Clusters of human infections with avian influenza A(H7N9) virus in China, March 2013-June 2015

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Multiple clusters of human infections with novel avian influenza A(H7N9) virus have occurred since the virus was first identified in spring 2013. However, in many situations it is unclear if these clusters result from person-to-person transmission or exposure to a common infectious source. We analyzed the possibility of person-to-person transmission in each cluster and developed a framework to assess the likelihood that person-to-person transmission had occurred. We described 21 clusters with 22 infected contact cases which were identified by the Chinese Center for Disease Control and Prevention from March 2013 through June 2015. Based on detailed epidemiological information and the timing of the contact cases’ exposures to infected persons and to poultry during their potential incubation period, we graded the likelihood of person-to-person transmission as probable, possible or unlikely. We found that person-to-person transmission probably occurred twelve times and possibly occurred four times; it was unlikely in six clusters. Probable nosocomial transmission likely occurred in two clusters. Limited person-to-person transmission likely transpired on multiple occasions since the H7N9 virus was first identified, although these transmission events represented a small fraction of all identified cases of H7N9 human infection and sustained person-to-person transmission was not documented.

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Challenges of avian influenza surveillance in Zambia and the way forward

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Effective surveillance of influenza viruses in the migratory waterfowl is very important to determine the possible risk of influenza outbreak in domestic birds and humans. Here I report the challenges in the surveillance of influenza viruses circulating in Zambia. After 2005 H5N1 outbreak in poultry in some African countries such as Nigeria, Togo, Benin and other countries, African countries and Zambia inclusive were called upon to step up their influenza surveillance activities in order to prevent the disease because of the possible influenza outbreak threat. The national strategic plan for prevention and control of avian influenza was put in place in 2005. This resulted in lot of influenza surveillance activities from 2005 to 2010 which resulted in isolation of a number of influenza subtypes like H6N1, H9N1, H3N2 and others from wild migratory birds. This was made possible due to good will from donor organizations as they provided funds. From 2010 to date, influenza surveillance activities have been very limited, not effective and not coordinated due to lack of funding. There is need Zambia as a country to find partners, collaborators and donors to assist in fundraising for surveillance and research activities in Zambia. Further, there is need for help in training of Zambian researchers and technicians at our laboratory in the rapid detection and diagnosis of influenza. This will help the in the prevention and control of possible influenza outbreak. Surveillance remains a key as an early warning system in the control of possible influenza outbreak.

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