

**For information
3 February 2005**

Legislative Council Panel on Health Services

Recent situation of meningococcal infections

Purpose

This paper briefs Members on the recent situation of meningococcal infections and the Department of Health's response.

Background about the disease

2. Meningococcal infection (MI) is caused by the bacteria *Neisseria meningitidis*. MI occurs with variable incidence in most countries in the world. MI is transmitted by direct contact through droplets of respiratory secretions from infected persons. A certain percentage of the population carries the bacteria in the nasopharynx without showing symptoms. The incubation period varies from 2-10 days, commonly 3-4 days. Clinically, MI most commonly presents as meningitis and/or septicemia. The disease is characterized by sudden onset of fever, intense headache, vomiting, stiff neck, photophobia, and sometimes convulsions and coma. Antibiotic treatment is usually effective and survival rate is over 90% if the patient is treated early. 15%-20% of recovered patients may have neurological sequelae such as intellectual impairment and hearing loss.

3. The risk of infection is higher among close contacts of patients with MI. Close contacts include (1) household members, (2) day care centre contacts, (3) persons directly exposed to the patient's oral secretions, and (4) those who frequently sleep or eat in the same dwellings as the patient. Certain patients with defective immune systems are also at higher risk. Other risk factors include antecedent viral infection, overcrowding, chronic underlying illness, and active and passive smoking.

Situation in Hong Kong

4. MI is a statutorily notifiable disease in Hong Kong. During 1990-2004, the number of notifications ranged from 2-14 per year, and a total of 85 cases were reported during this period. The annual incidence rate was

between 0.03-0.21 per 100,000 population. Cases were sporadic in nature and no focal outbreaks had occurred. The annual number of cases in 2004, 2003, 2002, 2001, and 2000 are 4, 3, 6, 10 and 14 respectively. One local case has been reported so far this year (the case occurred in January 2005).

5. Approximately 85% of the cases during 1990-2004 were classified as local cases. The remaining 15% were cases acquired outside Hong Kong, including Mainland China.

6. *Neisseria meningitidis* has at least 13 identified serogroups. Common known serogroups that cause invasive disease include A, B, C, W135, and Y. All of these serogroups have occurred in Hong Kong. Prior to 2000, the majority of isolates were serogroup B. Since 2000, non-serogroup B isolates have become more common.

Notification system between the Mainland and Hong Kong

7. The Department of Health (DH) has long-established ties with the Guangdong and Mainland counterparts. Since the SARS outbreak in 2003, collaboration has been considerably strengthened. Four *Tripartite Meetings of Guangdong-Hong Kong-Macao Expert Group on Prevention and Control of Communicable Diseases* have been organized between May 2003 and August 2004.

8. On the basis of the agreements reached in the tripartite meetings between Guangdong, Hong Kong, and Macao, the three places exchanged information on all statutory notifiable diseases on a monthly basis. MI is included in this list of notifiable diseases in all three places. In addition to routine reporting, an emergency reporting system was set up whereby the three places report promptly sudden and unusual upsurge of infectious diseases, including those of unknown nature. A point-to-point communication mechanism was put in place to ensure that reporting channels are open and effective. Furthermore, the three places have organized training and attachments of healthcare professionals to facilitate exchanges in infectious diseases.

9. In terms of communications with Mainland China on infectious diseases, the DH has established an open channel with the Ministry of Health, China. On numerous occasions, the DH has been able to obtain timely and relevant outbreak information through designated contacts in the Ministry of Health, China. The Ministry of Health, China has provided statistics of infectious diseases in various parts of the country.

The Department of Health's response to the recent MI situation

10. The Centre for Health Protection (CHP) of the DH has been monitoring infectious diseases in neighboring economies closely. On 31 January 2005, the CHP contacted the Ministry of Health, China, for information regarding the recent situation of MI in Mainland China. A response was obtained on the same day. A total of 258 cases of MI were reported in the country for the month of January 2005. Increase in MI has occurred in Anhui province, where 62 cases were reported during the period from late December 2004 through end of January 2005. The majority of cases in Anhui were students (77%), between the ages of 13-18 years. Serotype C was the main serotype found.

11. On the same day, the Guangdong Department of Health also provided information to CHP regarding MI in the province. A total of 11 cases of MI were reported in January 2005, of which 9 cases occurred in Guangzhou (廣州), one each in Dongguan (東莞) and Mouming (茂名). The cases were sporadic and there were no focal clusters. The majority of cases were labourers from other provinces. The cases were caused by serotype A. The incidence rate in January 2005 in Guangdong and Hong Kong was similar.

12. The DH has conducted an assessment and put in place a rapid and coordinated response to the situation targeted at travelers to and from the Mainland, medical professionals, and the general public. To reduce the risk of infection among travelers, the DH sent letters to the travel industry alerting them about the MI situation particularly in Anhui province, so that travelers can take the necessary health advice and precautions. At boundary control points between the Mainland and Hong Kong, in addition to performing routine temperature screening to detect travelers with active fever, the DH further distributes special pamphlets to alert travelers and provide them with educational guidelines on MI prevention.

13. For medical professionals, the CHP sent letters and messages to all doctors and professional medical groups giving them the most up-to-date situation. This facilitates doctors to recognize potential MI cases and promptly report to the CHP for investigation and control.

14. For the general public, the CHP has set up a hotline (2575 1221) for public enquiries about MI. Updates were uploaded on the CHP website (www.chp.gov.hk) and the Hong Kong Travelers' Health Service website (www.info.gov.hk/trhealth) providing tips about the disease, its prevention, and travel advice. The CHP also briefed the media and issued press releases daily

for transparency of information.

15. In addition to the coordinated measures above, the DH/CHP also has developed standard response protocols for the investigation and control of MI in connection with both sporadic cases and outbreak emergencies of the disease in Hong Kong. These have been developed based on overseas literature and local experience. The CHP has established a sensitive surveillance system for MI, which is a notifiable disease. Once a suspected or confirmed case is reported to CHP, the case is investigated immediately. The patient will be treated in a hospital and CHP will trace close contacts of the case. Prompt chemoprophylaxis will be given to close contacts to minimize their risk of developing disease and eliminating possible carriage. CHP will also put them under medical surveillance. A stockpile of meningococcal vaccines is also maintained to cater for the event of a focal outbreak in Hong Kong.

16. The DH will continue to liaise with the Ministry of Health, China, and Guangdong Department of Health to monitor the situation closely.

17. This paper is for Members' information. A chronology of the DH's response is attached at Annex.

Department of Health
February 2005

Chronology of events

Date	Event
31 Jan 2005	<p>DH contacted Ministry of Health, China requesting for information about MI</p> <p>Ministry of Health, China provided information about MI in Anhui province and the Mainland</p> <p>Department of Health, Guangdong provided information about MI in Guangdong province</p> <p>DH conducted media briefing explaining the situation and response</p> <p>Public hotline (2575 1221) on MI was put in place.</p> <p>Letter was sent to travel industry alerting them about the MI situation and necessary precautionary measures</p> <p>Preparation for enhanced border health measures initiated, on top of routine temperature screening</p> <p>Health education information was uploaded on webpage</p>
1 Feb 2005	<p>DH distributed letters to doctors and professional medical groups about MI situation to enhance surveillance of the disease</p> <p>DH distributed letters to institutions, including schools, advising them on the prevention of MI</p> <p>DH conducted media briefing</p> <p>Educational pamphlets on MI and its prevention distributed at border checkpoints with Mainland China</p> <p>Health messages have been broadcast on board all in-bound flights from Mainland China</p>

2 Feb 2005	DH conducted another media briefing Continuous dialogue with Guangdong Department of Health and Ministry of Health, China
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