

**SWINE FLU
EMERGING THREAT****VIEW POINT**

History of Swine Flu

**Shakil.A.Mir, V.R.Tandon, Z.Abbas, Z.Singh, S.Farhat, M.A.Pukhta,
Z. Ashai, S.Parveen, N.Jan, Shakil-u-Rehman**

Swine flu, also called Hog or Pig Flu, is an infection caused by any one of the several types of Swine influenza virus (SIV) which is common throughout pig population worldwide. The term "influenza" derived from Italian word "influenza" was coined *in 1357 AD* as the disease was thought to be caused by influence of stars. Influenza pandemics are believed to have occurred at unpredictable intervals for many centuries. Outbreaks of swine flu are common and cause significant economical losses. Influenza, the flu, is believed to have been around for a few thousand years. Hippocrates, who is considered to be the father of modern medicine, has described the symptoms of the flu *in 412 B.C* at Perinthus in North Greece (1). *In 855* Ebn al atir mentions a virulent epidemic resembling flu that started in Central Asia and spread across Persia (2). *In 1485* an illness with flu like symptoms killed thousands of people in Britian, including the mayor (3). *In 1510* a flu pandemic originated in Africa and spread across Europe (4). *In 1580* a pandemic originated in the North Africa during summer, spread to Sicily, and then up through Italy, through Europe and to North America. It had a high mortality rate and killed 9000 people in Rome alone. In some Spanish cities nearly everyone perished (5). *In 1688*, an outbreak, described as being like the plague because of the death toll, swept through England, Ireland and Virginia (6). *In 1693-1699* an influenza outbreak occurred in Europe and America and Massachusetts. The sickness extended to almost all families. Few or none escaped, and many died especially in Boston (7). *In 1729* a pandemic originated in Russia, and re-emerged in Sweden in September and in Vienna in October. In November it spread across Europe, and reached America in 1732. Deaths were most numerous amongst the elderly and pregnant women (8). *In 1781-82* an influenza pandemic afflicted two-thirds of the people of Rome and three-quarters of the population of Britain. Influenza also spread widely in North America, the West Indies and Spanish America (9). *In 1789*

influenza epidemic hit England, New York and Nova Scotia. Most deaths appeared to have been from secondary pneumonia (10). *In 1830-33* a pandemic spread out from China. The infection rate was high (20-25%), but mortality was low (10). *In 1847-1848* an epidemic swept through the Mediterranean to southern France and thence elsewhere in Western Europe (11). *The 1889* a pandemic began in May in Bokara, Central Asia and traveled west to Russia and Western Europe after a pause of several months. There were four waves to the 1889 pandemic, three of which affected Britain. The first was in January 1890. Subsequent waves occurred in May 1891 and January 1892 and were associated with much greater morbidity (12). *In 1900*: a major epidemic was reported in North America, England and Wales (13). *In 1918-19* the worst pandemic, so called "Spanish flu" affected nearly one third of the world's population and caused 50 million plus deaths worldwide. It is thought to have originated in the United States in Feb 1918. Researches indicate that the descendants of 1918 virus still persist enzotically in pigs and are also transmitted continuously to humans causing annual epidemics (14-15). *In 1957-58* avian influenza originated in China, with deaths worldwide estimated at between one and four million. *In 1968*, Hong Kong flu caused some million deaths worldwide, particularly among the elderly (16). *In 1976*, a variant of H1N1, known as A/New Jersey/1976 caused death of a army recruit at Fort Dix New Jersey USA. But it did not spread beyond Fort Dix (17). *In 1977* a pandemic. "Russian Flu" spread across Siberia and European part of Russia. *In 1988*, swine flu killed a 32 year old, otherwise healthy pregnant woman, Barbara Ann Wieners in Wisconsin, USA after she visited a pig exhibition (18).

In 1997 Avian Flu outbreak originated from the New Territories Region in northern Hong Kong. In this area, chickens had been dying and routine testing of poultry had verified the presence of the Avian Flu virus - subtype

From the PG Department of Pharmacology, Govt Medical College, Srinagar, (J&K)-India

Correspondence to : Dr Zaffar Abbas, Head, PG Department of Pharmacology, Govt. Medical College, Srinagar (J&K)- India.



H5N1. The first case of Avian Flu in humans was a three-year-old boy in May, 1997. Three months later, another Avian Flu case was reported. By December, there were more and more cases of Avian Flu cases in humans report. 1.5-million birds were slaughtered to minimize the spread of Avian Flu. **In August, 2002** an influenza epidemic in Madagascar took the lives of some 400 people in three weeks, with over 5,600 others infected. Testing confirmed that the strain involved in the epidemic was type A influenza. **In July 2007**, swine flu outbreak occurred in Philippines. All pigs in Manila and Five regions of Luzon were slaughtered (19). **The 2009 flu pandemic** is a global outbreak of a new strain of an influenza A virus subtype H1N1, referred to as the "**novel H1N1**", first identified in April 2009, and commonly called "swine flu." It is thought to be a reassortment of four known strains of influenza A virus: one endemic in (normally infecting) humans, one endemic in birds, and two endemic in pigs. Transmission of the new strain is human-to-human. The U.S. Center for Disease Control and Prevention (CDC) notes that although this is a very serious virus, cases worldwide are usually mild, and most hospitalizations and deaths have been of persons that also had underlying conditions such as asthma, diabetes, obesity, heart disease, or a weakened immune system (20-21). Beginning in March 2009, an outbreak of influenza in North America was found to be caused by a new strain of influenza virus, designated Influenza H1N1 2009. On April 9, 2009 it became apparent to public health officials in Mexico City that an outbreak of influenza was in progress late in the influenza season. On April 17, two cases in children were also reported in California near the Mexican border. The current outbreak of swine influenza A (H1N1) evolved so rapidly that as on 29 April 2009, nine countries officially reported with confirmed cases of swine influenza A/H1N1 infection. Of these, Mexico, United State, Austria, Canada, Germany, Israel, New Zealand, Spain and the United Kingdom have reported laboratory confirmed human cases and deaths due to rapidly progressive pneumonia, respiratory failure and acute respiratory distress syndrome (ARDS). World Health Organization (WHO) declared ever high stages on its "pandemic" scale-alert 6, designating the Influenza H1N1 2009 a potential threat to worldwide health and declared the outbreak as Public Health Emergency of International Concern (PHEIC). Then in India total confirmed cases and total deaths crossed to a level where the threat of a full blown epidemic is very real (20-21).

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