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Panel on Health Services

Updated background brief prepared by the Legislative Council Secretariat for the meeting on 13 July 2009

Prevention and control of human swine influenza infection in Hong Kong

Purpose

This paper gives an account of the discussions by the Panel on Health Services (the HS Panel) and the Panel on Food Safety and Environmental Hygiene (the FSEH Panel) on prevention and control of human swine influenza (HSI) infection in Hong Kong.

Background

2. Human cases of a new strain of swine influenza A (H1N1) virus infection were identified in April 2009 in Mexico, the United States (US) and Canada. According to the World Health Organization (WHO), the swine influenza A(H1N1) viruses characterised in this outbreak had not been previously detected in pigs or humans. Having regard to the occurrence of human cases associated with an animal influenza virus, and the multiple community outbreaks which affected mostly healthy young adults, WHO raised the alert level for swine influenza pandemic to Phase 5 on 30 April 2009, signifying that a global pandemic was imminent. On 27 April 2009, the Administration gazetted "Swine influenza" as a statutorily notifiable disease with immediate effect under the Prevention and Control of Disease Ordinance (Cap. 599) and as a specified disease under the Prevention and Control of Disease Regulation (Cap. 599A).

Past discussions by the HS Panel and the FSEH Panel

3. The HS Panel and the FSEH Panel held a joint meeting on 2 May 2009 with the Administration, following the confirmation of the first HSI in Hong Kong at about 8 pm on 1 May 2009 which involved a 25-year-old Mexican man (the index patient). Upon the confirmation of the first HSI case, the Director of Health issued an isolation order on the Metro Park Hotel in Wan Chai, where the index patient had stayed after arriving Hong Kong, for a period of seven days until 8 pm on 8 May 2009 to prevent the spread of the disease to the community.

Disease surveillance

4. Hon Fred LI pointed out that the fact that the Administration had failed to detect the index patient upon his arrival in Hong Kong demonstrated that merely measuring the body temperature of passengers arriving in Hong Kong was not enough, as the incubation period of human swine influenza was up to seven days. To better protect the community against HSI infection, the Administration should require all inbound passengers from affected areas, such as Mexico, to undergo medical assessment at the airport and border control points before allowing them to enter Hong Kong.

5. The Administration explained that in addition to body temperature screening, all incoming passengers were required to complete and submit health declaration forms upon arriving at the Hong Kong International Airport. Passengers who indicated in the forms that they came from affected areas and/or had flu-like symptoms, such as coughing or sneezing, would be sent to the medical posts set up at the airport to undergo medical assessment. To enhance the preventive measures against human swine influenza infection, Immigration Department staff at the airport had been instructed to send all Mexican passport holders to undergo medical assessment at the medical posts set up at the airport. If a Mexican visitor was assessed to have no flu-like symptoms, he would be asked to leave his contact address and/or number to enable Department of Health (DH) staff to check on his health condition daily and for a period of seven days. On the other hand, if a Mexican visitor was suspected to have flu-like symptoms, he would be placed under quarantine for seven days.

6. Hon Andrew CHENG considered it more effective if all incoming passengers were required to remain inside the airplane after landing in Hong Kong to facilitate checking by DH staff to see if these passengers had flu-like symptoms, and if so, to take down the names of the passengers sitting three rows in front of and three rows behind the suspected passenger and where they would be staying in Hong Kong for tracing later on if required.

7. The Administration pointed out that if no passenger displayed or developed any flu-like symptoms, neither measuring body temperature nor dispatching DH staff to check the health conditions of passengers onboard a plane would be useful in screening suspected passengers. Hence, airlines had been advised that their cabin crew should inform the authority concerned of any suspected case, prior to the airplane's landing in Hong Kong.

8. Hon Tommy CHEUNG and Hon Vincent FANG were of the view that the Hong Kong Special Administrative Region Government should require all airline and cross-boundary bus and vessel operators to take the body temperature of their passengers bound for Hong Kong as a condition for allowing their passengers to enter Hong Kong.

9. The Administration advised that to do so would be at variance with WHO's recommendation that imposing travel restrictions would have very little effect on stopping the virus from spreading, but would be highly disruptive to the global community. Moreover, not every place outside Hong Kong considered taking

body temperature of all incoming and departing travellers at airport and border control points an effective means to prevent outbreak of communicable disease, as had been practised by Hong Kong since the SARS outbreak in Hong Kong in April 2003. The Administration, however, pointed out that it could not be ruled out that WHO would later recommend affected countries to require all airlines to take the body temperature of their passengers before allowing passengers with no fever to board the plane.

10. Hon Albert HO suggested placing all incoming travellers from Mexico under isolation or quarantine for seven days. Hon Audrey EU was also of the view that Mexican visitors should at least be subject to medical surveillance for seven days upon their arrival at Hong Kong.

11. The Administration explained that under Cap. 599A, only persons whom a health officer had reason to suspect to be infected with a specified infectious disease could be placed under isolation and only persons whom a health officer had reason to believe to have had contact with a person suspected to be infected with a specified infectious disease could be placed under quarantine. The Administration supplemented that the Consul General of Mexico had been informed that Hong Kong would not rule out prohibiting people from Mexico to enter Hong Kong if WHO recommended imposing travel restrictions on Mexico in relation to the outbreak of the influenza A(H1N1) virus.

Naming of human swine influenza

12. Noting that "Influenza A (H1N1)" was used by WHO when referring to the new virus affecting humans, Hon WONG Kwok-hing and Hon James TO asked the Administration whether it would change "Swine influenza" in the Prevention and Control of Disease Ordinance (Cap. 599) to "Influenza A (H1N1)".

13. The Administration advised that as "Influenza A (H1N1)" could be regarded as including all other influenza A (H1N1) infections, for example, seasonal influenza A (H1N1), other than the new human swine influenza virus, changing "Swine influenza" to "Influenza A (H1N1)" might confuse the local medical sector as to whether they were required to report all seasonal influenza A (H1N1) infections to the health authorities as well. Subject to further development on the nomenclature of this novel influenza virus, the name "Swine influenza" would continue to be used in Cap. 599.

Wearing of face masks by air cabin crew

14. Hon WONG Kwok-hing urged the Administration to require airlines to allow cabin crew to wear face masks while on duty as the crew members saw fit. The Administration responded that it was incumbent upon airlines to safeguard the health of their staff. Nevertheless, the Administration agreed to take the matter up with local airlines to ensure such.

Past discussions by the HS Panel

15. The Panel held a total of four meetings, including three special meetings, with the Administration on prevention and control of HSI infection in Hong Kong on 11, 13 and 27 May 2009 and 10 June 2009.

Strategy and management of HSI

16. Members noted that the Administration's strategy against pandemic influenza was containment for as long as it would take to delay community transmission, after which mitigation would take priority. Mitigation would apply when local transmission of HSI became significant and containment strategy was no longer appropriate or feasible, i.e. the occurrence of a confirmed local case that had no identifiable link, such as travel to an affected area in the previous seven days. Transition of management of HSI from containment to mitigation phase would depend on factors, such as epidemic progression (indicated by daily number of new cases and/or the effective reproduction number), disease severity (indicated by proportion of those infected with complications, requiring hospitalisation and case fatality), burden to medical services, resource capacity and effectiveness of containment, and broader considerations in the community.

17. Members further noted that with new knowledge gained about the nature of this novel human swine virus, such as close contacts having around 22%-33% chance of getting infected and the absence of large scale environmental transmission as well as the availability of an effective prophylactic, plans for contact tracing and management of HSI in different settings, namely, inbound flight, hotel, home, workplace, elderly home, school and public places, in the containment phase had been devised by the Administration. For instance, in the event of an occurrence of a confirmed HSI case in a hotel setting during the late containment phase, the general guidance was that only guests and staff who stayed/served on the same floor/same service section on the same floor and other close contacts would be placed under medical surveillance and administered directly observed chemoprophylaxis.

18. Hon Vincent FANG questioned the necessity of imposing stringent health measures in Hong Kong, having regard to the facts that most affected places, such as the US, did not adopt any port health measures and that the HSI was relatively mild so far with limited mutability. Dr Hon LEUNG Ka-lau also questioned the need for Hong Kong to raise the response level to the highest level at "Emergency Response Level" under the Preparedness Plan for Pandemic Influenza in Hong Kong, upon the confirmation of an imported case of HSI infection in Hong Kong on 1 May 2009.

19. The Administration advised that although there appeared to be emerging evidence that this novel virus remained relatively mild so far with limited mutability and that Tamiflu remained an effective chemoprophylaxis against HSI so far, it should be pointed out that the outbreak of HSI in Mexico, which did not occur in its normal influenza season, had caused much disruption to the daily lives of its citizens and economy. Moreover, although the fatality rate of HSI was similar to that of seasonal influenza, with the exception of that in Mexico, the

secondary attack rate of HSI was about 30% higher than that of seasonal influenza. Past records suggested that seasonal influenza (of different variety of virus strain and type from season to season) accounted for about 1 000 deaths in Hong Kong every year. However, even if the severity of HSI remained similar to seasonal influenza, it was as yet unclear if hospitalisation needs and deaths arising from it would substitute or add to that of seasonal influenza, particularly in the coming influenza peak season. Hence, although it was a matter of time before the first local HSI case occurred in Hong Kong, it was important for Hong Kong to continue to contain possible onward transmission by imported index cases during this late containment stage in order to delay community spread.

20. Some members, including Hon CHAN Hak-kan and Hon IP Kwok-him, expressed concern about the effectiveness of the port health measures adopted by Hong Kong to prevent importation of HSI into Hong Kong, as the US did not take any measure to prevent infected people from leaving the country. This was particularly worrying as it was the peak season for students studying in the US to return to Hong Kong for the summer break.

21. The Administration advised that although WHO did not recommend countries to impose travel restrictions, which would have very little effect on stopping the virus from spreading but would be highly disruptive to the global community, countries had advised their citizens to postpone their travel if they felt unwell. Similar message was disseminated by US to their citizens. The Administration had requested the Hong Kong Economic and Trade Offices in the US to appeal to Hong Kong students to postpone their return to Hong Kong if they felt unwell. If this could not be done, students who felt unwell should put on masks while on board the airplane. Upon arrival, if fever or influenza-like symptoms developed, they should seek medical consultation and contact the Department of Health hotline immediately. Several recently confirmed cases of HSI were detected from people seeking medical consultation from public clinics or hospitals, thus preventing local transmission of the disease.

22. The Administration did not consider it unreasonable to advise students not to return to Hong Kong if they felt unwell, as this was to protect the students themselves and the health of travel collaterals. There should be no problem for students studying overseas to seek medical assistance before returning to Hong Kong as many schools, such as those in US and the United Kingdom, required their students to purchase medical insurance. If these students chose to return to Hong Kong despite felling unwell, they should put on masks while on board and notify the crew right away so that the latter could follow established procedures and alert the ground control. Upon landing, port health team would board the flight to measure the body temperature of passengers and assess whether any one on board would need to be further assessed at public hospitals for HSI.

23. Whilst agreeing with the Administration's strategy in preventing and controlling HSI infection in Hong Kong, Hon Andrew CHENG suggested requiring all passengers on mass transport vehicles to put on masks to better prevent local outbreak of HSI. The Administration considered it more important to remind people who felt unwell to put on masks. More work would be done in this regard.

24. To mitigate the adverse effect of HSI on the travel trade, Dr Hon PAN Pey-chyou was of the view that the Administration should provide clear guidelines to the trade on receiving inbound travellers. The Administration advised that it had met with the travel trade to exchange views on the handling of visitors during the current HSI epidemic. For instance, detailed health advice for tour leaders and tour guides operating tours in and outside Hong Kong for the prevention of HSI had been issued.

Surge capacity

25. Members noted that upon the occurrence of the first local HSI case, the Hospital Authority (HA) would open in the first instance seven designated HSI clinics for patients with influenza-like illness to provide treatment, including antiviral medication targeting high-risk patients e.g. patients with underlying medical conditions. Depending on the number of local HSI cases, it was HA's plan to open these clinics in each of the 18 districts in Hong Kong. It would only take one to two days for these clinics to be converted from general out-patient clinics.

26. On whether HA had the surge capacity to handle patients who required hospitalisation as local transmission became significant, HA advised that it had drawn up guidelines for triage and management of HSI to ensure that patients most in need of hospitalisation would not be denied of proper treatment, including the setting up of designated clinics operated by HA as focused first-line to triage and to look after patients with flu symptoms.

Use of Tamiflu

27. Concern was raised as to whether the Administration had adequate supply of antiviral drugs in time of outbreak in the community. The Administration advised that Tamiflu was presently prescribed to patients infected with HSI, as well as close and social contacts of the confirmed cases to prevent local transmission of the disease. However, if the management of HSI progressed into the mitigation phase upon the occurrence of the first confirmed local case that had no identifiable link, Tamiflu would only be prescribed to patients infected with HSI, as it was no longer feasible nor appropriate to treat close and social contacts where their risk of infection approximated that of the general public.

Suspension of classes

28. Some members, including Hon Andrew CHENG, were of the view that closure of schools for up to 14 days when the first local HSI case occurred should cover all secondary schools, in addition to all primary schools, kindergartens, nurseries and other pre-schools.

29. The Administration explained that limiting closure of schools to primary level and below was because according to WHO's assessment, young children were twice at risk at contracting HSI vis-a-vis young adults. Moreover, unlike young people in secondary schools, children aged 12 and below usually were less capable of adhering to good personal hygiene and keeping a distance from their classmates.

The Administration, however, advised that it would require the secondary school with a confirmed case of HSI to suspend classes for up to 14 days. Suspending the classes of all secondary schools would not be ruled out if local transmission of HSI became sustained and significant.

Procurement of HSI vaccines

30. Some members, including Hon Audrey EU, Hon Vincent FANG, Hon Fred LI and Dr Hon LEUNG Ka-lau, questioned the Administration's plan to seek the approval from the Finance Committee (FC) of LegCo on 19 June 2009 on creating a new commitment of $700 million to meet an one-off non-recurrent HSI vaccines and injections expenditure for 2009-2010, when it was uncertain whether and how the virus would mutate as the epidemic evolved and that the vaccines being developed had yet to obtain approval from overseas drug authorities such as those of the US and the European Union (EU).

31. The Administration advised that as the some 30 vaccine manufacturers worldwide could only produce the HSI vaccines to meet the demand of some 5% of the world population, and as Hong Kong did not have the capability and capacity of manufacturing vaccines, taking an early decision was the only way that Hong Kong could secure adequate supply of vaccines as international demand was becoming strong. Although regulatory approval of the HSI vaccines was still outstanding, the order to be placed by the Government, through tendering, would include safeguard clauses to require eventual approval of the vaccines from overseas drug authorities such as those of the US and/or EU. The Administration was presently gathering facts from several manufacturers on the quality, availability and price of the HSI vaccines.

32. On the eventual take-up rate of the HSI vaccines, the Administration advised that this would depend on various factors including the development of the pandemic in the next few months and public perception of the possible side effects of the vaccines. Demand for the vaccines would be greater if more people got infected and came down with serious illnesses. The cost involved in procuring and providing five million doses of HSI vaccines should be seen as the "insurance premium" to be paid by the community for safeguarding public health against HSI.

33. Some members were concerned about the possible side effects of the HSI vaccines and the implementation of the vaccinations. The Administration explained that after balancing the risks involved, it was more beneficial for the target group to receive HSI vaccines. The Administration would work out the detailed implementation plan for the vaccinations and brief the Panel in due course.

34. The proposal to create a new commitment of $700 million for procurement of HSI vaccines and the related injection was approved by FC on 19 June 2009.

Latest development

35. The Government announced on 27 June 2009 that as HSI had become the dominant strain of influenza virus in Hong Kong, albeit mild with no confirmed

patients requiring intensive care, DH and HA were adjusting mitigation phase measures being implemented against the disease. The following new measures would formally take effect on 29 June 2009 -

(a) Centre for Health Protection of DH would focus epidemiological investigations on severely ill patients with HSI as well as HSI associated outbreaks involving schools and institutions. Case investigation and contact tracing for other individual cases of HSI is no longer necessary;

(b) the admission and discharge criteria for patients confirmed with HSI would be based on their clinical conditions. Confirmed patients with mild symptoms would not be required for admission and would be provided with symptomatic treatment;

(c) services of the eight designated flu clinics would continue to attend to patients with fever and influenza-like illness (ILI). However, their priority would be given to pregnant women, those aged two or below and high risk groups, such as those suffering from chronic diseases or in immuno-compromised states;

(d) Tamiflu would only be given to ILI patients with chronic diseases or in immuno-compromised states; and

(e) travellers with mild symptoms and intercepted at boundary control points would be provided with face masks and guidance notes for seeking medical consultation. As for severe cases, Port Health Officers would take them to public hospitals by ambulance for medical examination.

36. On 3 July 2009, DH's Public Health Laboratory Services Branch detected a strain of HSI virus which was resistant to Tamiflu. This is the first time Tamiflu resistance in HSI virus is found in Hong Kong, while similar cases have been reported in Denmark and Japan.

37. As at 2:30 pm of 8 July 2009, there have been 1,055 confirmed cases of HSI in Hong Kong since the case was diagnosed on 1 May 2009.

Relevant papers

38. Members are invited to access the Legislative Council website (http://www.legco.gov.hk) for details of the relevant papers and minutes of the meetings.

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