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Health Advisory

School-Based Varicella (chickenpox) Outbreaks March 6, 2006

Several schools in Philadelphia, both elementary and secondary levels, are currently experiencing outbreaks of varicella infection. The Philadelphia Department of Public Health (PDPH) defines an outbreak of varicella as five or more cases in one facility within a three-week period. PDPH outbreak control recommendations for schools consist of: (1) parental notification of the outbreak; (2) exclusion of any child lacking evidence of prior disease or varicella immunization; and (3) use of varicella vaccine for primary immunization, or as a second dose booster (see below), in children eligible for vaccine. An excluded child may return to school immediately upon receiving one dose of vaccine. Immunocompromised children should not return to an outbreak setting, except per written recommendation from their personal physician.

In schools with a current varicella outbreak, letters may have been sent to parents recommending the use of a second dose of vaccine to prevent disease in children aged 12 months to 12 years who have previously been vaccinated against varicella. Because the second dose confers additional protection and helps interrupt disease transmission, your assistance in implementing this new disease control strategy is greatly appreciated. The official recommendation is:

A second dose of varicella vaccine is recommended for any previously vaccinated child, 1-12 years of age, who attends a daycare/school experiencing an outbreak of varicella, provided 3 months have lapsed since the child's first dose.

The recommendation for use of a second dose of varicella vaccine as an outbreak control measure was first issued in June 2005 by the Advisory Committee on Immunization Practices (http://www.cdc.gov/nip/recs/provisional_recs). ACIP considered several factors when deciding to endorse this strategy. Despite dramatic declines in varicella morbidity since vaccine licensure in 1995, the effectiveness of one dose does not appear to provide sufficient herd immunity to prevent school outbreaks, as indicated by epidemiologic data. Moreover, clinical trial findings have documented significant boosting of varicella zoster virus antibody responses among vaccinated children 1 to 12 years who received second doses, provided 3 months had elapsed between the first and second dose.

If you need additional varicella vaccine for children from the schools with outbreaks, please contact the Immunization Program at 215-685-6845 or 215-685-6740.