For information
on 13 May 2009

Legislative Council Panel on Health Services

Strategy and Management of Human Swine Influenza

PURPOSE

This paper briefs Members on the strategy and management of human swine influenza (HSI) adopted by the Administration, having taken into consideration local data and experience in handling the first HSI case in Hong Kong, as well as new findings outside Hong Kong.

STRATEGY

2. Public health strategies against pandemic influenza are characterized in two phases: containment and mitigation.

3. **Containment** applies when Hong Kong is free from HSI or when there is insignificant local transmission. Containment involves stringent port health measures, aggressive isolation of cases, contact tracing, quarantine and chemoprophylaxis to cut off disease introduction and transmission.

4. **Mitigation** applies when local transmission of HSI becomes significant and containment strategy is no longer appropriate or feasible. Mitigation aims at relieving disease burden and mortality through hygiene measures, social distancing, medical resource mobilization, self-care and other measures.

5. **HKSARG's present strategy is containment for as long as it takes to delay community transmission**, after which mitigation takes priority. Transition from containment to mitigation is a phased process that takes into account evolving situation.

6. It is impossible to predict accurately progress of epidemic and to draw a clear line in the transition from containment to mitigation in the context of Hong Kong. However, when most places of the world are affected by HSI, it is unlikely that Hong Kong can be spared of local transmission for an extended

period.

CONTAINMENT PHASE

Management of HSI in Different Settings

7. We have devised plans for contact tracing and management under different settings in the containment phase: HSI in the context of inbound flight, hotel, home, workplace, elderly home, school and public places. See ***Annex*** for details[1].

8. These plans, particularly for HSI in hotel setting, have taken into consideration local data and experience in handling the first HSI case in Hong Kong, as well as new findings outside Hong Kong. New knowledge gained since 1 May when the first HSI case was confirmed in Hong Kong:

From the local case

- No evidence for large-scale SARS-like environmental transmission in hotel
- Tamiflu effective chemoprophylaxis for preventing disease with no major side effects thus far
- No virus detected in the index patient's blood and stool samples
- All close contacts and social contacts were not infected
- All respiratory specimens from quarantined persons and environmental specimens are negative

From overseas literature

- The mutability of the virus appears to be fairly limited so far
- Droplet transmission predominant
- Close contacts have around 22-33% chance of getting infected according to WHO's latest severity assessment
- Hospitalization rate ~5% and mortality rate in US 0.1-0.2% amongst confirmed cases
- Deaths occur rarely but especially among patients with underlying medical conditions

9. **Conclusion**: Given the relatively milder nature of this novel human swine virus, absence of large scale environmental transmission, and the

[1] The Annex only provides general guidance. The classification and measures stated therein should not be understood as fettering the discretion of the Director of Health and health officers to take whatever is the most appropriate steps, which may differ from what is set out in the Annex, in accordance with the actual circumstances, information and law.

availability of an effective prophylactic, from a scientific viewpoint options other than wholesale quarantine of the entire hotel (or equivalently a building block) could be reasonably pursued. However, it must be stressed that robust enforcement and adherence would be required in order to meet the present goal of containment.

Contact Tracing

10. Contacts are classified into two broad categories based on risk of acquiring infection from the case-patient – close contact and social contact.

11. **Close contact**[2] is generally defined as having cared for or lived with a person who is a case of HSI, or having been in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of such a person (e.g., kissing, embracing, sharing eating or drinking utensils, physical examination, or any other contact between persons likely to result in exposure to respiratory droplets). Close contact typically does **not** include activities such as walking by an infected person or sitting across from a symptomatic patient in a waiting room or office. However, the actual determination of close contact will have to take into account the circumstances in different settings and the precise specification may vary.

12. **Social contacts** are persons who have had other forms of contact with the case-patient not fulfilling the definition of close contact.

13. While the existing legislation allows the Director of Health and health officers considerable discretion to take the most appropriate steps in accordance with the actual circumstances, in general –

(a) Close contacts may be subject to more stringent public health measures such as quarantine and chemoprophylaxis.

(b) Social contacts may require medical surveillance, observance of personal hygiene measures, and chemoprophylaxis as necessary to be determined in context.

14. Quarantine and medical surveillance would normally be required for a period of 7 days from the last known contact. The period required will be subject to review in the light of emerging scientific evidence.

[2] Definition as per US Centres for Disease Prevention and Control

Special Consideration for Schools

15. Schools are a particularly important case to consider as young children are particularly key to HSI transmission. School outbreaks of HSI are common from North America experience. Spread of HSI, as with most other respiratory viruses, is particularly important in young children. Clinical severity of HSI on young people also remains as yet uncertain.

16. As a prudent measure, when the first local HSI case occurs (i.e. the occurrence of a confirmed local case that has no identifiable link, such as travel to an affected area in the previous 7 days, or exposure to a confirmed index case with such history or his secondary contacts), all primary schools, kindergartens, nurseries and other pre-schools may be closed for up to 14 days in the first instance and to be reviewed as appropriate.

MITIGATION PHASE

17. Transition from containment to mitigation phase is necessarily a gradual, phased process. It depends 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.

18. As local transmission becomes sustained and significant, isolation and quarantine is no longer appropriate or practical.

19. Range of public health measures that may be deployed in mitigation phase:

- Active promotion and adoption of basic measures: personal protective measures such as hand hygiene and use of face masks; personal care for those who fall ill; environmental hygiene, etc.
- Social distancing: school closure, work place contingencies, cancellation of mass gatherings, etc.
- Designated clinics operated by Hospital Authority as focused first-line to triage and to look after patients with flu symptoms
- Antiviral stockpile mobilized for treatment of patients, chemoprophylaxis of healthcare workers and essential service providers in the public sector
- Vaccine administration if available

- Mobilize private sector, NGOs to increase medical surge capacity
- Private enterprises mobilize business continuity plans
- Self-care: sick patients stay home until their illness is over for at least 48 hours
- Risk communication to different community segments

20. Choice of public health measures depends much on severity of local epidemic. If local epidemic is severe, more aggressive measures are warranted. Conversely, if epidemic is mild, the measures required may approximate those taken to address ordinary seasonal influenza. It is important to bear in mind that even seasonal influenza claims some 1,000 lives each year in Hong Kong.

21. However, uncertainties are likely during early stages, e.g. severity of illness among different population groups may be different. Besides, community expectations are important to consider. A precautionary approach during the initial stage of mitigation is useful. Measures can be fine tuned as more knowledge is gained about the properties of the local epidemic.

ADVICE SOUGHT

22. Members are invited to note the content of the paper.

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Annex

General Guidance for Management of Contacts of Confirmed Human Swine Influenza Cases in Different Settings <u>During the Containment Phase</u>

Note: The table below summarises the general guidance for management of contacts of confirmed human swine influenza (HSI) cases. The precise specification will have to be determined on a case-by-case basis having regard to actual circumstances of the settings.

Setting	**Close contacts**	**Social/Other contacts**	**Remarks**
HSI in hotel	Guests and staff who stayed/served on the same floor/same service section on the same floor (depending on actual configuration), other close contacts: **quarantine at camp, chemoprophylaxis**	Other guests and staff at hotel: **medical surveillance, chemoprophylaxis**	Decant and disinfect floor/section that the case stayed. Other hotel staff (other than those quarantined) to undergo daily temperature check and symptom log before work.
HSI on inbound flight	Passengers in same row and 3 rows in front and 3 rows behind and crew who have served the same cabin: **quarantine at camp, chemoprophylaxis**	Other passengers: **medical surveillance, chemoprophylaxis**	Number of rows for quarantine may expand considering >1 case on plane, long flight duration, etc. UK adopts 2 rows in front to 2 rows behind.
HSI in home, local resident	Household contacts: **quarantine at camp/home, chemoprophylaxis** Non-household close contacts: **quarantine at camp, chemoprophylaxis**	Social contacts: **medical surveillance, chemoprophylaxis**	Trace and isolate source patient, close contacts of source patient put under quarantine and chemoprophylaxis.

Setting	Close contacts	Social/Other contacts	Remarks
HSI in workplace	Co-worker close contacts: **quarantine at camp, chemoprophylaxis**	Other workers sharing same office environment: **medical surveillance, chemoprophylaxis**	
HSI in elderly home	All residents: **quarantine at elderly home, chemoprophylaxis** Unprotected staff with close contact: **quarantine at camp/in-situ, chemoprophylaxis** Visitors with close contact: **quarantine at camp, chemoprophylaxis**	Visitors with no close contact: **medical surveillance, chemoprophylaxis**	Elderly home put under isolation. Elderly patients not fit to move to another location. Elderly home staff and/or health services staff to provide in-situ care. Infection control measures instituted early.
HSI in school	Teachers and students with close contact: **quarantine at camp/home, chemoprophylaxis**	Other staff and students of school: **medical surveillance, chemoprophylaxis**	For a non-local HSI case, school closed for 14 days in the first instance. For first local HSI case, all primary schools, kindergartens, nurseries and pre-schools may be closed for up to 14 days subject to review.
HSI in public places, ill-defined contacts (e.g., MTR, cinema, shopping mall)	No contact list usually available. **Quarantine based on individual case assessment** (usually following a mass appeal for such contacts to come forward).	No contact list usually available. **Medical surveillance in general** (usually following a mass appeal for such contacts to come forward).	Announce places visited by the case. Persons who think they might have been exposed to call hotline.