

and individuals should discuss the risks and benefits with a knowledgeable health care practitioner.

The live attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent vaccine in specific age-groups. The vaccine is given nasally as two doses at least 28 days apart in healthy persons 2 to 49 years old. The LAIV form is not recommended for children 2 to 4 years old with wheezing in the previous 12 months; those with diagnosed asthma; or for children with underlying medical conditions that predispose them to influenza complications (Grohskopf LA, Olsen SL, Sokolow LZ, et al, 2014b; American Academy of Pediatrics, 2013). Although the LAIV is an alternative to the injection, it costs more and may not be covered by insurance companies. Either IIV or LAIV may be given to healthy, nonpregnant persons 2 to 49 years old (American Academy of Pediatrics, 2015). Yearly influenza vaccine should be administered to health care workers and to children 6 to 59 months old with medical conditions (including asthma, cardiac disease, HIV, diabetes, and sickle cell disease) that place them at risk for influenza-related complications.

The H1N1 virus (swine flu) is a subtype of influenza type A. Previous outbreaks of H1N1 influenza occurred in 1918, and the mortality rates were significant both in the United States and worldwide (American Academy of Pediatrics, 2015). The pandemic of H1N1 in 2009 to 2010 caused significant morbidity and mortality worldwide, but particularly in Mexico and the United States.

Antigenic shift occurs when influenza A viruses undergo significant changes that result in new infection subtypes; such is the case in the current pandemic. The signs and symptoms of H1N1 flu are the same as those mentioned later for influenza. The most updated information on the status of this disease may be found at the websites for the Centers for Disease Control and Prevention (<http://www.cdc.gov/flu/about/season/index.htm>).

Meningococcal Disease

Invasive meningococcal disease continues to be the cause of high morbidity in children in the United States. Infants younger than 1 year old are particularly susceptible, yet the highest fatalities occur in adolescents (approximately 20%). There is also evidence that the risk of meningococcal infections is high in college freshmen living