decisions should be made at the local level

need to be flexible

some disagreement w/ MO re: data in the decision matrix

#s in matrix are regional or state, not school-based

at the community level

the trigger points in the text (p. 9) are what MO will use, not really the decision matrix

sending sick kids home, keeping healthy ones at school = best course
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Antiviral Storage and Distribution

Community Containment

Health Care Systems Readiness

Laboratory Preparedness

Mental Health

Mortuary Affairs

Public Communications

Special Health Care Needs

Surveillance Investigation and Data/Information Sharing

Vaccine Storage and Distribution

* * * * * * * * * * * * * Avian Influenza Plan * * * * * * * * * * * * * * *

For more information on Missouri’s Avian Influenza Plan, visit
http://www.dhss.mo.gov/PandemicInfluenza/subcommittees/zoonotic/
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 are likely to be in short supply and their usefulness in preventing people from becoming infected is limited. 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. 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 such as 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 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, public health agencies, mental health, home health, hospitals, long-term care, media (including television, radio, newprint and magazines), laboratorians, public representatives, legal authorities, legislators, and others. In developing the school policies, the Department of Homeland Security’s School Safety Subcommittee, which contains representatives from 26 school-focused organizations, participated and approved the policies. These groups included the
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 website at www.dhss.mo.gov/pandemicinfluenza/. 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.

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.

PLANNING ASSUMPTIONS

- Preparations should be geared toward a 1918 level pandemic. In Missouri, this would extrapolate to (without effective interventions) approximately 1.8 million ill; 900,000 seeking outpatient care; 198,000 hospitalizations; and 38,610 deaths. (Source: Centers for Disease Control and Prevention [CDC])

- An influenza pandemic of this magnitude will affect all segments of society, and could overwhelm health care and mortuary systems, severely disrupt commerce and economic activity, breakdown normal societal patterns, and cause psychosocial trauma.

- An effective response to such a pandemic will require a coordinated community-wide effort from local, state, and federal agencies, private businesses, individual citizens, elected officials, education and religious leaders.

- The clinical disease attack rate will be 30 percent in the overall population. Illness rates will be highest among school-aged children (about 40 percent) and decline with age.
Among working adults, an average of 20 percent will become ill during a community outbreak.

- 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.
- Employee absenteeism could reach as high as 30-40 percent.
- 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

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.

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.

Environmental Cleaning
Survival studies have documented that Influenza A and B can survive under the right conditions on hard, non-porous surfaces for approximately 24-48 hours and on cloth, paper, or tissue for 8-12 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.

**Personal Protective Equipment (PPE)–masks/respirators**
The preponderance of evidence points to the influenza virus being transmitted by contact and via large droplets. Adults can shed influenza virus one day before symptoms appear and up to five days after onset of illness. 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 scientific evidence available to support the use of respiratory protection in the community, school or 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 the May 2007 Interim Guidance from the CDC (www.pandemicflu.gov/plan/community/maskguidancecommunity.html) it states that 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. Until such time as new data are available, CDC also recommends that selected individuals who provide care for a sick person in which close contact is inevitable consider using an N-95 respirator, 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 and respirators, 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. *(An N-95 respirator would be inappropriate for this purpose and would not provide any additional protection.)* In addition, masks are recommended for use by symptomatic, post-partum women while caring for and nursing their infants.

**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)

- Until such time as new data are available, CDC also recommends that selected individuals who provide care for a sick person in which close contact is inevitable consider using an N-95 respirator, if available. (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 transmission of pandemic virus. This trigger is defined as “a laboratory-confirmed cluster of infection with a novel influenza virus and evidence of community transmission (i.e., epidemiologically linked cases from more than one household).” Prior to this trigger, public health officials will initiate “Alerts” and “Standby” triggers based on the current WHO Phase, United States Stage, and severity of the disease in the United States. Determining the likely time frame for this progression is difficult and would involve knowing 1) the speed at which the pandemic is progressing and 2) the segments of the population most likely to have severe disease. Because pandemic influenza is expected to move rapidly throughout the country it is likely that only a short time period will occur from the time of the Alert to the actual activation of the non-pharmaceutical mitigation strategies. Currently the state will use the CDC document published in February 2007, Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States, to assist in guiding decision making. Federal guidance during the phasing of the pandemic will assist as well. The complexity of the issue however may make modifications necessary based on state and local resources. Communities and local public health agencies (LPHAs) will be kept abreast of the status of the novel agent in the United States and Missouri utilizing the communication structures outlined in the DHSS All-Hazards Communication Plan, Annex K.1.6 Public Information. 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 triggers, therefore the duration will be determined based on factors such
as the excess mortality, case fatality ratios or other surrogate markers. The CDC document mentioned above will assist the 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 avian influenza A (H5N1) in person(s) who have traveled to an H5N1 affected country and have been exposed to sick poultry (either through handling or eating poultry products) or a laboratory-confirmed or epidemiologically linked human case(s) of H5N1 influenza;
- Suspected or confirmed cases of avian influenza A (H5N1) or another novel strain of influenza in travelers on airplanes, trains, or buses about to arrive in Missouri;
- Suspected or confirmed cases of avian influenza of any type in persons with known exposure to sick poultry or birds in Missouri;
- Clusters of avian influenza A (H5N1) or another novel strain of influenza in small, well defined settings, such as a military base; and
- Cases of laboratory exposure to avian influenza A (H5N1) 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. The negative consequences of large-scale quarantine are so extreme that this mitigation strategy should be eliminated from serious consideration.

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 is recommended. (Category 1)
C. Isolation

Isolating symptomatic influenza patients either at home or in the hospital, is probably 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. (*Hospital isolation is also covered in the Health Care Annex.*)

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 [www.dhss.mo.gov/Ready_in_3/PanFluCommunityGuide.pdf](http://www.dhss.mo.gov/Ready_in_3/PanFluCommunityGuide.pdf)
- Because of economics it may be difficult to persuade those with no paid sick leave not to go to work. See [www.dhss.mo.gov/pandemicinfluenza/businesses](http://www.dhss.mo.gov/pandemicinfluenza/businesses).

Screening of ill individuals and contacts in the home – 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 identifying their contacts. The practicality of doing this screening will depend upon an LPHA’s staffing and resources. This practice will therefore vary in different localities.

**Recommendations**

- Ill persons should be asked to voluntarily stay at home during their illness (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 phases of a pandemic will be commensurate with the actual severity of the pandemic and the societal impact.
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. The concept of closing schools to limit the transmission of pandemic influenza has profound implications for the education of students and for the economy.

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 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.dhss.mo.gov/PandemicInfluenza/PanFluCommToolkit.html.

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 committee 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 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 ahead of time to deal with these adverse consequences.

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. (Category 2)
   - School closings for student or teacher absenteeism should occur as necessary and the LPHA and school authorities will direct the closings. (Category 2)
• As stated in the information above, the effectiveness of closing schools to slow a pandemic is in question and will depend upon specific circumstances. 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 health authorities in accordance with 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.pandemicflu.gov/plan/school/schoolchecklist.html

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.pandemicflu.gov/plan/school/preschool.html
• http://www.hhs.gov/pandemicflu/plan/sup4.html#s4-V
• http://www.pandemicflu.gov/plan/school/schoolchecklist.html
• http://www.dhss.mo.gov/ChildCare/ControlOfCommunicableDiseases.pdf

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 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 and 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 website, 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:

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.

   Post Secondary Schools 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 individuals 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 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 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 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 (DHHS) 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.


The superintendent will investigate whether the school district can continue to provide meals to students on free and reduced lunch 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 post secondary school
facilities during an emergency is also controlled locally.

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

In a pandemic the person(s) responsible for coordinating the pandemic flu response and
the person the Governor would contact for:

DESE – Commissioner of Education and/or the Deputy Commissioner. (Currently 5/08)
Bryan Howard serves as the DESE representative to the state’s pandemic flu coordinating
team.

PSS – representative that serves on the state level pandemic planning team is the Director
of Administration and/or the Office Service Assistant.

IV. 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 for businesses visit
http://www.dhss.mo.gov/PandemicInfluenza/Businesses.html.

V. 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
the DHSS has developed a website (www.dhss.mo.gov/PandemicInfluenza/) where
information and educational tools regarding all aspects of pandemic influenza can be found.
In addition, educational booklets, DVDs, posters, signs and Power-point 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 hand-washing 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 to evaluate the residence to ensure the home environment meets the individual’s ongoing physical, mental and medical needs.

VI. 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.

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)

VII. 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 found on the DHSS Pandemic Influenza web page in the Community Containment annex (www.dhss.mo.gov/PandemicPlan/CommunityContainment.pdf).

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 other 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://www.dhss.mo.gov/PandemicInfluenza/PanFluCommToolkit.html. 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 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 24-48 hours and on cloth, paper, or tissue for 8-12 hours. It is then potentially transferred from the surface to people’s hands, which then carry the bug 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, 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://www.dhss.mo.gov/PandemicInfluenza/Businesses.html](http://www.dhss.mo.gov/PandemicInfluenza/Businesses.html).

VIII 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 for at least 7 days after your symptoms first appeared and when your fever has been gone for 48 hours without taking fever-reducing medicines such as acetaminophen (Tylenol), and ibuprofen (Motrin, Advil). Studies show you are most contagious and likely to spread influenza virus to others for 7 to 10 days after your first symptoms appeared and for up to 48 hours after your fever has ended.

- **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). While no one should return to work or school until their fever has been gone for 48 hours, antiviral drugs may shorten the period when you are contagious (capable of transmitting influenza virus), allowing you to return earlier.

IX. International Travel

The Missouri Department of Health and Senior Services will effectively develop and implement travel recommendations based on assessment of risks to travelers and/or CDC international travel guidelines.

REFERENCES

Non-Pharmaceutical Mitigation Strategies

   http://www.nap.edu/catalog/11800.html


Quarantine

3. Ferguson NM et al. Strategies for containing an emerging influenza pandemic in Southeast Asia, Nature advance online publication; published online 3 August 2006


6. Journal of Emerging Infectious Diseases, Jan., 2006 Vol.12 No.1

7. Medscape Pulmonary Medicine 2006;10:1@2006 Medscape Posted 2/23/06. Dr. Barwick Eidx

8. Tomianovic D. CDC COCA Conference Feb 2006


10. WHO Writing Group. EID Vol12, No1, Jan 2006 Non-Pharmaceutical Public Health Interventions

Respiratory Protection

11. American Federation of state, County and Municipal Employees, AFL-CIO, Dec. 21, 2005 letter for Elaine Chao at DOL.


16. WHO Vol 12, No1, Jan. 2006

School Closures
23. Institute of Biosecurity, St Louis School of Public Health
25. Markel H et al. (272 page report) Univ. of Michigan “A Historical Assessment of Non-Pharmaceutical Disease Containment Strategies Employed by Selected U.S. Communities During the Second Wave of the 1918-1920 Influenza Pandemic”
27. NACCHO/IDSA report Oct.26, 2006 to IOM
33. Household Responses to School Closure Resulting from Outbreak of Influenza B, North Carolina http://www.cdc.gov/eid/content/14/7/pdfs/08-0096.pdf
34. Public Response to Community Mitigation Measures for Pandemic Influenza http://www.cdc.gov/eid/content/14/5/778.htm
### Attachment A

#### Pandemic Influenza

**Selected Intervention Measures**

**Decision Matrix**

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Quarantine/Isolation</th>
<th>Closures</th>
<th>Protection</th>
<th>Vaccine</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Interpandemic Period (Phases 1, 2)</td>
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<td>Pandemic Alert Period (Phase 3)</td>
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<td>Case/Outbreak AI, Travel into Missouri</td>
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<td>Exposure From Animal Out of State</td>
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<td>Case/Outbreak AI, Exposure From Animal Missouri</td>
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<td>Pandemic Alert Period (Phase 4)</td>
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<tr>
<td>Small Cluster Pandemic Strain Novel Virus Out of State</td>
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<td>Pandemic Virus Arises in Missouri by Mass Transit (bus, plane, train)</td>
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<td>Pandemic Alert Period (Phase 5)</td>
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<td>First Missouri Cases Community Setting</td>
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<td>First Missouri Cases Controlled Setting (i.e., military base)</td>
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<td>Widespread Localized Outbreaks In-State</td>
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<tr>
<td>Pandemic (Phase 6)</td>
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<tr>
<td>Regional In-State Outbreaks &lt; 15% morbidity &lt; 1% mortality</td>
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<tr>
<td>Regional In-State Outbreaks &gt;25% morbidity &gt;2% mortality</td>
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<tr>
<td>Regional In-State Outbreaks Targeting School Age Children</td>
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<td>Statewide Pandemic (Phase 6)</td>
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<tr>
<td>Statewide Outbreaks Targeting Healthy Working Age Adults &gt;25% morbidity &gt;2% mortality</td>
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<tr>
<td>Statewide Outbreaks &lt;2% Mortality Targeting Typical High Risk Groups</td>
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<td>Statewide Outbreaks &gt;30% Morbidity &gt;5% Mortality</td>
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NR = Not Recommended  
I = Implement  
C = Consider  
O = Optional

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**Use When Available**

**January 26, 2007**

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**June 2008**

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**Missouri Department of Health and Senior Services**
Attachment B

HOME ISOLATION/QUARANTINE CONSIDERATIONS
(Checklist)

| 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 (e.g., 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 healthcare workers or ambulance services |
| Access to supplies such as thermometers, fever logs, phone numbers for reporting symptoms or accessing services, and emergency 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.

The above 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.

Local Health Department phone number ______________

Local Hospital phone number ______________

Local Ambulance phone number ______________