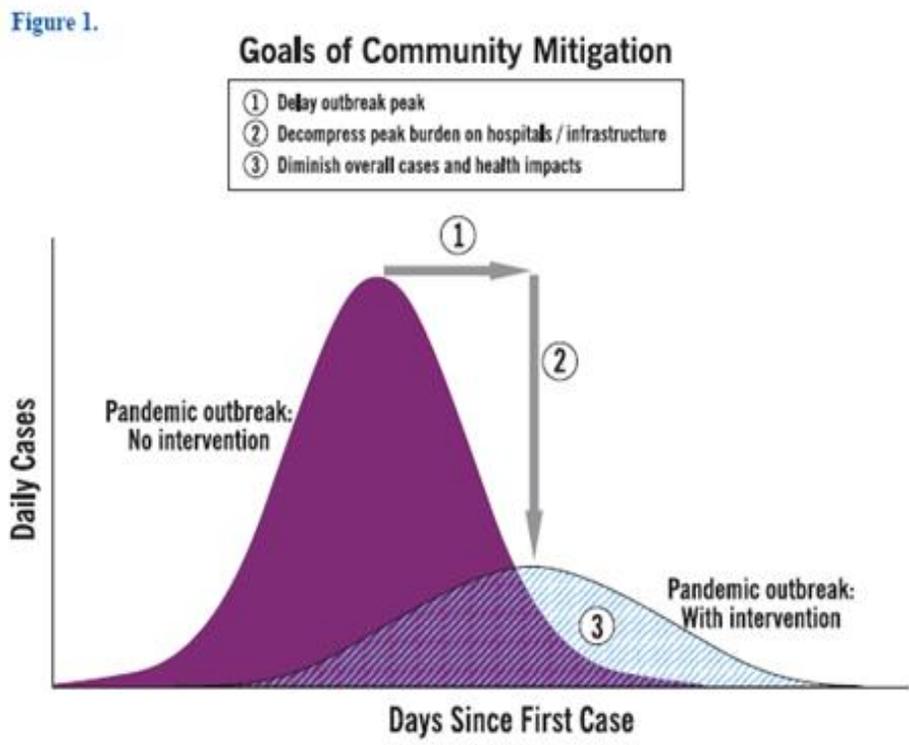
Early in an influenza pandemic, vaccine will not be immediately available for the prevention of infection. Most experts expect it to take a minimum of six to eight months, after a pandemic begins, to manufacture an adequate supply to provide nationwide coverage. In addition, antivirals such as Tamiflu® and Relenza® may become limited or antiviral resistance could increase as the pandemic progresses limiting their usefulness. For antivirals to be useful for prophylaxis, the medication must be taken throughout the period that influenza is present in the community. 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. Treatment will reduce suffering and death, but will only modestly affect community transmission.

For these reasons a menu of mitigation strategies known as non-pharmaceutical interventions (NPI) have been proposed to attempt to slow down the spread of the pandemic strain of influenza until such time that a vaccine becomes available (Figure 1.). The Missouri Department of Health and Senior Services (DHSS) recognizes the importance of these measures and will employ those shown to be effective to the fullest extent possible, in a consistent as possible manner, to meet the overall objectives of the department during a pandemic. The first objective is to reduce morbidity and mortality, the second is to prevent social disruption, and lastly, to minimize economic damages. Examples of NPIs that could be employed include voluntary isolation of cases, voluntary quarantine of household contacts, social distancing measures, cancellation of large public gatherings, school closures and infection control measures such as hand hygiene, cough etiquette and the appropriate use of personal protective equipment (PPE) such as face masks. In the past, various combinations of these measures have been used under epidemic and pandemic circumstances in an attempt to control the spread of influenza. Many mitigation strategies could have a serious impact on the ability of the health care system to deliver adequate care and could have potentially adverse consequences for the provision of essential services. Others could result in significant disruption of the social functioning of communities and result in possibly serious economic problems. The scientific evidence base for these measures is limited, however, the recommendations below are based on a thorough review of the facts that are available, common sense, the practicality of implementation and the ability for people to adhere to the recommendations.

In preparing these strategies, 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, local public health 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. Every effort is being made to reach out and partner with those affected by this endeavor.

Figure 1.



The evidence to support various practices recommended in this section have been assigned a category based on the available scientific evidence supporting or not supporting the practice.

- Category 1 – Sufficient scientific evidence exists to support the practice and it should definitely be implemented.

- Category 2 – Sufficient scientific evidence does not exist to categorically state the practice must be implemented but it should be considered.
- Category 3 – Scientific evidence does not exist to promote the practice but evidence does exist to recommend against the practice. Category 3 primarily means that a practice should not be considered.

These various measures are summarized in the attached Intervention Decision Matrix (Attachment A) and the Categories are reflected as follows: Category 1, I = Implement; Category 2, C = Consider; Category 3, NR = Not Recommended.

OBJECTIVE

- To provide non-pharmaceutical mitigation strategies to lessen or slow down the impact of pandemic on the society
- To preserve scarce healthcare resources

PLANNING ASSUMPTIONS

- A new pandemic will be due to a new subtype of influenza A.
- Emergence of new influenza A viruses is inevitable.
- Community mitigation response will depend on pandemic severity (Table 1.). Preparations should be geared toward at least three levels of pandemic severity: “mild” pandemic (1968 or 2009 H1N1 like), “moderate” pandemic (1957–58 like) and “severe” pandemic (1918 like).

Table 1. Pandemic Severity Index (assumed illness rate= 20-40%)

	Category 1	Category 2	Category 3	Category 4	Category 5
Case-Fatality Ratio	<0.1	0.1-<0.5	0.5-<1.0	1.0-<2.0	>=2.0
Projected number of US population death	<90,000	90,000-<450,000	450,000-<900,000	900,000-<1.8 Million	>= 1.8 Million
Projected number of Missouri population death (2009 estimate)	<1,800	1,800-<9,000	9,000-<18,000	18,000-<36,000	>=36,000
Comparable Scenario	Seasonal Influenza	1957 and 1968 Pandemic Flu	---	---	1918 Pandemic Flu

Gearing plans toward three levels of pandemic response will allow proper gauging of response and best match the appropriate levels of actions and activities to the current situation. In general, pandemic severity is defined not only by the genetic capabilities of the novel virus, but by the community it is interacting with. A well-prepared community with sufficient resources may manage a more virulent virus with minimal disruptive impact (that is - morbidity and mortality is suppressed and all critical services remain intact) while in a less prepared and resourced area morbidity may spike and services be overwhelmed. The goal of response is to employ the necessary measures to adequately depress the wave of morbidity and mortality to a level at or below the level of critical services capacity. Each community across the state exists in varying degrees of preparedness and resource strength, and must gauge and match their level of response accordingly. Additional planning guidance that outlines anticipated degrees of impact and response needed per level of pandemic severity can be found in “Assumptions Concerning Response to a Pandemic” in the Missouri Pandemic Influenza Response Plan.

- An effective response to any pandemic will require a coordinated community-wide effort from local, state and federal agencies, private businesses, individual citizens, elected officials and faith-based leaders.
- Risk groups for severe and fatal infections, in any pandemic, cannot be predicted with certainty.
- A pandemic could occur in any month, not only during the typical influenza season.
- Novel pandemic viruses normally have the same periods of infectivity as do seasonal influenza viruses, but each should be managed according to the best science.
- Pandemics historically have occurred in waves, with at least two waves likely. In an affected community, a pandemic wave has lasted about six to eight weeks with as little as 30 days between waves.
- Preparations should be made for outbreaks that will likely occur simultaneously across the state and nation, limiting the ability of any one jurisdiction to provide support and assistance to others.
- A new virus may be a re-emerging, previously known human virus subtype which has not recently been in circulation or a virus of animal origin, emerging either through stepwise ‘adaptation’ conferring greater affinity for humans or through a process of genetic ‘reassortment’ between the genes of swine, avian and human viruses or other animal species, or some combination thereof.
- From time to time, avian, swine or other animal influenza viruses will infect people directly exposed to infected avian species, swine or other animal species but may not necessarily evolve into pandemic viruses.
- Such a strain could first emerge anywhere, including Missouri.
- Whenever a new or novel influenza virus is isolated from an infected person, its potential to spread directly from person-to-person and cause outbreaks of illness needs to be assessed.
- False alarms are likely, but until it is known whether a new virus has developed which resulted in person-to-person transmission, its pandemic potential must remain under consideration and investigation.
- Vaccine for the novel influenza virus will likely not be available in Missouri before the virus reaches the state. Initial distribution of vaccine to Missouri will likely be limited and need to be prioritized to maximize effectiveness.

- Effective antivirals may be in limited supply and must be used per Centers for Disease Control and Prevention (CDC) recommendations to maximize effectiveness.
- Education, public health interventions, basic public health measures, and social controls must be relied upon initially to slow the spread of the disease within Missouri.
- Medical solutions (e.g., vaccine, antiviral medications, hospital capacity) to control an influenza pandemic may be limited, especially early in a pandemic.
- Education, public health interventions, basic public health measures and social controls must be relied upon initially to slow the spread of the disease within Missouri.
- Infection control (e.g., proper handwashing, and respiratory hygiene) strategies will be used to slow the disease, along with social distancing measures.
- Absenteeism will be the result of employees becoming ill, staying home to care for sick family members, children being sent home from school and from people refusing to go to work out of fear.
- People will be asked to voluntarily stay home if they are ill. However, many will not have adequate emergency food and medical supplies so they are unlikely to comply without adequate access to these items.
- Schools may be asked to close for substantial periods of time and children would be asked to stay home.
- School closures are likely to create unintended consequences that will need to be addressed prior to closures.

NON-PHARMACEUTICAL MITIGATION MEASURES

I. Individual Measures

A. Handwashing

Influenza viruses survive on the hands for less than five minutes, but regular handwashing is a common sense action that should be widely followed after coming into contact with ill persons or soiled surfaces. When hands are soiled it is important that soap and water be available for handwashing. Alcohol-based hand hygiene products do not work well in the presence of organic matter but offer an alternative for situations when hands are not visibly dirty.

B. Cough Etiquette

Covering one's mouth when coughing, preferably while using disposable tissues or coughing into the elbow, may be of some value in lowering the risk of transmission of influenza viruses and should become routine practice now, before a pandemic occurs.

C. Environmental Cleaning

Survival studies have documented that Influenza A and B can survive under the right conditions on hard, non-porous surfaces for approximately 24 to 48 hours and on cloth, paper, or tissue for 8 to 12 hours. However, low-level disinfectants are very effective in removing and killing these viruses. Ethyl or isopropyl alcohol, chlorine (100ppm; 1:500 dilution of 5.25 percent sodium hypochlorite), iodophors, phenolics quaternary

ammonium compounds and hydrogen peroxide are all effective disinfectants for killing influenza viruses. Cleaning with soap and water is a pre-requisite to disinfection, therefore, soiled surfaces should be cleaned with soap and water prior to disinfection or using a cleaner/disinfectant.

D. Personal Protective Equipment (PPE) (facemasks/respirators)

The preponderance of evidence points to the influenza virus being transmitted by contact and via large droplets. Adults with seasonal influenza can shed virus one day before symptoms appear and up to five days after onset of illness. Since pandemic virus most likely will be different from seasonal influenza viruses, the infectious period of people affected with a new pandemic virus may vary. Therefore, the selective use of masks (when close to an ill person) may not effectively limit transmission in the community and the emphasis should be focused on cough etiquette (see above) for persons with respiratory symptoms whenever they are in the presence of another person, including at home, school, work or other public places.

There is no strong scientific evidence available to support the use of respiratory protection in the community, at school or at work by healthy persons. In spite of this, it is acknowledged that fear will drive some members of the public to resort to wearing masks during a pandemic. Public health professionals must recognize that there is no evidence to support the practice but should not discourage it. In lieu of current science, the precise type of mask or respirator will be determined at the onset of a pandemic and guidance will be provided by CDC. The time spent in crowded settings should be as short as possible. Until such time as new data are available, the latest CDC Guidance based on the H1N1 pandemic experience (<http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm> (9-20-10) recommends that individuals who provide care for a sick person in which close contact is inevitable use a surgical facemask, if available. Additionally, providing information on the importance of distancing being a more appropriate strategy than masking, would also be helpful. Whenever possible, rather than relying on facemasks, close contact and crowded conditions should be avoided during an influenza pandemic.

Persons who are diagnosed with influenza or who have a febrile respiratory illness should remain at home until the fever is gone and the cough is resolving to avoid exposing other members of the public. If such symptomatic persons cannot stay home during the acute phase of their illness, it does make sense for them to wear a surgical mask when it is necessary to interact with others. In addition, masks are recommended for use by symptomatic, post-partum women while caring for and nursing their infants.

E. Recommendations

- Good handwashing, cough etiquette, and environmental cleaning are always recommended public health practices. These practices are currently promoted by DHSS and measures, such as public information campaigns to increase awareness, will be intensified during a pandemic. (Category 1).

- In general, respiratory protection is **not** recommended for general use by the public. (Category 2).
- Facemasks should be considered for use by individuals who enter crowded settings, both to protect their nose and mouth from other people’s coughs and to reduce the wearer’s likelihood of coughing on others. The time spent in crowded settings should be as short as possible. (Category 2).
- Current CDC guidance (Sept., 2010) recommends that a surgical face mask is all that is necessary to care for a person infected with influenza. N-95 Respirators are not felt to be necessary. (Category 2).
- Persons with signs and symptoms of respiratory infection should wear a surgical mask when close interaction with others is necessary. (Category 2).

II. Community-Based Measures

Statewide consistency regarding the use of quarantine and isolation, school closures and use of PPE in the event of an influenza pandemic is of paramount importance for maintaining social stability, protecting public health and minimizing economic impacts. The timing or “Triggers” for implementing various interventions is also important. The information below has been assembled to assist local communities in assuring that these issues are approached in a reasonable, consistent manner based on the best available evidence.

A. Triggers and Duration of Interventions

The timing of various community mitigation strategies will influence their effectiveness. Implementing these measures prior to a pandemic may result in economic and social hardship without public health benefit and may result in compliance fatigue. No one is really sure of the appropriate timing for initiation of these interventions. **However, in Missouri the primary activation trigger for initiating interventions will be the arrival and community transmission of pandemic virus.** DHSS will closely monitor the pandemic with all available surveillance tools to maintain situational awareness of community impacts of the pandemic. Based on this information, intelligence assessments will be made and the appropriate level and timing of community based interventions will be utilized and put into place following protocols as outlined in the “Concepts of Operations” in the Missouri Pandemic Influenza Response Plan. A general approach to implementing various individual strategies can be found in **Attachment A-Pandemic Influenza Selected Intervention Measures Decision Matrix** at the end of this document. The duration of implementation of non-pharmaceutical mitigation strategies will depend upon many factors such as the severity of the pandemic and the total duration of the pandemic wave in the community. There are no clear-cut indicators, therefore the duration will be determined based on factors such as the excess mortality, case fatality ratios or other surrogate markers. The Decision Matrix document mentioned above may be helpful for state and local communities in making this decision.

B. Quarantine

This is likely to have a limited impact in preventing the transmission of pandemic influenza due to the short incubation period of the virus, the ability of persons with asymptomatic disease to transmit virus and the possibility that early symptoms among

persons with a novel influenza strain may be non-specific, delaying recognition and implementation of containment. However, early implementation of quarantine when pandemic influenza is first detected in the United States and when the scope of the outbreak is focal and limited may slow geographic spread. Examples of specific instances where quarantine may be helpful:

- For the first suspected or confirmed cases of novel influenza in Missouri. For example, suspected or confirmed case(s) of novel influenza A in person(s) who have traveled to an affected country and have been exposed to sick poultry, swine or other animal carriers or a laboratory-confirmed or epidemiologically linked human case(s) of novel influenza.
- Suspected or confirmed cases of avian or swine influenza A or another novel strain of influenza in travelers on airplanes, trains or buses about to arrive in Missouri.
- Suspected or confirmed cases of avian or swine influenza of any type in persons with known exposure to sick poultry, birds or swine in Missouri.
- Clusters of novel influenza A in small, well defined settings, such as a military base.
- Cases of laboratory exposure to avian influenza A (H5N1), 2009 H1N1 novel influenza, or influenza viruses with the potential to cause a pandemic (e.g., influenza A H2N2).

Later in a pandemic when disease transmission is occurring in communities around the state, individual quarantine is much less likely to have an impact and likely would not be feasible to implement. There are no historical or scientific studies that support large-scale quarantine (*cordon sanitaire*) measures of groups of possibly infected persons for extended periods in order to slow the spread of influenza (for example, quarantining cities, regions, states etc.). The negative consequences of large-scale quarantine are so extreme that this mitigation strategy should be eliminated from serious consideration.

Quarantine Recommendations

- Early enforced quarantine of small numbers of people when the pandemic virus is first introduced in the state may be helpful and should be considered in examples cited above. (Category 2).
- Large-scale enforced quarantine (*cordon sanitaire*) measures late in a pandemic should not be considered. (Category 3).
- Voluntary self-quarantine of persons exposed to persons who are ill with pandemic influenza will be recommended based on the communicability and severity of the pandemic virus. (Category 1).

C. Isolation

The purpose of isolation is to reduce influenza transmission by separating infected persons from uninfected persons. Isolation of sick persons will be valuable during all intervals of pandemic influenza. It is assumed, that isolation of cases when the novel virus first emerges can slow the initial spread of the pandemic. During later pandemic intervals, isolation will reduce the risk of exposing uninfected persons.

Isolating symptomatic influenza patients either at home or in the hospital, is the most important measure that can be taken to reduce the transmission of influenza and slow the spread of illness within a community. Those who are sickest will likely be the ones to seek medical care. They are also considered the most contagious. Due to the large volume of ill persons in a pandemic, hospitals and other health care agencies are likely to be overwhelmed. Therefore, voluntary self-isolation and self-quarantine of exposed persons will play an enormous role in slowing the spread of the virus.

Voluntary self-isolation - simply put, a policy of asking those who are ill and do not need specialized medical treatment to “*stay home if you are ill*” will do more good than any other interventions in a pandemic.

There are a number of considerations that could deter people from voluntarily staying at home that must be dealt with before this strategy is implemented.

- Basic medical and food supplies would have to be available.
See <http://www.health.mo.gov/emergencies/readyin3/>.
- Because of economics it may be difficult to persuade those with no paid sick leave not to go to work.
See <http://www.health.mo.gov/emergencies/panflu/panbusiness.php>.

Early in a pandemic when there is limited transmission in a community, LPHAs may go into homes or other settings to screen persons for signs and symptoms of influenza and identify their contacts. The practicality of doing this screening will depend upon an LPHA’s staffing and resources and the severity of the pandemic virus. This practice, will therefore, vary in different locations.

The home is generally the preferred setting for isolation, as well as quarantine, but alternative sites may be necessary in certain situations. Persons who do not have a home suitable for this purpose (i.e. homeless), do not have a primary caregiver to care for them, or who require isolation away from home (e.g., during travel) will need to be housed in an alternative location. Special isolation facilities and staffing should be identified in advance and be available to operate. Because persons who have been exposed to pandemic influenza may be asked to voluntarily be quarantined for several days, and persons infected with influenza may require voluntary isolation for one week or more, it is important to ensure that the environment (home or facility) is conducive to meeting the individual’s ongoing physical, mental, and medical needs.

Isolation Recommendations

Ill persons should be asked to voluntarily stay at home during their illness, and especially for the period of communicability of the particular pandemic virus. The information on the period of communicability of the pandemic virus as evidenced by the on-going epidemiological research will be distributed to the public. (Category 1).

Note: Mechanisms to support the request for ill persons to stay home must be in place if this strategy is to be successful. Therefore, the development of systems to provide food, supplies and medicine is a priority and is currently being developed.

Large-scale enforced isolation practices late in a pandemic should not be employed. (Category 3)

D. Social Distancing Measures

Social distancing strategies are non-medical measures intended to reduce the spread of disease from person-to-person by discouraging or preventing people from coming in close contact with each other. These strategies could include: closing schools; closing non-essential agency functions; implementing emergency staffing plans to increase telecommuting; flex scheduling and other options; and closing public assemblies or after school activities. The actual social distancing measures that will be implemented during various stages of a pandemic will be commensurate with the actual severity of the pandemic and the societal impact.

Results of studies of nonpharmaceutical interventions indicate a need for efforts to increase compliance with home isolation and social distancing measures. For example, an implementation of nonpharmaceutical interventions, such as home isolation, social distancing, and infection control measures, were studied during an outbreak of pH1N1 virus infection at a large public university in April 2009. Only 6.4% of students and 8.6% faculty with acute respiratory infection reported staying home while ill. Nearly one-half (46%) of student respondents, including 44.7% of those with respiratory infection, attended social events.

III. Schools

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. Therefore, in a pandemic, long-term and widespread absenteeism may occur due to the lack of immunity. Until a vaccine becomes available, students, teachers and staff would be highly susceptible to a novel virus. 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. Probably the most controversial mitigation strategy related to schools is the concept of school closure during a pandemic. Currently, there is no consensus as to the effectiveness of this strategy. Models have suggested that if implemented early in a

pandemic, school closures may slow the spread. However, these models have serious flaws and have not considered the negative impacts of school closures. Historic data is only marginally instructive because there are significant differences in society, health and health care. Population density (nationally, locally, in schools and even in family homes) is very different. The speed of travel has increased dramatically and the ability of adults and children to move about and co-mingle with others changes interaction dynamics from previous pandemics. In addition, many historical accounts of the effectiveness of school closures on limiting the spread of infection in previous pandemics have been mixed. An investigation of pH1N1 in elementary schools found that pH1N1 outbreaks at schools can have substantial attack rates; however, grades and classrooms are affected variably, and that additional study is warranted to determine the effectiveness of school closure during outbreaks.

The concept of closing schools to limit the transmission of pandemic influenza has profound implications for the education of students and for the economy. As was seen in the spring of 2009, most school closures due to the H1N1 pandemic had apparently little appreciable impact on disease spread. They were not taken seriously by most people (i.e. individuals continued to engage in communal activities and promoted disease spread by going to malls, parks, amusement parks, etc.) and promoted public anxiety. A New York City survey of households affected by the 2009 pandemic influenza H1N1 - related school closures showed that, during closure, 30% of students visited at least one locale outside their homes. Investigation of pH1N1 outbreaks in U.S schools found that more participants reported adherence to hygiene measures, but fewer reported adherence to isolation measures.

While it may be necessary to eventually close schools, the goal of every 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 (see below). As stated above, in a pandemic it is essential that communities across the state be consistent in how school closings are handled and closing decisions should be based on the best science available and in collaboration with all stakeholders (students, parents, teachers, superintendents, state and local public health authorities, etc.). The following policies have been developed by the Homeland Security's Safe Schools Subcommittee to assist in this endeavor.

A. Overview of the Following 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. Currently a subcommittee is in the process of developing model food acquisition and distribution structures for individual communities to use when developing plans for their specific community needs in a pandemic.

The following information is provided to assist Missouri school districts in planning for an influenza pandemic.

B. Pandemic Influenza School Closure Policies

Goal: To keep schools open and safe whenever possible.

1. 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.

In a pandemic, short-term school closures (one to two weeks) will occur as a result of absenteeism and the ability to function as a school, much like what occurs during normal influenza season. The practicality of closing schools for longer periods of time (up to 12 weeks at a time according to CDC's "Interim Pre-pandemic Planning Guidance" of February 2007) is questionable and carries serious adverse consequences. For example, for working parents, school serves as a form of day care and, in some areas, a source of meals for children from lower income families. A portion of the state's workforce would be unable to go to work as long as children were out of school. Heightened absentee rates could cripple essential services (health care, first responders, utility companies, businesses, etc.). Teachers might not be paid and a great number of hourly workers (mall and fast food employees, school janitorial, security, kitchen staff, bus drivers, etc.) would face particular hardship. Prior to considering whether to close, it is important that every school district be prepared in advance to deal with these adverse consequences. Guidance based upon the above discussion will be provided by CDC based on the severity of the pandemic.

2. 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, 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.

3. 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.

C. 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.

- <http://www.flu.gov/professional/school/schoolchecklist.html>
- <http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/planning-guide.pdf>
- <http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/planning-guide/basic.pdf>

D. 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.

- <http://www.flu.gov/professional/school/preschool.html>
- <http://www.hhs.gov/pandemicflu/plan/sup4.html#s4-V>
- <http://www.flu.gov/professional/school/schoolchecklist.html>
- <http://health.mo.gov/emergencies/readyn3/schools.php>

E. 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. For example, in St Louis an automated voice mail system delivers a voice message to the students, families and staff phone numbers on file. 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).

F. 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:

- **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.

- **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. 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.

G. 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.

H. School Maintenance

The superintendent or designee will develop a cleaning/disinfecting checklist according to guidance from DHSS and the United States 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.

I. 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 only when it is impractical to provide soap and hot water.

- http://www.cdc.gov/germstopper/materials/home_work_school.pdf
- <http://www.flu.gov/professional/school/preschool.html>

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.

J. 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.

K. 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.

L. 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.

M. 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.

N. Department of Elementary and Secondary Education (DESE) and Post Secondary School (PSS) Coordination

In a pandemic, the person(s) 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.

IV. 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.

V. 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>.

VI. 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.

VII. 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 Surveillance, Investigation and Data/Information Sharing 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. Attachment B is a sample checklist to assist LPHAs in evaluating a residence to ensure the home environment meets the individual's ongoing physical, mental and medical needs.

VIII. Public Gathering Restrictions

The effectiveness of canceling public gatherings has not been established. However, it seems prudent that consideration be given to closing any planned public gathering during a pandemic as a method of limiting person-to-person contact. Decisions as to when to cancel public gatherings and under what circumstances will be made by LPHAs consistent with direction from DHSS.

If a public gathering is necessary, the following guidelines are appropriate:

- The facility where the gathering is held should be cleaned thoroughly utilizing normal cleaning products. Use clean water and detergent to scrub and sanitize, paying special attention to frequently touched and horizontal surfaces.
- Promote hand hygiene and cough etiquette.
- Space individuals at least three feet apart during large gatherings. Increasing the number of gatherings and limiting the number of attendees is one way of accomplishing this. Use audio/visual technology to broadcast the presentations to other rooms or buildings, allowing the groups to be split into smaller numbers.
- Encourage sick people to stay home.

Public Gathering Recommendations

- Canceling public gatherings during a pandemic may be recommended when public health authorities feel that such gatherings would lessen the spread of pandemic influenza. Cancellations will generally be directed by LPHAs consistent with directions from DHSS. (Category 2).
- If public gatherings are essential during a pandemic, the above guidelines should be followed. (Category 2).

IX. 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 or in this Community Containment annex.

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:

A. 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.

B. Cleaning/Sanitizing Methods and Frequency

One of the properties that make the influenza virus able to pass easily from person to person is its ability to survive on hard, non-porous surfaces for approximately 24 to 48 hours and on cloth, paper or tissue for 8 to 12 hours. It is then potentially transferred from the surface to people's hands, which then carry the virus to the nose, mouth or eyes where it can then cause infection. Besides handwashing, thorough cleaning of contaminated surfaces is one of the most effective methods of reducing spread.

IMPORTANT- special techniques and products are not necessary. The influenza virus is very susceptible to most good detergents. Therefore, the most important issue is to make sure that the cleaning gets done. The thoroughness and frequency of cleaning during a pandemic will greatly reduce the risk of infection from these sources.

- Technique:
 1. Put on rubber gloves.
 2. Thoroughly clean the surfaces with warm water and detergent.
 3. Rinse.
 4. Let air dry.
- Frequency:

The surfaces which come into contact with passengers such as the benches, seats, arm rests and hand rails should be cleaned whenever visibly soiled and at least before or after each shift.

More information for public transportation business owners can be obtained through the LPHA or on the DHSS web site at <http://health.mo.gov/emergencies/panflu/panbusiness.php>.

X. 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.

- **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 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.
- **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.
- **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[®]) and zanamivir (Relenza[®]). 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.

XI. International Travel

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

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Pandemic Influenza Selected Intervention Measures Decision Matrix

		Interventions																	
		Quarantine/Isolation	Closures				Protection				Vaccine								
		Enforced Quarantine	Enforced Isolation	Voluntary Quarantine	Voluntary Isolation	School Closure (Affected)	School Closure (Preemptive)	Public Assembly Prohibition	Border Closures/ Movement Restrictions	Business Closures	Respiratory Protection (mask use)	Respiratory Protection (mask use) Healthcare	Respiratory Protection (mask use) Public	Antiviral (Treatment)	Antiviral (Prophylaxis)	Vaccination			
Situation - Novel Influenza/Avian Influenza	Case/Outbreak AI, Travel into Missouri, Exposure From Animal Out of State	NR	C	I	C	C	NR	NR	NR	NR	NR	C	I	I	NR	I	I	NR	
	Case/Outbreak AI, Exposure From Animal in Missouri	I	I	I	C	C	NR	NR	NR	NR	NR	I	I	I	NR	I	I	NR	
	Small Cluster Pandemic Strain Novel Virus Out of State	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	C	I	NR	NR	NR	NR	NR	
	Pandemic Virus Arrives in Missouri by Mass Transit (bus, plane, train)	C	I	I	C	C	NR	NR	NR	NR	NR	C	I	I	NR	I	I	NR	
	First Missouri Cases Community Setting	C	C	C	I	I	C	C	C	C	C	NR	C	I	I	O	I	C	
	First Missouri Cases Controlled Setting (i.e., military base)	I	I	I	C	C	C	C	C	C	C	NR	C	I	I	O	I	C	
	Widespread Localized Outbreaks In-State	NR	C	C	I	I	C	C	C	C	NR	NR	I	I	O	I	NR		
	Regional In-State Outbreaks <15% morbidity <1% mortality	NR	NR	NR	I	I	C	C	C	C	C	NR	NR	I	I	O	I	NR	
	Regional In-State Outbreaks >25% morbidity >2% mortality	NR	NR	NR	I	I	I	I	C	I	C	NR	I	I	O	I	NR		
	Regional In-State Outbreaks Targeting School Age Children	NR	NR	NR	I	I	C	I	I	C	NR	NR	I	I	O	I	C		
	Statewide Outbreaks Targeting Healthy Working Age Adults >25% morbidity >2% mortality	NR	NR	NR	I	I	I	C	C	C	C	NR	I	I	O	I	NR		
	Statewide Outbreaks <2% Mortality Targeting Typical High Risk Groups	NR	NR	NR	I	I	NR	NR	NR	C	NR	NR	I	I	O	I	C		
	Statewide Outbreaks >30% Morbidity >5% Mortality	NR	NR	NR	I	I	I	I	I	I	I	NR	I	I	O	I	C		

NR = Not Recommended
I = Implement
C = Consider
O = Optional

December 10, 2009

HOME ISOLATION/QUARANTINE CONSIDERATIONS (Checklist)

This checklist can be used to evaluate the residence of those who are ill/exposed to determine if they have adequate supplies and services to assist them while home bound.

	Basic utilities (water, electricity, garbage collection and heating or air-conditioning as appropriate)
	Basic supplies (clothing, food, hand hygiene supplies, laundry services)
	Mechanism for addressing special needs (filling prescriptions)
	Mechanism for communications, including telephone (for monitoring by health staff, reporting of symptoms, gaining access to support services and communicating with family)
	Accessibility to health care workers or ambulance services
	Access to supplies such as thermometers, fever logs, phone numbers for accessing services and reporting symptoms and emergency phone numbers
	Access to mental health and other psychological support services

PERSONS WHO ARE ILL WITH PANDEMIC INFLUENZA SHOULD VOLUNTARILY STAY HOME WHILE ILL TO PROTECT OTHERS FROM THE INFECTION.

IN ADDITION, FAMILY MEMBERS AND OTHERS WHO HAVE BEEN EXPOSED TO PERSONS WITH KNOWN PANDEMIC INFLUENZA SHOULD ALSO STAY HOME TO PROTECT OTHERS.

Local Public Health Agency phone number _____

Local Hospital phone number _____

Local Ambulance phone number _____

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

