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Dear Doctors,

**A Confirmed Imported Case of Human Infection with Avian Influenza A(H7N9)
Virus**

I would like to draw your attention to a confirmed imported case of human infection with avian influenza A(H7N9) virus in Hong Kong.

On February 23, 2016, the Centre for Health Protection (CHP) confirmed a human infection with avian influenza A(H7N9) virus. The patient is a 60-year-old man with good past health. He developed fever, chills, rigor, cough and shortness of breath on February 8 and consulted a private doctor on February 10 and 11. He was referred to the Accident and Emergency Department of Pamela Youde Nethersole Eastern Hospital on February 11 and was admitted. He was found to have pneumonia. His nasopharyngeal aspirate specimens collected on February 12 were tested positive for influenza A(H7N9) by the CHP's Public Health Laboratory Services Branch on February 23. He is currently isolated in Princess Margaret Hospital and is in stable condition.

Preliminary epidemiological investigation revealed that the patient lived and worked in Suzhou, Jiangsu Province. He returned to Hong Kong on February 5. During the stay in Suzhou, he had visited a wet market with live poultry within the incubation period. Based on information available thus far, it is classified as an imported case. The CHP is tracing the exposed close contacts of the patient and Tamiflu chemoprophylaxis will be prescribed to them. The investigation is still on-going.

Prior to this case, thirteen imported cases of human infection with avian influenza A(H7N9) virus were recorded in Hong Kong since December 2013. Cumulatively, a total of 728 confirmed human H7N9 cases have been reported globally since March 2013, including at least 285 deaths (as of February 23, 2016). These included 707 cases in Mainland China and 21 cases exported from Mainland China to Hong Kong (14), Taiwan (4), Canada (2) and Malaysia (1).



There has been increase in the number of sporadic human cases of avian influenza A(H7N9) infection reported in Mainland China since this winter. At least 50 human H7N9 cases with onset dates since September 2015 have been reported in Mainland China (as of February 23). These 50 cases occurred in Zhejiang (24), Guangdong (10), Jiangsu (7), Fujian (3), Shanghai (3), Hunan (2) and Jiangxi (1). Besides, five cases of avian influenza A(H5N6) have been reported in Mainland China since December 2015, including four cases in Guangdong and one case imported from Guangdong to Jiangxi. Based on the seasonal pattern of avian influenza viruses, it is likely that the disease activity of avian influenza in Mainland China will remain at a high level in the winter and further sporadic cases of avian influenza are expected to be imported to Hong Kong.

We would like to urge you to pay special attention to patients who presented with fever or influenza-like illness and had **history of visiting wet market with live poultry**, contact with poultry or other at-risk exposure in affected areas within the incubation period (i.e. 10 days before onset of symptoms). The list of affected areas is regularly updated and is available at the following webpage of the CHP website: http://www.chp.gov.hk/files/pdf/global_statistics_avian_influenza_e.pdf.

Current evidence suggests that the H7N9 virus does not transmit easily among humans. However, it is possible that limited human-to-human transmission may have occurred where there was unprotected close contact with symptomatic human cases. Incidents of nosocomial transmission of H7N9 between patients and healthcare workers have been documented. A nosocomial cluster of co-infection with influenza A(H1N1)pdm09 and A(H7N9) viruses occurred in two patients at a hospital in Zhejiang in January 2014. The index case was a man with chronic lymphocytic leukemia who had been occupationally exposed to poultry. He had co-infection with H7N9 and H1N1 viruses. Another patient with polycythemia vera who was in the same ward as the index case for six days acquired infection with H7N9 and H1N1 viruses. Virus genetic sequences from the two cases were identical.¹

Another epidemiological investigation of two H7N9 patients in Zhejiang in February 2015 also revealed possible nosocomial H7N9 transmission between them. The index patient became ill seven days after visiting a live poultry market. The second patient with a history of chronic obstructive pulmonary disease developed influenza-like symptoms after sharing the same hospital ward with the index patient for five days. The second patient had not visited any poultry markets nor had any contact with poultry or birds within 15 days before the onset of illness. Genome sequences of the viruses isolated

¹ Chen H, Liu S, Liu J, *et al.* Nosocomial co-transmission of avian influenza A(H7N9) and A(H1N1)pdm09 viruses between 2 patients with hematologic disorders. *Emerg Infect Dis.* 2016 Apr.

from both patients were nearly identical.²

A published scientific report further suggested nosocomial transmission from a H7N9 patient to two attending physicians who had close contact with the index patient in Guangdong in early 2015. The use of personal protective equipment by the physicians while caring for the index patient could not be verified.³ In view of the above, it is important to strictly observe infection control practices in healthcare settings to prevent possible nosocomial spread.

Any suspected case meeting the reporting criteria (available from: https://cdis.chp.gov.hk/CDIS_CENO_ONLINE/ceno.html) should be immediately reported to the Central Notification Office (CENO) of the CHP via fax (2477 2770), phone (2477 2772) or CENO On-line (https://cdis.chp.gov.hk/CDIS_CENO_ONLINE/ceno.html). In addition, private doctors should contact the Medical Control Officer of the Department of Health at pager: 7116 3300 (call 9179) when reporting any suspected case outside office hours. The CHP will make arrangement to send the patient to a public hospital for isolation, testing and treatment. Besides, it is important to isolate the patient to minimise contact/exposure to staff and other patients and advise the patient to wear a surgical mask while waiting for transport.

For updates on the latest situation of avian influenza, please visit the CHP's designated website at http://www.chp.gov.hk/en/view_content/24244.html. Please draw the attention of the healthcare professionals and supporting staff in your institution/working with you to the above. Thank you for your ongoing support in combating communicable diseases.

Yours faithfully,



(Dr. SK CHUANG)
for Controller, Centre for Health Protection
Department of Health

² Fang CF, Ma MJ, Zhan BD, *et al.* Nosocomial transmission of avian influenza A (H7N9) virus in China: epidemiological investigation. *BMJ*. 2015 Nov 19;351:h5765.

³ Farooqui A, Liu W, Kelvin DJ, *et al.* Probable Hospital Cluster of H7N9 Influenza Infection. *N Engl J Med*. 2016 Feb 11;374(6):596-8.