

Swine Flu

Why have relations soured between the China and Mexico? Why were all schools closed in Texas? Why have Egyptians slaughtered all the 300,000 pigs in Egypt? And why is US President Obama carefully referring to the new influenza epidemic as H1N1 and not swine flu.

The current influenza outbreak started quietly in Mexico City when surveillance picked up a surge in influenza like illnesses around mid March 2009. It was labeled as late season flu usually due to Influenza virus B. Then a 10 year old boy in California and another 9 year old girl with upper respiratory tract infection in another county of California were found to have an untypable influenza virus, later identified as a new type of triple re-assortment influenza virus by the CDC. This influenza virus had an amalgam of genes from swine, humans and avian influenza viruses. Interestingly, so far there is no evidence that it originated in pigs. But the initial announcement that it was a swine influenza in view of the large number of genes commonly found in swine flu triggered off unwarranted panic. WHO has reaffirmed that it is not transmitted through eating pork or products derived from pigs.

A pandemic is feared because there is no innate immunity to this virus which has a high secondary attack rate. WHO has raised its pandemic alert level to "Phase 5" out of 6 maximum, as a "signal that a pandemic is imminent". As of now the virus has been isolated from the US, Mexico, Canada and many other countries.

SWINE ORIGIN INFLUENZA A VIRUS (S-OIV)

The virus has affected people between the ages of 3

months to 81 years. Children <5 years, adults >65 years, pregnant women, underlying chronic medical illness are at a higher risk for severe illness. Sixty percent are below 18 years of age. Clinical symptoms include fever (94%), cough (92%), sore throat (66%), vomiting (25%), and diarrhea (25%). Generally it is a mild illness with spontaneous recovery. Of the total 642 cases confirmed in 41 states of the United States, there were 2 confirmed deaths as of 10 May 2009. The infective period ranges from 1 day prior to illness to 5-7 days after symptoms resolve. It may be longer in children and immunocompromized hosts. Diagnosis is confirmed by Swine Influenza Virus Real-Time PCR on a nasopharyngeal specimen. S-OIV is susceptible to oseltamivir and zanamivir but resistant to the rimantadine and adamantadine. As of May 5, 2009, the CDC has recommended that therapy should be prioritized for hospitalized patients with suspected or confirmed S-OIV infection and for patients who are at high risk for complications. The FDA has issued an emergency-use authorization that approves the use of oseltamivir to treat influenza in infants (treatment that is normally approved for those 1 year of age or older) and for chemoprophylaxis in infants >3 months of age (normally approved for children ≥1 year of age).

The therapeutic dose of oseltamivir (Tamiflu) is 30 mg BD (<15 Kg), 45 mg BD (15-23 Kg), 60 mg BD (24-40 kg) and 75 mg BD (>40 Kg) for 5 days. The prophylactic dose is given OD for 10 days. Zanamivir (Relenza) is approved for therapy in children above 7 years in a dose of 10 mg BD for 5 days. It may be used as prophylaxis in children above 5 years in a dose of 10 mg od for 10 days in a household setting and for 28 days in community outbreaks.

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