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# Indiana State Department of Health

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**TO: Pandemic Influenza Planning Partners**

**FROM: Judy Monroe, MD**  
**State Health Commissioner**

**SUBJECT: School Closure and Slowing the Spread of Pandemic Influenza in the Community**

The Mission of the Public Health Surveillance and Preparedness Commission is to respond to public health threats and prevent avoidable disease, death and disability.

### Background

In the event of the outbreak of pandemic influenza, it will take 6-8 months to develop vaccine and vaccine will likely continue to be in short supply for a year or more. Likewise, antiviral medication is also expected to be in short supply. Therefore, the best hope for early mitigation of the pandemic lies in the realm of non-pharmacological interventions. These interventions include isolation of sick individuals, quarantine of close contacts of those who are sick, and various forms of social distancing, such as school closing and discouragement of large public gatherings. It is understood that these methods can not prevent the pandemic but they can help prevent avoidable disease, disability, and death by slowing the spread of influenza in the community. By doing so, it will:

- Buy time for the production and distribution of vaccine and/or antiviral medications;
- Extend, or stretch, the epidemic wave to lower the peak incidence of absenteeism, thus reducing the degree of social and economic disruption and disruption of essential services. For example, with lower absenteeism among health care workers and fewer people seeking care on any given day, the healthcare system would be better able to provide adequate care to those who need it.

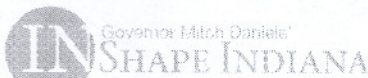
### Importance of School Closure to the Community

Schools are already known to be a hotbed of influenza transmission within communities. Schools bring a large number of children together. The disease is easily spread among the children and brought home to other household members. One study shows that 65% of those infected with influenza catch it from a child or teenager. Simulation models of influenza transmission indicate that while other methods of social distancing (e.g., discouraging large public gatherings) also have some effect; none are as effective as closing schools.

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The Indiana State Department of Health supports Indiana's economic prosperity and quality of life by promoting protecting and providing for the health of Hoosiers in their communities.

**Timing of Closure**

Studies of information from various U.S. cities during the 1918 influenza pandemic show that cities that closed schools early in the pandemic experienced lower incidence of disease than those that closed schools later. This is also supported by simulation models of influenza transmission. The exact timing of school closure depends on several factors and is best determined by epidemiologists at the Indiana State Department of Health (ISDH) and at the Centers for Disease Control and Prevention (CDC), taking into account what is known about the severity of the pandemic and the spread of the virus in other areas prior to its arrival in Indiana. It is clear, however, that closing should take place early in the pandemic, probably before it is even evident to most people that the pandemic is about to reach their community. In the event of a pandemic the decision to close the schools will be made by the State Health Commissioner.

**Re-opening**

The decision of when to reopen schools is much more problematic than deciding when to close them. During the 1918 pandemic, many communities reopened schools or lifted restrictions too early and experienced a rapid upsurge in disease incidence. A few communities waited too long and lifted restrictions just before the onset of the next wave of the pandemic. While it is easy to look at these communities with hindsight and say they opened too early or too late, it is not so easy to make this determination while events are unfolding. Again, timing is best determined by epidemiologists at the ISDH and at the CDC, taking into account what has happened in other communities that have lifted restrictions.