

## Pandemic Flu & Kids<sup>1</sup>

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This document is intended as draft guidance to SC staff and local partners involved in programming related to pandemic flu. Please send comments, suggestions for improvement, and questions to [estarbuck@savechildren.org](mailto:estarbuck@savechildren.org).

### Planning Assumptions

Important planning assumptions specific to children and adolescents include the following:

1. As infected school age children are likely to shed more virus, for a longer period of time than adults, and are less likely to follow respiratory and hand-washing etiquette, they play an important role in flu transmission within communities. This, along with the desire to protect children from infection in crowded school environments, is the rationale for school closing during severe outbreaks.
2. School closure or dismissal of classes, & closure of daycare centers, is likely during a severe pandemic wave.<sup>2</sup> In an optimistic scenario, closure of schools during a pandemic might have some effect on the total number of cases (maybe a 15% reduction), but cause larger reductions (around 40%) in peak attack rates.<sup>3</sup> However, this reduction will be substantially undermined if there is substantial mixing of out-of-school children in the community or if the policy is not well implemented.
3. Potential negative consequences of closing schools include the impact on children's education and development, and nutrition (if food is provided in school), along with the economic and social consequences of many parents having to stay home with their children. (For example, how many more health workers will stay away from their jobs because they need to be home with their children while schools are closed?)
4. Illness among parents and other family caregivers, as is expected to occur during a pandemic, will have direct consequences for the health and care of children and youth. As was the case during the 1918 pandemic, children in families in which all potential caretakers are ill at the same time will be at particularly high risk.

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<sup>1</sup> Parts of this document are based on Avian and Pandemic Flu and Education Programming, Jodie Fonseca, November 16, 2006.

<sup>2</sup> However, there may be settings in which experts conclude that, even in a severe pandemic wave, school closure or dismissal of students is not justified. See: Stern AM, Reilly MB, Cetron MS, Markel H. "Better Off in School": School Medical Inspection as a Public Health Strategy During the 1918–1919 Influenza Pandemic in the United States. *Public Health Reports*. 2010;125(Suppl 3):63-70: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2862335/pdf/phr125s30063.pdf>

<sup>3</sup> Simon Cauchemez, Neil M Ferguson, Claude Wachtel, Anders Tegnell, Guillaume Saour, Ben Duncan, Angus Nicoll. Closure of schools during an influenza pandemic. *Lancet Infect Dis* 2009; 9: 473–81. (<http://www.team-bhp.com/forum/attachments/shifting-gears/173297d1250059229-swine-flu-information-important-information-post-102-page-7-closure-schools-augs2009.pdf>)

## **Suggestions for Save the Children Preparedness Planning**

Preparedness activities at scale at the community-level which are specific to pandemic flu may not be feasible in most settings. Instead, it is suggested that partners test interventions in selected communities and prepare materials for rapid scale up during the few weeks most communities will have before the arrival of the first pandemic wave, following a specific trigger of increased risk of imminent pandemic onset. Several of the suggested interventions below are more generally applicable, and may thus be implemented at scale at this time.

### **Education Programming**

1. SC can work with schools and local partners to create plans that prepare the schools to cope with a pandemic. At a minimum, these plans should include means of coordinating a response at the school level (e.g., a committee); infection control policies and procedures; methods of communication to students, their families, and communities about the outbreak; and plans for ensuring the continuity of education in the event of a pandemic. The plans should be specific about local triggers for school closure and re-opening, including their rationale.
2. SC should use its links with national and district-level education offices and its on-the-ground presence in communities to provide two-way communication about pandemic flu, facilitating dialogue from the “top down” and the “bottom up.”
3. SC should help school communities plan for the education of school children and other community members about pandemic flu, including the nature of the threat, reducing risk of transmission (including social distancing of children while schools are closed, so that the rationale for school closing is not undermined by children mixing in out-of-school locations), and home care for ill family members. To accomplish this, SC should work through existing structures such as parent-teacher associations, school management committees, and teacher training and supervision structures, to help disseminate information and promote preparation for a pandemic.
4. SC should review current health education programs to see how they might be modified to promote learning about pandemic flu.
5. SC education programs should prepare age-appropriate messaging around pan flu, for example, pictures and large text for younger children and semi- or illiterate populations.
6. SC education programs can investigate ways to ensure that children continue to learn even if they remain at home during an outbreak, for example by creating a “studying at home” curriculum that is taught through a child-to-child methodology.
7. SC education and health programs should collaborate to help schools link to local health services in preparation for a pandemic, as well as in the event that a pandemic occurs.

### **Other Sectors**

8. Because schools and child care centers may close during a pandemic, and all caretakers will be ill at the same time in some families, SC and local partners should develop plans for alternative child care arrangements. Child care group sizes should be held to a minimum (fewer than 6 children) and mixing between such groups should be minimized (e.g., children should not move from group to group or have extended social contacts outside the designated group).

9. Along with closing schools, other interventions for the general population, such as hand washing, respiratory etiquette, and voluntary isolation of the ill, will be important for reducing the risk of infection among children. (See: Influenza: Symptoms, Transmission, and Prevention, on SaveNet and at: <https://www.savethechildren.org/us/about-us/resource-library/influenza-library>)
10. Home care for children ill with the flu will be important in all settings. See: The Flu: Caring for Someone Sick at Home, US CDC, at: <https://www.savethechildren.org/us/about-us/resource-library/influenza-library>

## References

**From: Provincial Pediatric Pandemic Influenza Planning**, C. Bruce-Barrett, Director, Strategic Projects, Hospital for Sick Children, June 27, 2006 ([http://www.powershow.com/view/148dd8-NDY5Z/PROVINCIAL\\_PAEDIATRIC\\_PANDEMIC\\_INFLUENZA\\_PLANNING\\_P4\\_powerpoint\\_presentation](http://www.powershow.com/view/148dd8-NDY5Z/PROVINCIAL_PAEDIATRIC_PANDEMIC_INFLUENZA_PLANNING_P4_powerpoint_presentation))

*Influenza manifests differently in children & will require different treatment*

- Symptoms may be more non-specific
- Gastrointestinal symptoms are more likely
- Differentiating between concurrent diseases difficult
- Tamiflu resistance appears more frequently
- Young children require presence of parent/ adult at all times
- Surge capacity must accommodate space for parent/ caregiver & child

*Strategies: The health system must:*

- Communicate effectively with families
- Provide age appropriate information for children & youth
- Implement infection control & consider public health measures to reduce the spread of influenza among children
- Consider the need for child care services, particularly for children of health care workers
- Provide appropriate care for children with influenza including care providers, equipment, supplies, & laboratory support
- Provide psychosocial support for families

**From: Community Strategy for Pandemic Influenza Mitigation**, US CDC, February 2007 (<https://stacks.cdc.gov/view/cdc/11425>)

*Targeting Schools, Childcare, and Children (page 27)*

“Biological, social, and maturational factors make children especially important in the transmission of influenza. Children without pre-existing immunity to circulating influenza viruses are more susceptible than adults to infection and, compared with adults, are responsible for more secondary transmission within households. Compared with adults, children usually shed more influenza virus, and they shed virus for a longer period. They also are not skilled in handling their secretions, and they are in close proximity with many other children for most of the day at school. Schools, in particular, clearly serve as amplification points of seasonal community influenza epidemics, and children are thought to play a significant role in introducing and transmitting influenza virus within their households.

“Dismissal of students from school could eliminate a potential amplifier of transmission. However, re-congregation and social mixing of children at alternate settings could offset gains associated with disruption of their social networks in schools. For this reason, dismissal of students from schools and, to the extent possible, protecting children and teenagers through social distancing in the community, to include reductions of out-of-school social contacts and community mixing, are proposed as a bundled strategy for disrupting their social networks and, thus, the associated disease transmission pathways for this age group.”

*Child Social Distancing (pages 38 – 39)*

“The goal of these interventions is to protect children and to decrease transmission among children in dense classroom and non-school settings and, thus, to decrease introduction into households and the community at large. Social distancing interventions for children include dismissal of students from classrooms and closure of childcare programs, coupled with protecting children and teenagers through social distancing in the community to achieve reductions of out-of-school social contacts and community mixing. Childcare facilities and schools represent an important point of epidemic amplification, while the children themselves, for reasons cited above, are thought to be efficient transmitters of disease in any setting. The common sense desire of parents to protect their children by limiting their contacts with others during a severe pandemic is congruent with public health priorities, and parents should be advised that they could protect their children by reducing their social contacts as much as possible.

“However, it is acknowledged that maintaining the strict confinement of children during a pandemic would raise significant problems for many families and may cause psychosocial stress to children and adolescents. These considerations must be weighed against the severity of a given pandemic virus to the community at large and to children in particular. Risk of introduction of an infection into a group and subsequent transmission among group members is directly related to the functional number of individuals in the group. Although the available evidence currently does not permit the specification of a “safe” group size, activities that recreate the typical density and numbers of children in school classrooms are clearly to be avoided. Gatherings of children that are comparable to family-size units may be acceptable and could be important in facilitating social interaction and play behaviors for children and promoting emotional and psychosocial stability.

“A recent study of children between the ages of 25 and 36 months found that children in group care with six or more children were 2.2 times as likely to have an upper respiratory tract illness as children reared at home or in small-group care (defined as fewer than six children). If a recommendation for social distancing of children is advised during a pandemic and families must nevertheless group their children for pragmatic reasons, it is recommended that group sizes be held to a minimum and that mixing between such groups be minimized (e.g., children should not move from group to group or have extended social contacts outside the designated group).

“Requirements for success of these interventions include consistent implementation among all schools in a region being affected by an outbreak of pandemic influenza, community and parental commitment to keeping children from congregating out of school, alternative options for the education and social interaction of the children, clear legal authorities for decisions to dismiss students from classes and identification of the decision-makers, and support for parents and adolescents who need to stay home from work. Interim recommendations for pre-pandemic planning for this intervention include a three-tiered strategy: 1) no dismissal of students from schools or closure of childcare facilities in a Category 1 pandemic, 2) short-term (up to 4 weeks) cancellation of classes and closure of childcare facilities during a Category 2 or Category 3 pandemic,

and 3) prolonged (up to 12 weeks)<sup>4</sup> dismissal of students and closure of childcare facilities during a severe influenza pandemic (Category 4 or Category 5).”

### Resources for Kids, Parents, Schools, & Childcare Providers

- Nonpharmaceutical Interventions (NPIs), At School, US CDC:  
<https://www.cdc.gov/nonpharmaceutical-interventions/school/index.html>
- Flu information for parents with young children: US CDC:  
<http://www.cdc.gov/flu/parents/index.htm>
- Flu information for schools, childcare providers, parents, & kids: US CDC:  
[www.cdc.gov/flu/school/](http://www.cdc.gov/flu/school/)
- Contra Costa County, California (USA), Pandemic Flu School Action Kit,  
[http://www.cchealth.org/topics/pandemic\\_flu/school\\_action\\_kit/](http://www.cchealth.org/topics/pandemic_flu/school_action_kit/)

### Other Resources

- Reducing excess mortality from common illnesses during an influenza pandemic: WHO guidelines for emergency health interventions in community settings, October 2008. (This includes recommendations for moving case management of childhood pneumonia, diarrhea, & malaria to the community level before and/or during a pandemic.)  
[www.who.int/diseasecontrol\\_emergencies/common\\_illnesses2008\\_6.pdf](http://www.who.int/diseasecontrol_emergencies/common_illnesses2008_6.pdf)
- Pandemic influenza preparedness & mitigation in refugee & displaced populations: WHO guidelines for humanitarian agencies, May 2008  
[http://www.who.int/diseasecontrol\\_emergencies/HSE\\_EPR\\_DCE\\_2008\\_3rweb.pdf](http://www.who.int/diseasecontrol_emergencies/HSE_EPR_DCE_2008_3rweb.pdf)

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<sup>4</sup> April 2017 US CDC guidance notes that one of the objectives of school closure may be “Objective 3: To allow time for pandemic vaccine production and distribution (closures up to 6 months).” Qualls N, Levitt A, Kanade N, et al. Community Mitigation Guidelines to Prevent Pandemic Influenza — United States, 2017. MMWR Recomm Rep 2017;66(No. RR-1):1–34. DOI: <http://dx.doi.org/10.15585/mmwr.rr6601a1>  
<https://www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6601.pdf>