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Panel on Health Services

Information note prepared by the Legislative Council Secretariat for the meeting on 15 February 2016

Measures for the prevention and control of Zika virus infection

Zika virus is an emerging mosquito-borne virus that was first identified in Uganda in 1947 in rhesus monkeys, and subsequently identified in human in 1952 in Uganda and the United Republic of Tanzania. Zika virus is mainly transmitted to humans through the bite of an infected Aedes mosquito. Mosquitoes become infected when they bite a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites. Aedes aegypti, which is currently not found in Hong Kong, is considered the most important vector for Zika transmission to humans. Other Aedes mosquito species such as Aedes albopictus widely present locally are also considered as potential vectors. Zika virus can also be transmitted through blood, but this is an infrequent mechanism. The virus has been isolated in semen. Cases of possible person-to-person transmission through blood transfusion and sexual contact have been reported.

2. At present, there is no vaccine to prevent Zika virus infection. While the incubation period is not clear, it is likely to be a few days to a week. The most common symptoms of Zika virus infection are similar to other arbovirus infection, and include fever, skin rash, conjunctivitis, muscle or joint pain and general malaise. These symptoms are usually mild and last for a few days. However, around 70% to 80% of infected people are asymptomatic. No specific antiviral treatment is currently available for the disease. Symptomatic treatment is given to relieve discomfort. Most infected people recover fully. According to the Centres for Disease Control and Prevention of the United States, Zika virus usually remains in the blood of an infected person for a week but it can be found longer in some people.

3. Outbreak of Zika virus infection was reported for the first time from the South Pacific on Yap Island in the Federated States of Micronesia in 2007. Outbreaks have since then been reported in Africa, the Americas, Asia and the Pacific. During large outbreaks in French Polynesia in 2013 to 2014 and in Brazil in 2015, national health authorities reported potential autoimmune neurological complications[1] of Zika disease. On 28 November 2015, the Ministry of Health of Brazil established a relationship between an increase in cases of microcephaly[2] in newborns and Zika virus infections in the country's northeast. According to a preliminary analysis of research carried out by Brazilian authorities, the greatest risk of microcephaly and malformations appears to be associated with infection during the first trimester of pregnancy.

4. On 1 February 2016, experts of the International Health Regulations Emergency Committee of the World Health Organization ("WHO") agreed that a causal relationship between Zika infection during pregnancy and microcephaly was strongly suspected, though not yet scientifically proven. WHO declared on the same day that the recent cluster of microcephaly cases and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constituted a Public Health Emergency of International Concern. There was a need to improve surveillance, the detection of infections, congenital malformations, and neurological complications; to intensify the control of mosquito populations; and to expedite the development of diagnostic tests and vaccines to protect people at risk, especially during pregnancy. According to WHO, while travellers to areas with Zika virus transmission[3] should be provided with up-to-date advice on potential risks and appropriate measures to reduce the possibility of exposure to mosquito bites, there should be no restrictions on travel or trade with areas with Zika virus transmission.

5. Locally, the Department of Health has been reminding outbound travellers of the risk of Zika virus infection since 18 January 2016, and advising pregnant women and women preparing for pregnancy to take necessary anti-mosquito measures as a precaution. An interdepartmental meeting chaired

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[1] These complications include, among others, Guillain-Barré syndrome and meningitis.

[2] Microcephaly is a condition where a baby is born with a small head or the head stops growing after birth. There is no specific treatment for microcephaly. It is difficult to predict the consequences of microcephaly at the time of birth. Babies born with microcephaly may develop convulsions and suffer physical and learning disabilities as they grow older.

[3] According to the latest report by the Pan American Health Organization/WHO, autochthonous transmission of Zika virus was reported from epidemiological week 17 of 2015 to epidemiological week 4 of 2016 in the following countries and territories in the Americas Region: Barbados, Bolivia, Brazil, Colombia, Curaçao, Dominican Republic, Ecuador, El Salvador, French Guiana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Martinique, Mexico, Nicaragua, Panama, Paraguay, Puerto Rico, Saint Martin, Suriname, US Virgin Islands, Venezuela. The European Centre for Disease Control and Prevention also lists out 31 countries which have reporting of local transmission of confirmed Zika virus infections in past nine months as of 28 January 2016.

by the Secretary for Food and Health was held on 1 February 2016 to discuss the latest local risk assessment as well as prevention and control measures against Zika virus infection. To enhance the surveillance, prevention and control of spread of Zika virus in Hong Kong, the Prevention and Control of Disease Ordinance (Amendment of Schedule 1) Notice 2016 gazetted on 5 February 2016 has made Zika virus infection a statutorily notifiable disease under the Prevention and Control of Disease Ordinance (Cap. 599) taking effect on the same day. All clinically compatible cases with laboratory confirmation[4] should be reported immediately to the Centre for Health Protection ("CHP"). Other response measures that have been put in place by the Administration to safeguard Hong Kong against Zika virus infection include stepping up port health measures and mosquito control work. CHP has also worked with the Hospital Authority to strengthen surveillance, at public outpatient clinics and Accident and Emergency Departments, of patients presenting with compatible symptoms who had travelled to the affected areas.

6. At the Council meeting of 3 February 2016, Dr Hon Priscilla LEUNG and Hon Alice MAK raised two urgent oral questions in relation to measures against Zika virus infection. The questions and the Administration's replies are in **Appendices I to II** respectively.

Council Business Division 2
Legislative Council Secretariat
11 February 2016

[4] According to the Administration, laboratory tests can be arranged with the Public Health Laboratory Services Branch for a clinical suspected case.

Press Releases

LC Urgent Q1: Zika virus
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Following is an urgent question by the Hon Priscilla Leung under Rule 24(4) of the Rules of Procedure and a reply by the Secretary for Food and Health, Dr Ko Wing-man, in the Legislative Council today (February 3):

Question:

There have been several thousand cases of Zika virus infection in Brazil since it reported the first infection in May last year. According to the information of the World Health Organization (WHO), the Zika epidemic is spreading rapidly, with reported infection cases in more than 20 countries in Central and South America at present. WHO anticipates a tendency for the epidemic to spread explosively. WHO has pointed out that Zika virus may be associated with microcephaly in infants and Guillain-Barré Syndrome (an infective polyneuritis). It is learnt that Zika virus mainly spreads through the Aedes aegypti mosquito. Some experts have pointed out that the Aedes albopictus mosquito, which is commonly found in Hong Kong, can also transmit the virus, and thus the public are very concerned about a possible outbreak of Zika epidemic in Hong Kong. In this connection, will the Government inform this Council:

(1) of the immediate measures taken by the authorities to provide the public (in particular pregnant women and outbound travellers) and the tourism sector with information and health advice on the Zika virus; whether they will consider the issuance of an outbound travel alert immediately for countries and regions with serious Zika epidemic outbreak, and ensure that the Food and Health Bureau and the Security Bureau are in close communication on this issue, so as to avoid the recurrence of the chaotic situation in June last year caused by the incongruent information issued in relation to the outbreak of the Middle East Respiratory Syndrome in South Korea;

(2) as the Zika epidemic is spreading rapidly across the globe, whether the authorities have kept themselves updated on the latest development of the epidemic, and whether they have currently assessed the risk of a Zika epidemic outbreak in Hong Kong; if they have, of the assessment outcome; if not, the reasons for that; and

(3) whether the authorities have immediately put in place contingency measures in case of an outbreak of Zika epidemic in Hong Kong, including anti-mosquito operations, epidemic prevention measures at boundary control points, screening of infection cases at outpatient clinics as well as accident and emergency departments, formulation of clinical and medication guidelines, etc.; if they have, of the details; if not, how the authorities ensure that the epidemic can be brought under control in case of an outbreak in Hong Kong?

Reply:

President,

Zika virus infection is a disease caused by Zika virus which

is mainly transmitted by mosquitoes. Zika virus infection is endemic in some parts of Africa and Asia, and was first identified in the South Pacific after an outbreak on Yap Island in the Federated States of Micronesia in 2007. Prevalence of Zika virus infection has been detected in the Americas since 2014, with the outbreak of Zika virus infection in Brazil starting in mid-2015.

Zika virus is primarily transmitted to humans through bites of Aedes mosquitos. The incubation period is not clear, but likely to be a few days to a week. People infected with Zika virus will develop symptoms including mild fever, rash, muscle pain, joint pain, headache, retro-orbital pain and conjunctivitis, which last for a few days. At present, there is no specific medication for the disease. Symptomatic treatment is given to relieve discomfort. At present, around 70-80 per cent of infected people are asymptomatic and most infected people can recover fully.

In the past, people infected with Zika virus developed relatively mild illness and therefore the disease did not raise much concern. However, due to its latest spread in the Americas and the reports of its strong link with microcephaly of infants, the virus is now under close international attention.

At the emergency meeting held on February 1, 2016, the World Health Organization (WHO) declared that the relationship between Zika virus infection and the recent cases of microcephaly in infants and other neurological disorders constituted a Public Health Emergency of International Concern and recommended a series of preventive and control measures.

My reply to the three parts of the question is as follows:

(1) The travel health advice issued by the Department of Health (DH) is mainly to provide information on any disease outbreak around the world, give health advice on protection against disease vectors and make recommendation on vaccinations. The advice is issued in the light of a disease's risk of spreading in the affected areas and import to Hong Kong. Factors taken into account include the prevalence and spreading of the disease in the affected areas, and whether there are close economic ties and extensive travel between Hong Kong and the affected areas. Before issuing a travel health advice, the DH will make reference to the advice given by WHO and other overseas health authorities.

Moreover, the Government has put in place the Outbound Travel Alert (OTA) System, which aims to help Hong Kong residents better understand the possible risks to personal safety in travelling to overseas places that are popular with Hong Kong residents. Should there be public health reasons, the Security Bureau may, based on the advice of the Food and Health Bureau, disseminate information through the OTA System to help the public and the tourism industry better understand the possible health risks and make arrangements accordingly. The Food and Health Bureau and the Security Bureau have been maintaining close communication with each other.

The DH issued an alert on January 18, reminding outbound travellers of the risk of Zika virus infection.

After an emergency meeting on February 1, the emergency committee of the WHO recommended that travel or trade

restrictions should not be imposed on countries and areas with Zika virus infection outbreaks. Nevertheless, in view of the rapid spread of the Zika virus infection around the world, the DH has already issued a travel advice suggesting that, if not necessary, pregnant women and women preparing for pregnancy should consider deferring their trip to areas with past or current evidence of ongoing Zika virus transmission. Those who must travel to any of these areas should seek medical advice of their doctor before the trip, adopt contraception if appropriate and strictly follow steps to avoid mosquito bites during the trip. Travellers should apply mosquito repellent for 14 days after returning from the affected areas. If a female partner is at risk of getting pregnant, or is already pregnant, condom use is advised for a male traveller. Travellers should consult and reveal to their doctor their travel history if symptoms develop. The travel advice has been uploaded to the website of the Centre for Health Protection (CHP), the DH's Travel Health Service homepage and the Security Bureau's Outbound Travel Alert website.

The DH has maintained close communication with the tourism sector and other stakeholders, especially travel agents organising tours to the affected areas and their tour leaders and tour guides, to provide them with up-to-date disease information and health advice regularly. It will continue to closely monitor the latest developments in neighbouring and overseas areas.

(2) Zika virus is primarily transmitted to humans through bites of Aedes mosquitoes, and Aedes aegypti is considered the most important vector for Zika virus transmission to humans. Although Aedes aegypti is currently not found in Hong Kong, other Aedes mosquito species such as Aedes albopictus are also considered potential vectors. Since Aedes albopictus is widely present locally, there is a risk of secondary spread of imported infections in Hong Kong. Furthermore, extensive international travel will increase the risk of imported Zika virus cases in Hong Kong.

(3) The Food and Health Bureau held an inter-departmental meeting with the DH, the Food and Environmental Hygiene Department (FEHD) and the Hospital Authority (HA) on February 1, 2016 to discuss the latest local risk assessment as well as prevention and control measures against Zika virus infection. First of all, to enhance the surveillance of Zika virus in Hong Kong, the Government will publish in the Gazette the Prevention and Control of Disease Ordinance (Amendment of Schedule 1) Notice 2016 on February 5, 2016 to make Zika virus infection a statutorily notifiable infectious disease under the Prevention and Control of Disease Ordinance (Cap. 599) with immediate effect on the same day. The CHP of the DH is to be notified of any confirmed case for investigation and follow-up actions. The CHP has sent letters to inform doctors and hospitals of the relevant legislative amendments. The Government will also put in place the following preventive measures to safeguard against the import of the virus to Hong Kong:

On epidemic prevention measures at boundary control points, to prevent the import of Zika virus to Hong Kong, the Port Health Office has implemented a series of measures at various boundary control points (BCPs) in the territory. Details are as follows:

(i) The Port Health Office will carry out regular inspections at BCPs to ensure that good environmental hygiene is maintained and proper mosquito control measures are in place. The Port Health

Inspector will enhance the training for cleansing service and pest control contractors at BPCs to ensure that vector control measures are effective.

(ii) Health promotion at BCPs will be enhanced through pamphlet distribution and poster display to remind travellers of the preventive measures against Zika virus.

(iii) Moreover, temperature checks will be conducted on an ongoing basis for all inbound travellers at all BCPs. Suspected cases will be referred to medical institutions for follow-ups. The DH will also encourage tourists travelling from the affected countries and areas and Hong Kong residents returning from those places to apply mosquito repellent for 14 days after arrival in Hong Kong to reduce the risk of disease transmission. This is the most important thing. I want to reiterate that I hope all Hong Kong residents who travelled to these areas to apply mosquito repellent for 14 days after returning to Hong Kong, reducing the risk of an infected person to transmit the virus to Aedes mosquitoes in Hong Kong.

Regarding out-patient clinics and Accident and Emergency Departments, the HA will take active measures in response to the DH's notification guidelines. It will inform frontline staff that Zika virus has been made a statutorily notifiable infectious disease and update the electronic system so that doctors can make the relevant notifications. Travellers who develop clinical symptoms within two weeks after returning Hong Kong from affected areas will be arranged for diagnostic tests for Zika virus infection. At the same time, tests for dengue fever and chikungunya fever will also be conducted. The HA will work closely with the Public Health Laboratory Services Branch of the CHP, specimens will be sent for virus testing so that confirmed cases can be identified as early as possible. The relevant information has been disseminated to the Accident and Emergency Departments and out-patient clinics.

Although there is no medication or vaccine against Zika virus at present, the HA will keep close watch on relevant guidelines from the CHP and the WHO, and take the appropriate actions accordingly.

On mosquito elimination, in response to the several local dengue fever cases which came to light in the past two years, FEHD has stepped up its mosquito control work particularly during the winter period. FEHD has since October 2015 increased the number of surveillance areas with ovitraps for Aedes albopictus across the territory from 44 to 52. Surveillance operations for Aedes albopictus in all port areas (except the airport where surveillance is done once a week) have also been stepped up from once a month to twice a month since November 2015. Since Aedes albopictus may carry both dengue fever and Zika virus, our continuous efforts on the above front will help enhance the surveillance of dengue and Zika vectors. In 2016, FEHD will keep up the momentum of its work in mosquito control. This includes:

(i) increasing the number of out-sourced pest control roving teams in winter (from December 2015 to March 2016) to 266 teams, i.e. maintaining the same number of teams as in summer 2015;

(ii) stepping up mosquito control work during the year-end clean-up campaign launched on January 15, 2016;

(iii) implementing the Anti-mosquito Campaign (Note) in 2016 by

three phases. The first phase will be launched from February 15 to March 18. To upkeep the effectiveness of the campaign, FEHD will, immediately after each phase of the campaign, conduct thematic operations across the territory to enhance the mosquito control work in strategic areas; and

(iv) having regard to the fact that works sites are prone to the breeding of mosquitoes, FEHD will continue to liaise with relevant departments (e.g. the Civil Engineering and Development Department), brief the contractors of various works departments on the importance of mosquito prevention, as well as enhance the efforts to eliminate mosquitoes within particular works sites where necessary.

We will continue to closely monitor the latest developments in overseas and maintain liaison with WHO and health authorities of the Mainland and neighbouring areas. The local response and health surveillance will also be adjusted if necessary.

Note: The Campaign aims at enhancing public awareness of the potential risks of mosquito-borne diseases, as well as encouraging the community and various government departments to make concerted efforts and actively participate in anti-mosquito work.

Ends/Wednesday, February 3, 2016
Issued at HKT 21:04

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Press Releases

LC Urgent Q2: Measures adopted by Hong Kong in response to Zika virus
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Following is an urgent question by the Hon Alice Mak under Rule 24(4) of the Rules of Procedure and a reply by the Secretary for Food and Health, Dr Ko Wing-man, in the Legislative Council today (February 3):

Question:

Over the past few months, thousands of newborn babies in Brazil were born with microcephaly, which were suspected to be related to their mothers having been infected with Zika virus through mosquito bites during pregnancy. It has been reported that there is a trend of the Zika epidemic spreading across the globe. Apart from European countries and the United States with Zika infection cases reported one after another, the first confirmed case of Zika infection was reported on the 19th of last month in Taiwan, which is close to Hong Kong. This has raised concern among Hong Kong people that the Zika epidemic may spread to Hong Kong at any time. In this connection, will the Government inform this Council:

(1) of the immediate measures that the authorities have in place to prevent imported cases of Zika infection; whether rapid tests are currently available to detect if persons entering the territory have been infected with Zika virus;

(2) as it has been reported that Zika infection cases have been reported in quite a number of popular tourist hotspots in Southeast Asia frequented by Hong Kong people, including Thailand, Indonesia, etc., whether the authorities will immediately discuss with the health authorities in those countries to establish reciprocal notification mechanisms on the Zika epidemic; and

(3) as mosquito problems are relatively serious in quite a number of districts in the territory, such as Yuen Long, Tin Shui Wai, Tung Chung and Tseung Kwan O, of the immediate measures taken by the authorities to prevent an outbreak of the Zika epidemic in those districts?

Reply:

President,

As I have already introduced the background information on Zika virus, I will not repeat here.

At the emergency meeting held on February 1, 2016, the World Health Organization (WHO) declared that the relationship between Zika virus infection and the recent cases of microcephaly in infants and other neurological disorders constituted a Public Health Emergency of International Concern and recommended a series of preventive and control measures.

Against the above background, my reply to the three parts of the question is as follows:

(1) In response to the Zika virus infection, the Food and Health Bureau has held an inter-departmental meeting with the Department of Health (DH), the Food and Environmental Hygiene Department (FEHD) and the Hospital Authority (HA), and immediately implemented a host of measures.

First of all, statutory notification is an important element in disease surveillance, prevention and control. To enhance surveillance of Zika virus infection, the Government will publish in the Gazette the Prevention and Control of Disease Ordinance (Amendment of Schedule 1) Notice 2016 on February 5, 2016 to make Zika virus infection a statutorily notifiable infectious disease under the Prevention and Control of Disease Ordinance (Cap. 599) with immediate effect on the same day. The Centre for Health Protection (CHP) of the DH is to be notified of any confirmed case for investigation and follow-up actions. The CHP has sent letters to inform doctors and hospitals of the relevant legislative amendments.

In addition, the DH has been reminding outbound travellers of the risk of Zika virus infection since January 18, 2016 and advising pregnant women and women preparing for pregnancy to take necessary anti-mosquito measures as a precaution. I reiterate that, if not necessary, pregnant women should consider deferring their unnecessary trip to areas with ongoing Zika virus transmission. Travellers should seek medical advice before the trip, adopt contraception if appropriate and avoid mosquito bites during the trip, and should continue to take protection measures such as applying mosquito repellent for 14 days after returning from affected areas. If a female partner is at risk of getting pregnant, or is already pregnant, condom use is advised for a male traveller. Travellers should consult and reveal to their doctor their travel history if symptoms develop. The Port Health Office of the DH has also stepped up port health measures and enhanced risk communication with stakeholders and travellers to reduce the risk of importing Zika virus to Hong Kong.

At present, the CHP's Public Health Laboratory Services Branch is responsible for Zika virus testing. Application of the laboratory tests and experiment results is to be jointly assessed by clinicians and microbiologists. Their assessment will be based on the patient's epidemiological and clinical history and the time interval from exposure to the vector to onset of symptoms or seeking of medical attention. A report on preliminary positive/negative test result can be issued within one day upon receipt of the test sample, while a report to confirm diagnosis will take one more day.

(2) The International Health Regulations (2005) is an international legal instrument binding on all WHO member states, including the People's Republic of China, and it extends to cover Hong Kong. The CHP has been maintaining close liaison with the WHO and health authorities of the neighbouring areas to closely monitor the latest situation relating to Zika virus infection in overseas countries.

Moreover, the CHP has been maintaining close communication with the health authorities of Guangdong and Macao on the surveillance of Zika virus infection. A teleconference has been held among the three places to further enhance the notification and communication mechanism for exchanging information. The three parties agreed to strengthen their co-operation on the prevention and control of the disease and notify each other in case of any confirmed cases.

(3) FEHD will, in the light of the developments taking place in different districts and the actual situation on the ground, adjust its surveillance measures in respect of Aedes albopictus. This includes adjusting the coverage of the ovitrap surveys or increasing the number of surveillance points. In Tin Shui Wai, Yuen Long and Tung Chung, most of the areas where population flows congregate such as large residential estates, hospitals and schools are already covered by the ovitrap surveys. For the Tseung Kwan O district, a new surveillance area (namely Tseung Kwan O North) was added in 2015. In 2016, FEHD will implement the anti-mosquito campaign by three phases. The first phase is to be launched from February 15 to March 18, 2016. To upkeep the effectiveness of the campaign, FEHD will, immediately after each phase of the campaign, conduct thematic operations (Note) across the territory to enhance the mosquito control work in strategic areas. I have also reiterated the importance of this issue at the meeting with Chairmen and Vice-Chairmen of environmental hygiene committees of 18 District Councils, hoping that they will complement FEHD's anti-mosquito work.

Lastly, I would like to take this opportunity to remind the public again that there is no vaccine to prevent Zika virus infection at present. According to the WHO, controlling mosquito breeding and avoiding mosquito bites are the most important protective measures, especially for pregnant women, against the disease. To prevent Zika virus infection, the public should take anti-mosquito measures and eliminate mosquito breeding.

I want to reiterate an important point that we do not want to see any cases where Hong Kong residents, who travelled to affected areas and were infected with Zika virus through mosquito bites, are subsequently bitten by Aedes albopictus in Hong Kong. It may infect the mosquitos in Hong Kong, leading to secondary spread of the virus in Hong Kong. Therefore, the most important thing, which is also relatively easy to be done, is that travellers should continue taking protection measures, that is applying mosquito repellent for at least 14 days, after returning from the affected areas.

Note: The Campaign aims at enhancing public awareness of the potential risks of mosquito-borne diseases, as well as encouraging the community and various government departments to make concerted efforts and actively participate in anti-mosquito work.

Ends/Wednesday, February 3, 2016
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