

A Preliminary Probe into the Risk of Influenza Global Pandemic

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Abstract

In the past three years, the increasing number of human avian influenza cases has been alarming. Furthermore, it is known that in the last (20th) century, type A influenza virus caused three pandemics, resulting in increased mortality. Experts believe an influenza pandemic in the 21st century is unavoidable. This article deals with the following avian influenza-related topics: 1) early identification of effective human to human viral transmission through surveillance of key viral mutations; 2) because of difficulties in rapid diagnostic methods, one suggestion is to collect adequate quantities of various body fluid samples from index cases before administration of drugs, so that further testing would be possible; 3) use mathematical models to evaluate the effectiveness of influenza pandemic prevention measures and associated public health measures; and 4) either infection control in hospitals and communities or administration of antiviral drugs may decrease the burden of pandemic, but the combination of implementing control measures, use of antiviral drugs, and vaccination may be the best. During a pandemic, it might be difficult to implement all intervention

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policies. Therefore, it is advisable to formulate diversified feasible preparedness plans that incorporate the characteristics of the country's resources. Finally, appropriate community harm-reduction intervention program may slow the spread of disease, thus facilitating the medical preparedness, and decrease the number of cases.

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