Health authorities from Guangdong and Macau visited Hong Kong on the collaboration in the prevention and control of avian influenza

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In order to strengthen the mutual communication and co-operation in combating avian influenza in the tripartite region, health authorities from Guangdong and Macau visited Hong Kong on May 18 and 19, 2017 to discuss the collaboration in the prevention and control of avian influenza.

In the current fifth wave of human infection with avian influenza A(H7N9) since October 2016, over 700 human cases in 25 provinces/municipalities/autonomous regions in Mainland China have been reported. Among these cases, over 60 cases were reported in Guangdong Province. In Hong Kong, five cases were recorded in this wave, all were imported including four from Guangdong Province. Apart from Hong Kong, human H7N9 cases imported from Guangdong Province have been detected in Macau and Taiwan in this wave.

The Centre for Health Protection (CHP) of the Department of Health met the delegations from the Guangdong Provincial Center for Disease Control and Prevention, the Health and Family Planning Commission of Guangdong Province and the Center for Disease Control of Macau Special Administrative Region. Other representatives from Hong Kong included Agriculture, Fisheries and Conservation Department (AFCD); Food and Environmental Hygiene Department (FEHD) and the Hospital Authority (HA) (Photo 1 and 2).

During the meeting on May 18, public health experts of the three places reviewed the latest situation of avian influenza A(H7N9) in the tripartite region. The participants had in-depth discussions and experience-sharing on the collaboration in the prevention and control of avian influenza and related notification system.

Public health actions in combating avian influenza were discussed during the meeting, including disease surveillance, laboratory surveillance, diagnosis and clinical management, travel health advice and public education, port health measures, preparedness plan and risk communication, poultry import and control, laboratory surveillance on poultry, measures implemented in wholesale poultry market and retail markets.

In that afternoon, the participants visited Cheung Sha Wan Temporary Wholesale Poultry Market to have a better understanding on the operation of wholesale market in Hong Kong. Briefing on the market operation, biosecurity measures and segregation measures in the wholesale market was conducted by AFCD colleagues (Photo 3 and 4).
The participants then visited the poultry commodity in the Tai Kok Tsui Market and were briefed by colleagues of FEHD on the avian influenza control measures, stringent hygiene requirements for retail outlets including daily cleansing and disinfection, and prohibition of the keeping of live poultry overnight at retail level (Photo 5 and 6).

On May 19, the participants visited the Tai Lung Veterinary Laboratory in Lin Tong Mei, Sheung Shui and were briefed on the surveillance and veterinary laboratory testing services on avian influenza by AFCD colleagues (Photo 7 and 8).

In summary, Guangdong, Macau and Hong Kong’s health authorities all agreed that in order to minimise the public health risk of avian influenza in the three places, the current communication and co-operation should be continued and strengthened.

### Effect of diabetes mellitus on the clinical presentation and treatment response in tuberculosis

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Diabetes mellitus (DM) is associated with more severe disease and it adversely affects the treatment response of tuberculosis (TB). This study aimed to explore the effects of DM on the presentation of TB and its response to treatment in Hong Kong.

Consecutive TB patients with DM, receiving a nine-month extended treatment in a territory-wide treatment programme from 2006 to 2010, were examined in this study. These patients were followed up prospectively to assess their treatment response. Successful treatment completers were tracked through the TB registry and death registry for relapse and death data till December 31, 2014. A total of 21,414 consecutive patients received treatment in the Tuberculosis and Chest Service of the Department of Health from January 1, 2006 to December 31, 2010 were included in this study. It was found that DM was independently associated with more chest symptoms (adjusted odds ratio (AOR): 1.13, p=0.006) and systemic symptoms (AOR: 1.30, p<0.001) but less with other site-specific symptoms (AOR: 0.58, p<0.001) at TB presentation. There was more frequent pulmonary involvement (AOR: 1.69, p<0.001), with more extensive lung lesion (AOR: 1.25, p<0.001), lung cavity (AOR: 2.00, p<0.001) and positive sputum smear (AOR: 1.83, p<0.001) and culture (AOR: 1.38, p<0.001), but no difference in the proportion of retreatment cases or isoniazid and/or rifampicin resistance. After initiation of treatment, there was higher overall incidence (AOR: 1.38, p<0.001) of adverse effects (mainly gastrointestinal symptoms, renal impairment and peripheral neuropathy), more smear non-conversion (AOR: 1.59, p<0.001) and culture non-conversion (AOR: 1.40, p=0.001) at two months, and lower combined cure/treatment completion rate at 12 months (AOR: 0.79, p=0.003), but no difference in the relapse rate after having successfully completed treatment.

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### From SARS to Avian Influenza Preparedness in Hong Kong

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The first human infection with avian influenza A(H5N1) was reported in Hong Kong in 1997. It continues to be a major threat to global public health as it is a likely candidate for the next influenza pandemic. Since the human outbreak of avian influenza A(H5N1) in Hong Kong, effective preparedness and response plan in case of an influenza pandemic was first formulated in 2005 and modified and strengthened in the following years. This paper describes in detail about avian influenza preparedness in public hospitals in Hong Kong to illustrate policies and practices associated with control of emerging infectious diseases (EIDs). In brief, the Hong Kong Special...
New Delhi metallo-β-lactamase-producing Enterobacteriaceae in Hong Kong

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Administrative Region (HKSAR) government developed strategy for the prevention and control of influenza pandemic after emergence of the first case of severe acute respiratory syndrome (SARS) in Hong Kong in 2003. The HKSAR government’s risk-based preparedness plan for influenza pandemics includes three response levels: Alert, Serious, and Emergency. The different response levels provide the command, control, and coordination frameworks for territory-wide response. This enables early detection based on epidemiological exposure followed by initiation of a care bundle and there are corresponding actions to be taken by public hospitals during different response levels. The Hospital Authority’s response to avian influenza generally follows the HKSAR government preparedness plans, so this greatly facilitates communication with the public. Key components of the pandemic response measures taken by the public hospital system in Hong Kong include strengthening disease surveillance systems, enhancing infection control practices, and building up surge capacity. Information technology, laboratory preparedness, clinical and public health management, and infrastructure support are some of the key components in establishing an effective and generalisable preparedness plan for EIDs. The Preparedness Plan for Influenza Pandemic has been used as a model to develop preparedness and response plans for other EIDs including Middle East respiratory syndrome, Ebola virus disease and Zika virus infection.

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Review of first 36 cases of New Delhi metallo-β-lactamase-producing Enterobacteriaceae in Hong Kong

Thirty-six cases with NDM-producing Enterobacteriaceae were isolated from the local registry of the Public Health Laboratory Service Branch, Centre for Health Protection of the Department of Health. Most of the patients (n=28) were adult and eight were children with age ranged from 4 months to 95 years (median=59 years). More male were affected with male-to-female ratio of 2.6:1. Majority were identified through the admission screening programme (n=28) and seven cases were identified from clinical specimens and one through contact tracing. All of them had at least one risk factor for NDM acquisition such as having travel history (n=35) and in contact with healthcare facilities outside Hong Kong (n=33, 28 patients had history of hospitalisation). Currently, all carbapenem-resistant Enterobacteriaceae (CRE) positive patients would be identified (‘tag’) in Hospital Authority’s Clinical practice Branch, Centre for Health Protection, Department of Health, Hong Kong SAR, China. The authors indicated that it was necessary to de-tag these patients for operation needs and rendering severe infections difficult to treat. In this study, authors reviewed the first 36 cases of NDM-producing Enterobacteriaceae identified in Hong Kong from 2009 to 2013.

New Delhi metallo-β-lactamases (NDMs) are enzymes with broad-spectrum inactivating activity against carbapenem and other β-lactams. Bacteria harbouring a blonDM gene are resistant to multiple antimicrobials, limiting therapeutic options and rendering severe infections difficult to treat. In this study, authors reviewed the first 36 cases of NDM-producing Enterobacteriaceae identified in Hong Kong from 2009 to 2013.

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NEWS IN BRIEF

A domestic cluster of pertussis

In May 2017, the Centre for Health Protection (CHP) recorded a domestic cluster of pertussis affecting a two-month-old girl and her 23-year-old father. The baby girl had presented with cough and runny nose since May 7, 2017 and was admitted to a public hospital on May 17. Her pernasal swab was tested positive for Bordetella pertussis. She was treated with antibiotic and was discharged on May 24. Upon contact tracing, her father had been found to have cough since April 30. He was referred to the Accident and Emergency Department of the public hospital on May 24. He did not require hospital admission. He was given antibiotic and remained in stable condition. His pernasal swab was also tested positive for Bordetella pertussis.

Epidemiological investigation revealed that both of them travelled to Guangdong from April 15 to 27. The girl was not yet due for her first dose of diphtheria, tetanus, acellular pertussis and inactivated polio virus vaccine while her father could not recall his own vaccination history. The great grandmother and father of the girl also had cough but their pernasal swabs were both tested negative for Bordetella pertussis. They were given chemoprophylaxis. Chemoprophylaxis were also offered to other asymptomatic close contacts.

A probable sporadic case of Creutzfeldt-Jakob disease

On May 26, 2017, CHP recorded a probable case of sporadic Creutzfeldt-Jakob disease (CJD) affecting a 55-year-old man with underlying illnesses. He had presented with left side rigidity since April 4, 2017, followed by myoclonus. He was admitted to a public hospital on April 24, 2017 due to increase in left upper limb involuntary movement. He was later found to have rapidly progressive dementia, dysphasia, dysphagia and akinetic mutism. Electroencephalography and imaging findings were compatible with CJD. His condition was stable in hospital. He had no known family history of CJD and there were no reported risk factors for iatrogenic or variant CJD. He was classified as a probable case of sporadic CJD.

A local sporadic case of listeriosis

On June 2, 2017, CHP recorded a case of listeriosis affecting an 81-year-old man with underlying illnesses. He presented with fever, shortness of breath and confusion on May 26 and was admitted to a public hospital on May 27. His blood culture yielded Listeria monocytogenes. He was treated with antibiotics and his condition was stable. He had no recent travel history. He had no history of consumption of high risk food item during the incubation period. His home contact was asymptomatic. Investigations are on-going.