



**衛生防護中心**  
Centre for Health Protection

**Scientific Committee on Vaccine Preventable Diseases**

**Consensus Recommendations on School Closure due to  
Seasonal Influenza**

School closure has been adopted from time to time as a non-pharmacological intervention during influenza pandemic as well as seasonal influenza epidemics. It had been recognised that in pandemic preparedness plans, rationales for school closures were that children are thought to be important vectors of transmission and more infectious and susceptible to most influenza strains than adults, and high contact rates in schools favour transmission.

**Territory-wide school closure**

2. Territory-wide school closure for primary schools and pre-primary institutions due to influenza was implemented in 2008, 2009 and 2018 in Hong Kong. The decisions were made based on the prevailing situations and there have been no established criteria to trigger territory-wide school closure locally.

3. Literature review suggested that school closure is able to reduce influenza transmission amongst children. The effect of school closure is greater on peak incidence than cumulative attack rate. It would also delay the peak of an epidemic but the overall duration would be increased. In addition, school closure is more likely to have the greatest effect if the virus has low transmissibility and if age-specific attack rates are higher in children than in adults. There is little evidence



to suggest an appropriate threshold to trigger school closure. Furthermore, the published evidence showed that school closure of less than two weeks may have limited influence on community transmission, and the evidence so far does not allow an estimate of the optimum duration of school closure to be made.

4. In Hong Kong, a local study was conducted after the territory-wide school closure of primary schools and pre-primary institutions in response to the three paediatric deaths due to seasonal influenza in March 2008, which could not find a substantial effect on community transmission. Regarding the territory-wide school closure of primary schools and pre-primary institutions in June 2009 in response to the influenza pandemic due to influenza A(H1N1)pdm09 virus, a local study found that only after subsequent closure of secondary schools for the summer vacation was associated with substantially lower transmission across all age groups.

5. Review of practice elsewhere found that most health authorities including Mainland China, Macau, Taiwan, United States of America, United Kingdom, Singapore and Japan do not have established criteria for triggering territory-wide school closure due to seasonal influenza epidemics.

6. After reviewing scientific literature and practice on the criteria for triggering territory-wide school closure due to seasonal influenza epidemics, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) noted that there is so far no scientific evidence or international guidelines/consensus to suggest an appropriate threshold to trigger territory-wide school closure due to seasonal influenza epidemics. Hence, SCVPD concluded that there is no scientific basis to establish local criteria for territory-wide school closure due to seasonal influenza epidemics.

### **Individual school closure**

7. In 2008, an Expert Group was set up to investigate the three paediatric deaths due to seasonal influenza.<sup>1</sup> The Expert Group recommended

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<sup>1</sup> <http://www.info.gov.hk/gia/general/200804/18/P200804180245.htm>

that closure of an individual school during influenza outbreaks may be considered taking reference from (but not solely dictated by) certain indicators such as:

- (a) Any death in the school due to influenza in otherwise healthy children,
- (b) There are two or more intensive care unit admissions,
- (c) The hospitalisation rate is more than 1%, or
- (d) The sick leave rate is 10% or more.

8. According to the experience in investigation and management of influenza outbreaks in schools and pre-primary institutions in the past ten years, the Centre for Health Protection found that the third and fourth indicators concerning hospitalisation rate and sick leave rate respectively are not practicable owing to the relatively small capacity of students among pre-primary institutions in Hong Kong. If such indicators were implemented, at least 7-21% of the pre-primary institutions with influenza/influenza-like illness outbreaks in the recent three years would have been closed which was not warranted from the public health perspective. Moreover, the suggested duration of closure was not specified in the recommendation.

9. Based on the review of the local epidemiology, scientific literature and overseas practice, SCVPD recommends that closure of an individual school with influenza/influenza-like illness outbreaks may be considered taking reference from the following indicators:

- (a) Any death of healthy children in the school due to influenza,
- (b) Two or more children required intensive care unit admission due to influenza, or
- (c) Influenza-like illness attack rate among children is 20% or more.

10. In addition to the above indicators, factors including the number of staff affected (which may potentially affect operation of the school), epidemic trend of the outbreak and effectiveness of control measures etc., should also be taken into consideration for advising school closure during an influenza/influenza-like illness outbreak.

11. SCVPD also noted that there is no international consensus/guidelines on the optimum closure duration regarding closure of an individual school due to influenza outbreak. As influenza has an incubation period of about 1-4 days and a communicable period of about 3-5 days in general, SCVPD considers that 7 days of school closure is appropriate for interrupting influenza transmission within the affected school.

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