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Panel on Health Services

**Background brief prepared by the Legislative Council Secretariat
for the meeting on 17 November 2014**

Prevention and control measures against Ebola virus disease

Purpose

This paper summarizes the concerns of members of the Panel on Health Services ("the Panel") on the prevention and control measures against Ebola virus disease ("EVD").

Background

2. EVD, formerly known as Ebola haemorrhagic fever, is caused by infection with Ebola virus. According to the World Health Organization ("WHO"), EVD is one of the world's most virulent diseases. Ebola virus is introduced to the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals including chimpanzees, gorillas, fruit bats, monkeys, forest antelopes and porcupines. It then spreads in the community through human-to-human transmission, with infection resulting from direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and indirect contact with environments contaminated with such fluids. Airborne transmission has not been documented during previous EVD outbreaks. Sudden onset of fever, intense weakness, muscle pain, headache and sore throat are typical signs and symptoms of infection. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding. The incubation period of EVD varies from two to 21 days. Patients are not contagious during the incubation period. While there are currently no licensed vaccines or medicines against EVD, two candidate vaccines are currently being tested in humans for safety and efficacy.

On the treatment modalities, use of convalescent whole blood and plasma collected from patients recovered from EVD for transfusion has been prioritized by WHO for investigation.

3. The current EVD outbreak in West Africa is unprecedented in scale and geographical distribution since the identification of Ebola in 1976. On 8 August 2014, WHO declared it a Public Health Emergency of International Concern, and a series of preventive and control measures were recommended. As of 9 November 2014, there have been 14 098 reported Ebola cases, including 5 160 reported deaths, in eight affected countries since the outbreak began. The three countries with widespread and intense transmission are Guinea, Liberia and Sierra Leone. The remaining five countries (namely Mali, Nigeria, Senegal, Spain and the United States) have reported a case or cases imported from these three countries. Separately, an outbreak of EVD unrelated to the one originated in West Africa was reported in the Equateur province of the Democratic Republic of the Congo in late August 2014. A total of 66 cases, including 49 deaths, were reported but no new cases have arisen in more than 31 days.

4. At present, EVD is a statutorily notifiable infectious disease under the disease group viral haemorrhagic fever¹. To enhance the effectiveness of response to possible risks of EVD as well as to strengthen the handling capacity when a confirmed case of EVD is found Hong Kong, the Government announced the Preparedness and Response Plan for Ebola Virus Disease on 20 August 2014. In the Plan, a three-tier response level (i.e. Alert, Serious and Emergency Response Levels, which are based on the risk assessment of EVD that may affect Hong Kong and its health impact on the community) is used. At present, the Alert Response Level is activated. According to the Administration, a series of preventive strategies, covering areas such as risk communication, liaison with other health authorities, port health measures, stockpile of personal protective equipment ("PPE"), publicity and public education, and drills for concerted interdepartmental actions, have already been put in place to safeguard Hong Kong against EVD. No confirmed case of EVD has been identified so far in Hong Kong.

Deliberations of the Panel

5. The Panel discussed the measures for the prevention and control of EVD at a special meeting held in August 2014. The deliberations and concerns of members are summarized below.

¹ Viral haemorrhagic fever refers to a group of systemic mild to life-threatening viral infection often complicated by haemorrhagic syndromes. The most concerned viral haemorrhagic fever include Ebola, Marburg, Lassa, and Crimean-Congo haemorrhagic fever viruses.

Port health measures

6. Members were gravely concerned about the port health measures put in place by the Administration to prevent the importation of EVD into Hong Kong. Some members were of the view that incoming travellers, in particular those from the EVD-affected countries, should be required to make health declaration and provide their local contact information upon their arrival at the Hong Kong International Airport ("the Airport") or other boundary control points ("BCPs"). This could facilitate contact tracing and investigation when suspected EVD case was reported.

7. The Administration advised that it had no plan to require incoming travellers to make health declaration at this stage. At present, the Department of Health ("DH") had been delivering updated EVD-related health promotion message to travelers through health leaflets and broadcasting at the Airport and other BCPs, as well as the travel health website. Airlines were also requested to conduct in-flight broadcast of health message at all incoming passenger flights to alert travellers about the disease. In addition, immigration officers at all BCPs assisted in identifying arriving passengers holding travel documents issued by the EVD-affected countries and provided them written information sheets about EVD, which reminding travellers the means to seek assistance if they developed symptoms upon arrival or during their visit to Hong Kong. All suspected cases identified at the Airport and other BCPs would be referred to the Hospital Authority Infectious Disease Centre ("HAIDC") in Princess Margaret Hospital for examination.

8. Given that prolonged Ebola virus shedding could occur up to seven weeks after recovery from illness, there was a concern that incoming travellers who had recovered from EVD and no longer displayed any symptoms of infection would remain contagious. According to the Administration, studies revealed that Ebola virus was detected by reverse-transcription polymerase chain reaction in some specific bodily fluids, such as breast milk and semen, of convalescent patients weeks after recovering from the acute phase of their illness and the virus had been cleared from their blood. However, the risk of person-to-person transmission from convalescent patients to people in the community leading to an outbreak was low, as the EVD virus would only spread by means of direct contact with these specific bodily fluids, such as through breast feeding and sexual intercourse.

Outbound travel alert

9. Some members are concerned that health risk was not a factor to be considered under the three-tier Outbound Travel Alert ("OTA") system, which was designed to facilitate members of the public to better understand the risk or threat to their personal safety when travelling overseas. There was a view that

the issuance of a notice from DH to advise Hong Kong residents to avoid unnecessary travel to countries with conditions that might affect travellers' health and posting such notice in the webpages of OTA and the Centre for Health Protection ("CHP") respectively, as in the present case of the outbreaks of Ebola virus disease in Guinea, Liberia, Nigeria and Sierra Leone, could not provide a comparative level of alert to members of the public. The Security Bureau should review the OTA system to include health conditions of a country as a factor for consideration in assessing the travel risk and the need to issue an OTA.

10. Subsequent to the meeting, the Security Bureau provided a response to the Panel in November 2014 advising that security threat and health risk involved different considerations, guided by necessary expertise and professional judgment. Insofar as health risk was concerned, DH had all along maintained vigilance and issued timely advice to the public, if the circumstances so warranted. For the case of EVD, DH had advised Hong Kong residents to avoid unnecessary travel to the affected countries and areas, namely Equateur province of the Democratic Republic of Congo, Guinea, Liberia and Sierra Leone. This travel advice had been widely promulgated for public's attention and uploaded to the front page of CHP and DH's Travel Health Service websites, as well as the OTA website of the Security Bureau.

Liaison with the Mainland health authorities

11. Noting an increasing number of African travellers on the Mainland, some members were concerned about the effective operation of the notification mechanism on infectious diseases between Hong Kong and the Mainland health authorities. According to the Administration, CHP had been exchanging information with the National and Guangdong health authorities on EVD and its latest preventive and control measures. A point-to-point notification mechanism had also been set up with related health authorities. Should there be any EVD cases reported on the Mainland or Hong Kong, there would be a prompt exchange of information so that preventive measures were taken as early as possible.

Infection control in healthcare settings and community

12. Concern was raised about the control measures putting in place by the Administration for handling suspected EVD cases, and provision of training and PPE for healthcare personnel. The Administration advised that having regard to the recommendations of WHO and the outbreak updates, HA had considered the risk of the disease and the responsiveness of public hospitals. The strategy of "early notification, early isolation and early testing" was adopted in order to reduce the risk of spread of the disease in Hong Kong. Once notification of a suspected EVD case was received, CHP would initiate immediate epidemiological investigation, including contact tracing and field investigation.

The patients concerned would be referred to HAIDC for isolation, diagnosis and treatment, and specimens would be collected for laboratory testing to confirm or refute the diagnosis of EVD. This apart, HA had procured PPE that were compatible with the WHO standard for use by frontline staff to reduce their risk of contracting EVD. Infection control training would also be provided to healthcare workers.

Patient management

13. Members noted that no drug regulatory authorities had registered any drugs for the treatment of EVD and some investigational drugs against EVD were still in the early stage of product development. They were concerned about the management of patients if there was a confirmed EVD case in Hong Kong.

14. According to the Administration, there was currently no specific treatment for EVD and patients would be managed by supportive treatment. This notwithstanding, WHO had announced that it was ethical to offer unproven interventions with yet unknown efficacy and adverse effects as potential treatment of EVD. The Scientific Committee on Emerging and Zoonotic Diseases under CHP had advised that subject to ethical approval, consideration could be given to using estrogen receptor antagonist, an approved drug for treating breast cancer, for the treatment of EVD cases in Hong Kong. Efforts had also been and would continuously be made by the Administration to maintain contact with various developers of the potential products under investigation and trial on the latest situation of product development and the possibility to obtain them. According to the Pharmacy and Poisons Ordinance (Cap. 138), doctors could through the established mechanism, apply to DH for the import of unregistered pharmaceutical products for treatment of their patients when clinically indicated.

Publicity and public education

15. Members were of the view that the Administration should step up publicity on the prevention of EVD in daily setting, and organize target health education activities for the local African community and guesthouses to remind them to stay vigilant against EVD.

16. The Administration advised that DH had organized various health education activities on the prevention of EVD and personal and environmental hygiene for the general public. Targeting specific population groups, CHP had visited guesthouses where the African community stayed to deliver health advice, pamphlets and posters, and provide briefings for representatives of guesthouses in Yam Tsim Mong District as well as management companies and owners' corporations of relevant buildings. In addition, a dedicated webpage on EVD

had been set up under the website of CHP. New television and radio Announcements in the Public Interest Information would also be introduced to deliver information of preventive measures against EVD.

Recent developments

17. Starting from 20 October 2014, arriving passengers at the Airport are required to fill in their personal information, travel history, health status and contact history with EVD patients in a health surveillance questionnaire if they have travelled to the EVD-affected countries in the past 21 days or are holding a travel document issued by the affected countries. The completed questionnaire will be passed to DH's Port Health Office ("PHO") staff at the counter set up in the arrival hall of the Airport before immigration clearance. If these arriving passengers have any symptoms of EVD, or have come into contact with any suspected or confirmed patients of EVD or an EVD patient's dead body, blood, secretions, organs or body fluid, PHO's officers will perform further assessment and refer them to HAIDC for examination.

18. To enhance surveillance over patients with low grade fever probably at the early stage of infection of Ebola virus, CHP has revised the reporting criteria of EVD cases on 20 October 2014 by lowering the body temperature of fever patients suspected of EVD from 38 to 37.5 degrees Celsius.

Relevant papers

19. A list of the relevant papers on the Legislative Council website is in the **Appendix**.

Relevant papers on the prevention and control of Ebola virus disease

Committee	Date of meeting	Paper
Panel on Health Services	22.8.2014 (Item I)	Agenda CB(2)281/14-15(01)

Council Business Division 2
Legislative Council Secretariat
14 November 2014