

Influenza Pandemics: Can they be averted?

Based on historical patterns, influenza pandemics can be expected to occur, on an average, three to four times each century when new virus subtypes emerge and are readily transmitted from person to person. However, the occurrence of influenza pandemics is unpredictable. In the 20th century, the influenza pandemic of 1918-1919, which caused an estimated 40-50 million deaths worldwide, was followed by pandemics in 1957-1958 and 1968-1969.

Experts agree that another influenza pandemic is inevitable and possibly imminent. Most influenza experts also agree that the prompt culling of Hong Kong's entire poultry population in 1997 probably averted a pandemic. Several measures can help minimize the global public health risks.

When large outbreaks of highly pathogenic H5N1 avian influenza occur in birds

- An immediate priority is to halt further spread of epidemics in poultry populations. This strategy helps to reduce opportunities for human exposure to the virus.
- Vaccination of persons at high risk of exposure to infected poultry, using existing vaccines effective against currently circulating human influenza strains, can reduce the likelihood of co-infection of humans with avian and influenza strains, and thus reduce the risk that genes will be exchanged.
- Workers involved in the culling of poultry flocks must be protected, by proper clothing and equipment, against infection. These workers should also receive antiviral drugs as a preventive measure.

When cases of avian influenza in humans occur

- Information on the extent of influenza infection in animals as well as humans and on circulating influenza viruses is urgently needed to aid the assessment of risks to public health and to guide the best protective measures.
- Thorough investigation of each case is essential.
- Aggressive management of human cases by treating them with antivirals and placing them in isolation should be practiced.
- All possible contacts or contacts in a defined geographical area should be given antivirals.
- While WHO and the global influenza network, together with other international agencies, can assist with many of these activities, the successful containment of public health risks also depends on the epidemiological and laboratory capacity of affected countries and the adequacy of surveillance systems already in place.
- Ensuring country preparedness through development and implementation of the pandemic preparedness plans, with full involvement of all relevant sectors is therefore of fundamental importance.
- While all these activities can reduce the likelihood of a pandemic, the question of whether another influenza pandemic can be averted, is difficult to answer.