流行性感冒的疫苗及防護

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●Influenza is an acute respiratory illness caused by influenza A or B viruses. It occurs in epidemics nearly every year, mainly during the winter season in temperate climates . Influenza virus is remarkable for its high rate of mutation; this viral evolution compromises the ability of the immune system to protect against new viral variants. As a consequence, new vaccines are produced each year to match the vaccine with the new circulating viruses. The protective efficacy of the vaccine is largely determined by the relationship (closeness of "fit" or "match") between the strains in the vaccine and viruses that circulate in the outbreak. Annual influenza vaccination is an important public health measure for preventing influenza infection.

●Several influenza vaccines are licensed for use in the United States, including inactivated vaccines, which are administered intramuscularly or intradermally, and a live-attenuated vaccine, which is administered intranasally. Current influenza vaccines are trivalent or quadrivalent. The protection provided by influenza vaccines is based upon induction of virus-neutralizing antibodies, mainly directed against the viral hemagglutinin.

●The United States Advisory Committee on Immunization Practices (ACIP) recommends influenza vaccination for all individuals six months of age and older. High-risk individuals, their close contacts,

and healthcare workers should remain high-priority populations in vaccination campaigns.

●For healthy nonpregnant adults <65 years of age, we recommend annual influenza vaccination (**Grade 1A**) For individuals ≥65 years of age and for other individuals at increased risk for severe influenza (eg, immunocompromise; chronic cardiovascular, pulmonary, or metabolic disease; pregnancy), we recommend annual influenza vaccination (**Grade 1B**).

●A single dose of an influenza vaccine should be offered soon after the vaccine becomes available, ideally by October in the northern hemisphere and May in the southern hemisphere. Annual immunization is necessary even if the previous year's vaccine contained one or more of the antigens to be administered because immunity declines during the year following vaccination.

●The choice of vaccine formulation depends upon several factors, including age, comorbidities, pregnancy, and risk of adverse reactions. For healthy nonpregnant adults up to 49 years of age, we use either an inactivated vaccine or the live-attenuated influenza vaccine (LAIV); in randomized trials of adults, the inactivated vaccine was either equivalent to or more effective than the live-attenuated vaccine. We use an inactivated influenza vaccine in those patients in whom safety and/or efficacy of LAIV has not been established, including adults ≥50 years of age; individuals who are immunocompromised or have chronic cardiovascular, pulmonary, or metabolic disease; pregnant women; and those with egg allergy. We favor a quadrivalent formulation over a trivalent formulation when possible. For individuals ≥65 years of age, we suggest the high-dose inactivated

influenza vaccine (Fluzone high-dose) when available rather than a standard-dose inactivated influenza vaccine because the high-dose vaccine is more immunogenic and appears more effective than the standard-dose vaccine in such patients (**Grade 2B**). If possible, individuals on statins should receive the high-dose vaccine, since statins may impair vaccine responses. Additional guidance regarding the most appropriate formulation for a given patient is provided above.