EDITORIAL

SWINE FLU A NEW EPIDEMIC

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In late March and early April 2009, an outbreak of H1N1 influenza A virus infection was detected in Mexico, with subsequent cases observed in many other countries including Pakistan. On June 11, 2009, the World Health Organization raised its pandemic alert level to the highest level, phase 6, indicating widespread community transmission on at least in two continents. Influenza virus is present in respiratory secretions of infected persons. As a result, influenza virus can be transmitted through sneezing and coughing via large-particle droplets. Transmission via contact with surfaces that have been contaminated with respiratory droplets or by aerosolized small-particle droplets may also occur, although these modes of transmission have not been proven. Since the duration of shedding of H1N1 influenza A virus is currently unclear, the estimated duration of shedding is based upon what is known for seasonal influenza virus. Patients with H1N1 influenza A virus infection are likely to be contagious from one day prior to the development of signs and symptoms until resolution of fever. However, because the duration of shedding has not been established, individuals should be considered contagious until seven days after illness onset. Longer periods of shedding may occur in children (especially young infants), elderly adults, patients with chronic illnesses, and immunocompromised hosts.

The most common clinical findings of the 2009 H1N1 influenza A pandemic have been fever, cough, sore throat, malaise, and headache; vomiting and diarrhea have also been common, both of which are unusual features of seasonal influenza. Other frequent findings have included chills, myalgias, and arthralgias. The most common risk factors for influenza complications were chronic lung disease (asthma or chronic obstructive pulmonary disease), immunosuppressive conditions, cardiac disease, pregnancy, diabetes mellitus, and obesity. To establish the diagnosis of H1N1 influenza A, an upper respiratory sample (nasopharyngeal swab, nasal swab, throat swab, combined oropharyngeal/nasopharyngeal swab, or nasal aspirate) should be collected. Specimens should be placed in viral transport media and placed on ice (4ºC) or refrigerated immediately for transportation to the laboratory. Once the samples arrive in the laboratory, they should be stored either in a refrigerator at 4ºC or in a -70ºC freezer. If a -70ºC freezer is not available, they should be kept refrigerated, preferably for d" 1 week.

The strain of H1N1 influenza A virus circulating in Mexico and other countries in the spring of 2009 appears sensitive to the neuraminidase inhibitors, oseltamivir and zanamivir, in vitro but resistant to amantadine and rimantadine. However, there are no reported studies yet on the clinical benefits of antiviral therapy. All hospitalized patients with confirmed, probable, or suspected H1N1 influenza A virus infection and Patients at increased risk for complications. For patients requiring treatment, either zanamivir or oseltamivir is recommended. Zanamivir is contraindicated in patients with asthma or chronic obstructive pulmonary disease. The United States Centers for Disease Control and Prevention states that post-exposure antiviral prophylaxis can be considered for: Close contacts who are at high risk for complications of influenza (eg, individuals with certain chronic medical conditions, e" 65 years of age, pregnant women) of a confirmed, probable, or suspected case. Health care workers, public health workers, or first responders who were not using appropriate personal protective equipment during close contact with a confirmed, probable, or suspected patient during that person's infectious period. Pregnant women who are close contacts of individuals with suspected, probable, or confirmed cases should receive antiviral prophylaxis with zanamivir or oseltamivir.

The United States Centers for Disease Control and Prevention distributed H1N1 influenza A seed stocks to vaccine manufacturers in late May 2009 for use in a vaccine, which will take several months to produce. Recent seasonal influenza vaccines have not included antigens from the H1N1 influenza A virus that emerged in the spring of 2009. A study of cross-reactive antibody responses to swine H1N1 influenza A in the sera of individuals who were vaccinated with seasonal influenza vaccines between 2005 and 2009 showed that prior vaccination is unlikely to elicit a protective antibody response against this strain. The effectiveness of face masks and N95 respirators in preventing transmission of H1N1 influenza A is not known. Face masks do not seal tightly to the face and are used to prevent large droplets from coming into contact with the user's mouth or nose. N95 respirators fit tightly and filter out small particles. The optimal use of N95 respirators requires fit testing, training, and medical clearance. N95 respirators are not recommended for children or individuals with facial hair. Individuals with an influenza-like illness (ILI) should self-isolate in their home for seven days after the onset of illness or for at least 24 hours after symptoms have resolved, whichever is longer. he United States Centers for Disease Control and Prevention recommends that lactating women with H1N1 influenza A infection continue to breastfeed since the passive transfer of antibodies

against the virus can protect the infant; this is particularly important for infants less than 6 months of age. Women with an influenza-like illness (fever with cough or sore throat) should wear a face mask during breastfeeding; if a face mask is unavailable or intolerable, a tissue should be used to cover the face when coughing and sneezing. If maternal illness prevents breastfeeding, the infant's mother should pump, if possible, so that the infant can still receive breast milk. The risk of H1N1 influenza A virus transmission via breast milk is unknown, although reports of viremia with seasonal influenza are rare. Antiviral treatment or prophylaxis of the mother is not a contraindication to breastfeeding.

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