WRITTEN STATEMENT OF DR MARGARET CHAN

I provide below my answers to the questions raised by the Select Committee to the best of my knowledge. As many of the questions cover the work of the Department of Health (DH) as a whole and as I have already left the Department, I have sought assistance from my former colleagues to provide relevant information and to peruse relevant files and records.

A1. Prior to the outbreak of SARS, there was a standing arrangement for sharing of experience and exchange of information on infectious diseases between Hong Kong and the Mainland. Monthly reports on four infectious diseases, viz., cholera, malaria, viral hepatitis and HIV/AIDS were exchanged with Guangzhou, Zhuhai, Shenzhen, Hainan and Macao. Ad hoc meetings / conferences were convened to foster collaboration on disease surveillance. For outbreaks of infectious diseases of public health importance, DH would communicate with the Mainland health authorities by telephone, fax or e-mail to obtain more information.

As AP was not on the list of diseases for information exchange, DH did not receive any notification from the Mainland health authorities.

A2. As part of the notification / surveillance system, DH contacted health authorities in the Mainland, including the Ministry of Health and the Chinese Center for Disease Control and Prevention in Beijing.

A3. Any unusual pattern or upsurge of infectious diseases of public health importance may trigger off follow-up actions, such as contacting the related party for further information and initiating investigation and control measures deemed necessary.

A4. Yes. DH did make reference to local and Mainland newspapers.

A5. I should first point out that in early 2002, as part of the continuous efforts to enhance the surveillance system, DH discussed with HA the possibility of sharing hospital data on selected infectious diseases, including pneumonia. Since September 2002, weekly discharge data of relevant diseases from 14 acute HA hospitals (backdated to January 2001) had been received. While noting media reports about AP cases in the Mainland, we observed that there was no abnormal pattern of pneumonia cases in Hong Kong. We continued to monitor the situation.

A6. DH was not aware of the investigation report at the time.

A7. As a result of media reports about an atypical pneumonia outbreak in Guangdong Province on 10 February, I asked the Consultant (Community Medicine) i/c, Disease Prevention and Control Division (Dr LY Tse) to enquire with officials in Guangzhou and Guangdong Province. This was the normal channel of communication with the Mainland authorities. When she was unable to establish contact, I approached the Director General of the Department of International Cooperation, Ministry of Health in Beijing. I told him that I was concerned by the media reports, particularly about the possibility of an outbreak of anthrax or plague. The Director General promised to look into the matter and I reported the above to SHWF.

On the following day (11 February), the Guangzhou Bureau of Health held a press conference informing the public that the situation in Guangzhou was under control. Separately, on my instruction, DH made verbal enquiries with the Hospital Authority, private hospitals and sentinel doctors and they reported that no unusual pattern of influenza-like illness or pneumonia in Hong Kong was found. With the information from Guangzhou and enquiry results in Hong Kong, I conducted a stand-up briefing and issued a press release late in the afternoon on the reported outbreak in Guangzhou and provided health advice that should be observed in the usual peak season of influenza in Hong Kong (January – March).

Turning to follow-up action taken in Hong Kong, I should first mention that back in March 2002, DH had sought assistance from HA for statistics

on pneumonia cases with a view to better monitoring the pattern of the disease. HA started providing the figures from January 2001 onwards in September 2002. Separately, in November 2002, Dr Tse joined the HA Task Force in Infection Control as a co-opted member to enhance sharing of experience between the two organizations.

With the outbreak in Guangdong Province, surveillance efforts were stepped up immediately. On 11 February 2003, HA set up a Working Group on severe community acquired pneumonia (SCAP) cases, viz., those patients with pneumonia who required assisted ventilation or treatment in intensive care / high dependency care units. Membership of the Working Group was built on that of the Task Force. Rather than setting up a separate mechanism and to strengthen communication, DH joined the HA Working Group from the 2nd meeting held on 17 February. A set of procedures for HA to make notification of SCAP cases to DH for epidemiological investigation and action was agreed with DH. On 13 February, DH requested private hospitals to make similar notifications of SCAP cases upon admission.

A8. The above information was provided by the Guangdong health authorities after DH had approached the Mainland authorities on 10 February. I was naturally concerned. For details of actions taken by the authorities in Hong Kong, please refer to A7.

A9. The AP outbreak in Guangdong was widely reported in the media on 10 February. Some people thought that the AP might have been spread by germs in the air and started to use boiling vinegar as a preventive measure, which is a traditional Chinese way of killing germs. As there is no scientific evidence for its effectiveness, I advised the public through media not to use boiling vinegar but to adopt proper preventive measures like good ventilation, good personal and environmental hygiene.

A10. On 19 February, DH confirmed a case of influenza A H5N1 infection in a nine-year boy who had a recent travel history to the Mainland. Since DH's influenza surveillance system had not detected any H5 infection in

human beings after the avian flu outbreak in 1997, WHO was informed of the H5N1 case immediately. At the same time, DH stepped up its surveillance system by testing all SCAP cases for H5 virus, among other things, and also closely liaised with the Mainland health authorities, HA and the University of Hong Kong (HKU) to monitor the situation.

A11. I was aware of academic exchanges between the Department of Microbiology of the HKU and Mainland institutions. Such exchanges started after the 1997 bird flu epidemic. I was however not aware of who made the visit although Professor KY Yuen mentioned about the visit during our discussions regarding academic exchanges. I recalled that we discussed at length the possible causes of the infection and agreed that we needed to step up surveillance on pneumonia cases. This was then being tackled by the Working Group on SCAP set up on 11 February. I also asked Prof Yuen to keep me informed of any new findings.

A12. The answer is no.

A13. As explained in A10, DH confirmed on 19 February a case of influenza A H5N1 infection in a nine-year boy returning from Fujian. I was then in close contact with a WHO expert on this matter. It was in one of these discussions that the WHO expert informed me that his team of experts would be visiting Beijing to find out more about the Guangzhou outbreak.

The WHO expert called on me on 11 March and informed me that the visit had not identified any cause or reason for the Guangzhou outbreak. He stayed on in DH to assist us in our investigation in the Prince of Wales Hospital outbreak which was reported in the media that very same day.

With my close liaison with Beijing, I did not consider it necessary to send my staff to the Mainland on fact finding. The need for such a visit became less apparent when I learnt that WHO would be stationing experts in Beijing on 23 February.

A14. DH did not approach the Office of the HKSAR in Beijing.

A15. I was aware of Dr Liu's memo of 12 February to HA hospitals requiring them to report SCAP cases. DH requested private hospitals to make similar notifications of SCAP cases upon admission on the following day.

A16. The Regional Office of Western Pacific (WPRO) of WHO informed Dr LY Tse on 5 March that a patient in Hanoi in stable condition with positive serological test for influenza B would be transferred to PMH in Hong Kong on the same day. Seven health care workers who had cared for the patient reported high fever, malaise and headache but not respiratory symptoms. WPRO asked Dr Tse to inform the hospital staff to take protective measures. I understand that Dr Tse had checked with Dr Lai Sik To of PMH but the latter was not aware of the transfer. She then further checked with WPRO about the transfer and was told that the patient would be leaving Hanoi in the evening. She also informed Dr SH Liu of HAHO of the matter.

A17. No. The patient was transferred to Hong Kong at the request of his family. The WPRO told Dr Tse that the patient was being transferred to PMH. DH conveyed the WPRO's notification to HA.

A18. Please see A16.

A19. With the establishment of the surveillance system of SCAP, HAHO required hospitals under its charge to report cases of community-acquired pneumonia who required assisted ventilation or Intensive Care Unit/High Dependency Unit care. HAHO would consolidate the reports and send to DH for investigation and follow-up. The notification included details of hospital name, patient name, HKID number, sex, age, underlying diseases, date of admission, onset of symptoms, chest x-ray findings, vital signs, travel history, laboratory findings and patient condition. The notification formed part of the surveillance system for infectious diseases.

Upon receipt of notification, Regional Offices of DH would start investigation in accordance with a checklist developed by DPCD. The investigation included detailed history taking and contact tracing. Dr Tse scrutinized the investigation findings submitted by Regional Offices and decided if further actions were required. Main investigation findings would be summarized and sent to Regional Offices and HAHO for information.

A20. Yes. In February, HA extended an invitation to Dr Tse to join the Working Group on SCAP for information sharing and monitoring of the surveillance system on SCAP cases.

Information such as individual case report, summary statistics of SCAP cases and guidelines on management of SCAP cases was shared between the Working Group and DH. Relevant information was disseminated to other concerned colleagues in DH.

A21. Dr Tse represented DH at the Working Group since its second meeting. Information such as individual case report, summary statistics of SCAP cases and guidelines on management of SCAP cases was shared between the Working Group and DH. Relevant information was disseminated to other concerned colleagues in DH. The Working Group had its last meeting on 18 March.

A22. Prior to the outbreak of SARS, DH had disease protocols for 36 infectious diseases and contingency plans on influenza pandemic, dengue fever and biological attack.

A23. The purpose of contact tracing was for early detection of cases among the contacts and prevention of further spread from them. The contacts were put under surveillance, checked if they had symptoms, advised to be alert for symptoms, observe personal and environmental hygiene, and take preventive measures like wearing mask when they had symptoms. Symptomatic cases were advised to attend hospitals for management. In

addition, the information identified through contact tracing was assessed to help understanding the disease like the attack rate and mode of spread.

Contact tracing was mainly conducted by the respective Regional Offices (ROs) of DH. To cope with the heavy and increasing caseloads during the epidemic, additional staff was deployed to the four ROs through internal redeployment in DH. The pool of medical and nursing staff, who was the core team in contact tracing in the four ROs, was gradually strengthened from 60 odd staff when the Prince of Wales Hospital (PWH) outbreak first came to notice on 11 March, to over 130 during the peak period in the later part of March to mid April, and maintained at around 100 thereafter. The staff worked extended hours and on weekends and holidays. Other administrative and supporting staff in the ROs also took on additional duties to support their colleagues in contact tracing. Separately, one doctor and a group of two to nine nurses at the Wan Chai Control Centre (which was set up on 13 April for "real-time" contact tracing data through e-SARS and the Police's Major Incident Investigation and Disaster Support System) also assisted in contact tracing. In addition, the DH Call Centre (its main function was to answer public enquiries on SARS), where over 120 members of staff were deployed during the peak period, also played a role in liaising with contacts through the hotlines.

A24. With hindsight and current knowledge about SARS, the case should have been notified to DH at the earliest opportunity. For the purpose of enhanced surveillance of SCAP cases at the time, HAHO's reporting of the case was acceptable.

As for contact tracing action taken by DH, please refer to DH Staff News No.2 (Annex 1) and No.3 (Annex 2) which set out the case of [redacted] AA (code named as AA in the Annexes).

A25. I was briefed of the case on 25 February. The question of launching an investigation at the hotel was not raised at the time because for respiratory tract infection, the place of residence was not normally a significant factor. [redacted] AA was an imported case because he had been in Hong

Kong for less than 24 hours before he attended KWH. There were also, at that stage, no environmental factors suggesting that an investigation might be required. By contrast, the place where contaminated food was consumed would be significant in a food contamination case investigation.

A26. Neither AA [redacted]'s sister nor his brother-in-law were SCAP cases when they were hospitalized at KWH.

A27. Upon receipt of notification on 3 March, Kowloon Regional Office (KRO) of DH conducted case investigation and contact tracing on the same day and noted that a nephew of AA [redacted] who had returned to Guangzhou had symptoms suggestive of pneumonia. In a follow up contact tracing interview on 4 March, KRO learnt that AA [redacted]'s daughter had fever on 27 February and was hospitalized in Guangzhou on the same day. The question of launching an investigation at the hotel was not raised at that time because –

- Intra-familial spread through close contact is not an uncommon phenomenon for respiratory illnesses.

- There was, at that stage, no indication of any environmental factors that would suggest the need for such action.

In the light of the information known to DH, or could reasonably be expected to be uncovered by DH at the time, there was no evidence to suggest that the investigation and contact tracing action should extend to the hotel where [redacted] spent one night, or indeed any other places Prof Liu had visited. AA

A28. I gave instruction to launch an investigation at the hotel on 18 March when Dr Tse presented to me the information from Health Canada and the three Singapore cases. The investigation had led to the discovery of the M [redacted] Hotel cluster which was announced on 19 March. This had triggered a report from WHO on 20 March that the American Chinese

patient from Hanoi had stayed at [redacted] Hotel at the material time.

A29. During a conversation on 8 March on another subject, a doctor from the Singapore MoH informed Dr Tse that three persons had been hospitalized after traveling to Hong Kong around 20-25 February. They had stayed at Metropole Hotel and two of them were friends. Laboratory investigations were pending and the patients' condition had apparently improved with antibiotic treatment. After discussion with the informing doctor, Dr Tse considered that there was insufficient evidence to suggest that their illnesses had been related to the Hotel. She asked the Singapore MoH to keep DH informed of any positive laboratory findings. I was briefed of this case afterwards.

A30. I understand that case investigation and contact tracing action was taken immediately on receipt of notification on 13 March. The place of residence of the patient (in this case [redacted] Hotel) was not a significant factor at the time, given that the disease was respiratory tract infection. There were also no environmental factors suggesting that action for investigating the hotel should be launched.

As explained in A31, when I gave instruction to launch an investigation on the Metropole Hotel, I also asked for all SCAP cases to be reviewed. The epidemiological linkage of this case to [redacted] was established then.

A31. On 18 March, DH received a fax from Health Canada that the patient in Toronto had stayed at [redacted] Hotel in the latter part of February 2003. With the 3 Singaporean patients also staying in [redacted] Hotel around that period, Dr Tse brought the matter to my attention. There and then I decided that DH should launch an investigation at the hotel and examine exhaustively patient records of SCAP cases and those of PWH cases.

A32. No. This is an operational matter the details of which rest with Dr Tse.

A33. The Regional Office of Western Pacific of WHO informed DH that the businessman was in a stable condition with positive serological test for influenza B. This notwithstanding, the fact that HCWs were involved was a cause for concern as the causative agent appeared to be quite infectious. Extra precaution in terms of infection control was necessary. Thus, on receipt of the information on the transferal, DH alerted PMH, HAHO and the ambulancemen responsible for the transfer on the need for protective measures and also closely liaised with laboratories.

A34. A patient from a private hospital may request to be transferred to a public hospital. Likewise, a private hospital may make the request if it considers that the patient could be better managed at a public hospital. HA would be in a better position to advise on the procedures.

I was not aware of the UH case at the time. I understand that DH was notified by PWH on 22 February of the case. Field investigation and contact tracing were carried out immediately. Four relatives who joined the patient in Guangzhou, were identified as contacts and were placed under medical surveillance. They were admitted to PMH and one was eventually found to have developed SARS. After the patient was discharged from PWH on 4 March, DH contacted her on 5 March and was told that she was asymptomatic and would be followed up at Union Hospital.

A35. The PWH index patient was not notified to DH because it was not a SCAP case.

A36. Through the media on 11 March. I was obviously very concerned and immediately called the Hospital Chief Executive of PWH to find out more about the situation. I told him staff from DH would be there as soon as possible to start the investigation. He agreed with the suggestion and promised to work together as a joint operation to speed up the process.

For infectious diseases listed under the First Schedule of the Quarantine and Prevention of Disease Ordinance, notification is statutory. For other

infectious diseases of public health significance, reporting to DH is encouraged.

A37. DH has established protocols for investigation of outbreaks of infectious diseases which are also applicable in a hospital setting. All hospitals have infection control guidelines.

A38. The Community Physician of New Territories East Region [CP(NTE)] was in charge of the field investigation of the PWH outbreak. He was in regular dialogue with colleagues in DHHQ including myself. On the very first day (11 March), NTE Regional Office of DH worked late into the night and interviewed all available HCWs who had reported sick. On the basis of information collected, CP(NTE) worked out a case definition for agreement with PWH management on the following day (12 March). He also presented his preliminary epidemiological findings to PWH management. The case definition formed the basis for PWH to notify DH of cases for investigation.

Case investigation and contact tracing continued throughout the period of the PWH outbreak, and on 14 March, NTERO identified that four cases with fever admitted to PWH on late 13 and early 14 March were relatives of a patient (JJ) of Ward 8A. Another relative of JJ was noted to have been admitted to Baptist Hospital on 13 March with fever. While two were household contacts, other relatives only got into contact with JJ through visiting him in PWH Ward 8A. NTERO also informed PWH of the linkage, and the latter immediately reviewed exposure history of sick staff and identified a number of them had contact with JJ during the incubation period. The above discoveries and other epidemiological data were shared in the evening meeting on 14 March between PWH and DH. The meeting supported the findings that JJ was the index patient. It was agreed at the meeting that PWH would follow up staff, medical students and in-patients exposed to JJ while DH would follow up discharged patients and hospital visitors exposed to JJ.

It is clear from the above that contact tracing actions taken by DH had been very useful for the control of the disease.

A39. On 12 March, DH issued letters to doctors and private hospitals advising them to strictly adhere to infection control guidelines in handling patients, report any suspected clustering of HCWs reporting sick or unusual/ unexplained pattern of illnesses. In addition to issuing letters direct to doctors and private hospitals, we had uploaded similar information onto the Department's homepage and promulgated related health advice through press releases/public announcements and DH's Central Health Education Hotline.

Upon DH's request on 15 March, private hospitals submitted daily reports on pneumonia cases to DH from 16 March onwards.

All SARS cases were confirmed in public hospitals. There were altogether 1 755 cases.

A40. In view of the magnitude of the outbreak, the non-specific nature of the symptoms, the lack of a quick diagnostic test for the syndrome and the speed with which workload and cases were increasing, there was a need to enhance the flow of information of cases between PWH and DH at the working level in the initial days. To facilitate communication, outbreak investigation and contact tracing, NTERO started to station a team of staff at PWH, in addition to the Special Control Team at NTERO.

A41. The investigation of the PWH outbreak was a joint effort between PWH under the HA and DH. A DCC staffed by PWH staff was set up to coordinate the vast amount of data generated from the hospital and produce the daily master list which was referred to NTERO for case investigation and contact tracing. On DH's side, NTERO also had its own Team in PWH working in the DCC. The fact that both PWH management and NTERO had a dedicated team in the DCC had facilitated the flow of information between PWH and DH. I also understand that PWH colleagues also used the questionnaire designed by NTERO for contact tracing.

As a general principle, DH followed up community contacts of reported cases. In addition, there was agreement that PWH and DH would carry

out contact tracing work for different categories of persons, viz., PWH to follow up staff, medical students and in-patients exposed to the index patient (JJ) while DH to follow up discharged patients and hospital visitors exposed to JJ. In both situations, contacts found to be symptomatic were referred to hospitals for management.

A42. The answer is no.

A43. Please refer to A40 and A38.

A44. HA was established under the HA Ordinance (Cap. 113) to manage and control public hospitals. Section 6(3) of the HA Bylaws provides that the HA may close any part of a hospital to the public and no person, unless authorized by the HA to do so, shall enter such part.

When CP(NTE) attended a meeting at PWH on 11 March 2003, he was told that Ward 8A had been closed to admission and discharge. Later on, DH learned on 17 March, PWH diverted all medical emergencies to hospitals outside the NTE Cluster and eventually closed its accident and emergency department completely on 19 March.

I was not asked to consider hospital closure. I should, however, say that whilst discussing other issues with me over the phone during the first few days of the PWH outbreak, the Hospital Chief Executive of PWH said that a question of closing the hospital had been raised at one of the PWH internal meetings. As far as I can recall, my response was that closing a big teaching hospital was a complicated issue and that it had to be discussed with SHWF.

A45. DH had discussed with SHWF the statistics on pneumonia and the latest position about the outbreak. SHWF made his statements on the basis of the information available at that time. At the same meeting, SHWF also said that what was unusual at PWH was that many HCWs of Ward 8A had contracted respiratory tract infection with pneumonia developed within a

short period of time. He assured members that there was no question of the Administration downplaying the severity of the infection.

A46. For the first two questions, please refer to A44.

The Director of Health, whenever he considers it expedient for the prevention of the spread of any infectious disease specified in the Quarantine and Prevention of Disease Ordinance (Cap. 141), is empowered to isolate, and restrict movements in relation to, any area or premises, including hospitals, by orders under Regulations 24 and 25 of the Prevention of the Spread of Infectious Diseases Regulations (Cap. 141B).

A47. The answer is no.

A48. I participated in the discussion on 13 March. Other attendees included senior staff from DH, HA and a WHO representative. The meeting agreed on the way forward in investigating the disease and containing its spread, and enhancing exchange of information with WHO, Mainland and CDC Atlanta, USA. The meeting also decided to set up a steering group and an expert group which were subsequently merged to become the HWFB Task Force on SARS.

A49. DH had no knowledge of the discharge of the patient at the time.

A50. I was not aware of any approach by HA Chairman and senior executives of HAHO.

A51-52

I answer the two related questions together. The two cases were dealt with in the normal way by my professional colleagues without reference to me. It should be noted that at the time DH officers were dealing with

hundreds of cases. They would only draw my attention to cases of concern. I understand that the actions taken were -

On 23 March, NTERO was notified of a case admitted to PWH which later turned out to be the Amoy Gardens index patient (YY).

NTERO managed to contact the father of YY on 24 March and was told that all family contacts were asymptomatic. On 25 March, the father reported that YY's brother had developed fever and cough and was admitted to United Christian Hospital on 24 March. NTERO referred the case of the brother to KRO for further investigation immediately.

KRO investigated the case of the brother and conducted contact tracing on the same day. The brother's wife worked in an elderly home and had taken leave since 25 March. She did not have any symptoms then and was put under medical surveillance. In the course of investigation, it was learnt that YY stayed at his brother's home in Amoy Gardens Block E on 14 and 19 March.

On 26 March, on being notified of an outbreak in Block E of Amoy Gardens, KRO conducted a site visit in the afternoon and interviewed the brother's wife, among other residents. She was still asymptomatic. She was instructed to report to KRO should she develop symptoms. On 30 March, DH was notified that the brother's wife had been admitted to Princess Margaret Hospital because of fever. KRO conducted contact tracing for her workplace contacts. None of the inmates and elderly home staff were affected throughout the surveillance period.

A53. I did not know why the notification was not made earlier.

A54. On 26 March, DH was notified by UCH of 15 suspected SARS cases from Amoy Gardens Block E and started investigation and contact tracing on the same day.

A55. The answer is no.

A56. All along, DH had received full support from doctors in voluntarily reporting cases and cooperation of patients in implementing medical surveillance. While DH had been giving consideration to including the disease in the First Schedule to the Ordinance, the need first arose when DH recommended a basket of public health control measures at a meeting of the HWFB Task Force held on 26 March, including the establishment of Designated Medical Centres and introduction of health declarations at border points. Accordingly, I made the orders to include SARS in the First Schedule on 27 March 2003.

The Quarantine and Prevention of Disease Ordinance provides that the Director of Health is the authority to amend the First Schedule. As a matter of practice, any amendment to the Ordinance requires policy support by HWFB.

A57. WHO epidemiological team accompanied DH officers to a site visit to Amoy Gardens and collaborated in the drawing up of an epidemiological study to determine possible risk factors associated with transmission of disease in Block E of Amoy Gardens. Furthermore, on the request of DH, WHO sent an environmental team to assist DH in conducting environmental investigations at Amoy Gardens.

A58. The question of school closure had been discussed at both the HWFB Task Force on SARS and the CE's Steering Committee. There was no strong medical ground for school closure. This notwithstanding, DH made a recommendation to close schools as a precautionary measure at the HWFB Task Force meeting on 26 March.

A59. The question of whether to introduce quarantine measures was first discussed at a meeting of the CE's SARS Steering Committee held on 25 March. The Committee further discussed the matter on 26 and 27 March. Taking into account the effectiveness, implementability and acceptability by the public, it was decided on 27 March to go forward with the establishment of designated medical centres for medical

surveillance of contacts and that no quarantine would be imposed at that stage.

A60. Field investigations by DH and its multi-disciplinary team had examined the possibilities of spreading through people movement, water supplies, garbage and elevators, sewerage system, vectors, and construction site next to the housing estate. In the morning of 1 April, the Secretary for Health, Welfare and Food was briefed of the field investigations. It was considered that there was preliminary evidence suggesting that the sewerage system might have been involved in the spread of SARS cases in Block E. The decision was made on the same day for the evacuation.

The possible role of rodents and pests in disease transmission had been studied during the investigation.

A.61 Please refer to A63.

A62. Through joint efforts of the Government, the management of Amoy Gardens and residents, thorough disinfection and elimination of rodents and other pests in all blocks of Amoy Gardens were carried out. Residents were given health advice and close contacts were put under medical surveillance. The situation in the entire Amoy Gardens was closely monitored.

A63. In view of continuing increase in the number of cases in Block E of Amoy Gardens at the time, the need for confinement of Block E residents was discussed at the HWFB Task Force meeting in the afternoon of 30 March. The isolation order for that block was issued after an Emergency Meeting of the CE's SARS Steering Committee in the evening.

When preliminary evidence suggested that the sewerage system might contribute to the spread of SARS cases in Block E, the decision to issue a removal order was made by the CE's SARS Steering Committee on 1 April.

Households that moved out of Block E before imposition of the isolation order on 31 March were urged to contact DH for medical surveillance. By 4 April, with assistance from the Police, all except one household (occupant not in Hong Kong) had been contacted for medical surveillance.

A64. DH adopted a graduated enhancement strategy in introducing public health control measures during the SARS outbreak. Before SARS was made a notifiable disease, there was voluntary medical surveillance of contacts. DH placed contacts of SARS patients under medical surveillance. Close contacts were advised not to go to work or school for at least seven days. Symptomatic contacts were referred to HA hospitals for further investigations.

At the HWFB Task Force meeting held on 26 March, I recommended a basket of public health control measures, including the establishment of DMCs. The DMC proposal was considered in view of the mounting caseload of contact cases, the limited capacity of the Accident and Emergency Departments of HA hospitals and the availability of chest-X-ray facilities at DH clinics.

The matter was further considered at the CE's SARS Steering Committee later that day. Suggestions of introducing a home quarantine requirement or quarantine centres were also explored. Taking into account the effectiveness, implementability and acceptability by the public of the measures, it was decided on 27 March that four DMCs should be set up. Starting from 31 March, close contacts had to report to a DMC on a daily basis for a period of up to 10 days for medical surveillance. During this period, they were asked to remain at home and not venture outside other than to attend the DMC. Medical surveillance covered health screening and temperature check and, if symptomatic, a chest x-ray. Those suspected of SARS were referred to HA hospitals.

A65. Please refer to A63.

The planning and implementation of the evacuation exercise was the responsibility of the Interdepartmental Action Coordinating Committee chaired by the Permanent Secretary for Health, Welfare and Food. Agencies taking part in the operation included HWFB, Security Bureau, Home Affairs Bureau, Home Affairs Department, Hong Kong Police Force, Department of Health, etc.

A66. Please see A62.

A67. With the continuing rise in the number of cases by early April, it was considered necessary to introduce additional measures to avoid overloading the DMCs and to minimize cross-infection in the community. The CE's SARS Steering Committee meeting decided on 7 April that quarantine measures for household contacts of confirmed SARS cases should be carried out as soon as possible. Since 10 April, household contacts of SARS patients were ordered to undergo home confinement (quarantine) for 10 days, with no visitors allowed. Regular home visits were made by public health nurses during this period for medical surveillance. The Police also conducted spot checks to ensure compliance. At the same time, close contacts other than household contacts continued their attendance at DMCs.

A68. Some members of the community had demanded that the residential addresses of SARS patients be disclosed. There was much debate on the issue particularly in view of possible infringement on personal data privacy and discriminatory effect. Moreover, disclosure of personal data of SARS patients would not add to public health control of the outbreak. After further discussion, it was agreed to disclose only the names of buildings where SARS patients resided before hospital admission. Accordingly, DH released the names of buildings of SARS cases on the website effective from 12 April. The listing of affected buildings was extended to buildings with suspected SARS cases on 25 April. Except for health care settings, there was no evidence suggesting that workplace was at high risk for spreading of SARS and hence its inclusion in the list was not warranted.

A69. The full report was not released because it contains detailed information of affected households in Amoy Gardens, including their precise room and flat numbers.

The summary report released on 17 April has a detailed account of the epidemiological investigations, environmental investigations and laboratory investigations in Amoy Gardens. Distribution of cases in Blocks B, C and D as well as probable explanation of disease spread were also described therein.

DH was briefed by the Faculty of Engineering, HKU about their research into the spread of the SARS virus in Amoy Gardens.

A70. As the number of SARS cases continued to increase, some overseas countries were worried that the disease would spread to their communities through international travel. The CE's SARS Steering Committee had considered measures to enhance control measures at border points. This had led to the making of the Prevention of the Spread of Infectious Diseases (Amendment) Regulation 2003 on 15 April to step up control measures to prevent the disease from being exported from or imported into Hong Kong. The Regulation was gazetted on 17 April and came into force with immediate effect. It provides explicit provisions to prohibit the departure from Hong Kong of persons who have been exposed to the risk of infection of SARS. It also provides additional legal power for measuring the body temperature of and carrying out medical examination on people arriving in and leaving Hong Kong so as to ascertain whether they are likely to be infected with SARS.

A71. The Quarantine and Prevention of Disease Ordinance (Cap. 141) provides the legal framework for the Director of Health to exercise public health control measures. It was based on the principles stipulated in the International Health Regulations. The WHO is reviewing the IHR which is the principal guide of regulatory instrument relating to infectious diseases internationally and the review is expected to be completed by

2005, DH would closely follow the new development in this area so that Cap. 141 could be updated to keep pace with international practice.

A72. At the HWFB Task Force Meeting on 26 March, DH recommended the designation of one hospital, preferably the PMH, to receive all new SARS cases referred by DMCs so that case information could be collected more efficiently and effectively by stationing a health team there.

M.Chan

Dr Margaret Chan
11 January 2004

香港特別行政區政府
衞生署

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
DEPARTMENT OF HEALTH

DH Staff News No.2

The Guangzhou Visitor (1 of 2)

Following an atypical pneumonia outbreak in Guangzhou, an arrangement was introduced in February 2003 to monitor severe community acquired pneumonia (SCAP) cases in Hong Kong. Under the arrangement, the Hospital Authority notified Department of Health (DH) on 24 February that a SCAP case of a Guangzhou visitor – code named AA in the SARS Expert Committee Report – was admitted to Kwong Wah Hospital (KWH) on 22 February. The patient died on 4 March, way before the World Health Organization named SARS on 15 March. His specimen was tested positive for coronavirus in April.

On 19 March, DH announced that AA was the index patient of the Hotel M cluster with seven cases at the time. There had been criticism that DH's contact tracing of AA should have included Hotel M and that might have changed the course of events in the outbreak at Prince of Wales Hospital. Having reviewed all the evidences, the Expert Committee has exonerated DH. But the perceptions have persisted. This article gives colleagues a better insight into DH's efforts in the incident.

Gist of Contact Tracing

- A public health nurse went to KWH on 24 February, the day DH was notified of the SCAP case. AA was already intubated and could not be interviewed.
- The nurse studied the hospital case notes. The notes made no mention that AA had indicated to staff that he was infectious.
- The nurse interviewed over the phone AA's wife and daughter (visitors from Guangzhou) and his sister CC in Hong Kong. Noted that on arrival from Guangzhou on 21 February, AA and relatives (including CC and her husband) had lunch in a restaurant near Mongkok Railway Station. AA then went shopping in Central Hong Kong with CC's husband in the afternoon and stayed at the latter's home for dinner that evening. AA and his wife only stayed in Hotel M for one night.
- Five close contacts were identified and given health advice. They were his wife, daughter, son, sister CC and her husband. Only AA's wife was reported to have fever. She was urged to seek treatment in a hospital. But she chose to return to Guangzhou with her daughter that evening (24 February).

- One of the purposes of contact tracing is to help identify the source of infection. From the information gathered, AA was a medical doctor from a Guangzhou hospital with past good health. He had contacted two patients presenting with high-grade fever and chest symptoms in the week before he developed fever, chills and rigor on 15 February, followed by cough and sputum. He self-treated with antibiotics. He came to Hong Kong with his wife on 21 February to attend the wedding banquet of a nephew (CC's son).

- The nurse made it a point to enquire whether AA had any exposure to poultry prior to onset of symptoms in view of confirmation of two avian flu cases just days ago. Upon learning that ÁA did not keep any chickens, ducks or birds, nor go to any market where live poultry was kept, DH stopped pursuing investigation along that trail.

- DH maintained contact with attending doctors for clinical progress of AA. As part of our contact tracing efforts, DH also monitored the situation daily by phoning CC since 24 February. The medical surveillance stopped on 28 February when CC refused to get involved. Except for AA's wife who was admitted to hospital upon return to Guangzhou on 24 February, no other symptomatic case among the five close contacts was noted at the time.

Further Developments

- On 3 March, DH received notifications that CC and her husband were respectively admitted to KWH on 1 March and 28 February. DH conducted another workup for case investigation and contact tracing and noted that a nephew of AA from Guangzhou was also among the relatives who had lunch with AA on 21 February. The nephew who had returned to Guangzhou was noted to have symptoms suggestive of pneumonia.

- In a follow up contact tracing interview on 4 March, DH learnt that AA's daughter had fever on 27 February and was hospitalized in Guangzhou on the same day.

- Thus, by 4 March, DH had learnt that a total of five close contacts of AA had fallen sick, viz. his wife, daughter and nephew in Guangzhou, and sister CC and her husband in Hong Kong. Although intra-familial spread through close contacts was not an uncommon phenomenon for respiratory illnesses, the Director was concerned and had discussions with one of the attending physicians and the consultant of DH's Government Virus Unit to review any further action that was required to help identify the causative agent. Results of extensive laboratory investigations on AA were negative for all known atypical pneumonia agents, except for a four-fold rise in adenovirus antibody titre.

(..... to be continued in Issue No. 3)

香港特別行政區政府
衞生署

THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION
DEPARTMENT OF HEALTH

DH Staff News No.3

The Guangzhou Visitor – AA (2 of 2)

Review of Contact Tracing Actions

AA arrived Hong Kong from Guangzhou on 21 February 2003 early in the afternoon, had lunch with relatives in a restaurant near Mongkok Railway Station, went shopping with his brother-in-law (husband of sister CC) in Central in the afternoon and had dinner at CC's home. He spent the night at Hotel M with his wife and was admitted to Kwong Wah Hospital (KWH) on the following day, 22 February.

HA notified DH of AA's hospitalization as a Severe Community Acquired Pneumonia (SCAP) case on 24 February. DH initiated case investigation and contact tracing on the same day and identified five close contacts. They were his wife, daughter, son, sister CC and her husband. The son returned to the mainland on 23 February. Accompanied by her daughter, the wife returned to Guangzhou in the evening on 24 February.

DH conducted medical surveillance action and phoned sister CC in Hong Kong every day. This ceased on 28 February when CC refused to be involved. At the time there was only one person found to be symptomatic, viz. AA's wife. Hospital case notes did not say that AA was very infectious. Neither did the question of infectivity come up in discussions which DH had with attending doctors.

On 3 March, DH was notified of the admission into hospital of CC and her husband. Contact tracing revealed that a nephew of AA who lived in Guangzhou had symptoms suggestive of pneumonia while AA's daughter had been hospitalized in Guangzhou. By 4 March, DH was aware that a total of five close contacts of AA had fallen ill. They were his wife, daughter, and nephew in Guangzhou, and sister CC and her husband in Hong Kong. Such intra familial spread among close contacts for respiratory illnesses was not uncommon. There was no health care worker reported sick. Nor was there any other reported case related to AA or staff from Hotel M.

In the light of the information known to DH, or could reasonably be expected to be uncovered by DH at the time, there was no evidence to suggest that our investigation and contact tracing action should extend to Hotel M or indeed other places AA had visited. AA had stayed for one night in the hotel and there were no environmental factors indicating that actions on the part of DH were required.

Having regard to all the evidences, the Expert Committee considers that the authorities in Hong Kong acted reasonably on the information available, and pursued with due diligence a course of investigation commensurate with the evidence available at the time.

Verbal Report from Singapore

Fourteen days after AA's hospitalisation (i.e. 8 March), the Singapore Ministry of Health (MoH) informed DH in the course of a telephone conversation on another subject that three persons who had travelled to Hong Kong at the end of February had been admitted to hospital for pneumonia in Singapore. All three patients had stayed in Hotel M and two were friends. Laboratory investigations were pending and the patients' illnesses improved with antibiotics treatment. As there was insufficient evidence that their illnesses were related to Hotel M, DH asked Singapore MoH to keep us posted of positive laboratory findings.

In the light of the experience gained from the epidemic, we have computerized the SARS centralized case and contact information system in our Disease Prevention and Control Division to facilitate early identification of the source of infection and prevention of disease spread.

However, it should be noted that even had DH launched an investigation on Hotel M on 8 March, it would not have changed the course of the outbreak at Prince of Wales Hospital (PWH). Retrospective epidemic information indicates that over 30 cases in the PWH cluster had onset of symptoms by 8 March, though the outbreak only came to light on 11 March. Neither could DH have identified the index patient for the PWH outbreak earlier, since he was a visitor and not a guest at Hotel M. He was first suspected to be the index case on 13 March and was confirmed as such on the following day. It was only after he had been identified as the index patient, and upon repeated enquiries, that he revealed that he had visited Hotel M around that period.

Health Care Worker (HCW) infection

A HCW infection in KWH was notified to DH on 13 March. Contact tracing action revealed that she had probably been infected by CC's husband, brother-in-law of AA. Subsequently, we learnt of another HCW in KWH possibly infected by AA. This latter HCW was not notified to DH because it was not a SCAP case.

Hotel M cluster uncovered

Alerted by local media coverage on 11 March about respiratory illnesses of HCWs in PWH, DH initiated case investigation immediately. We duly informed the World Health Organization on the next day, prompting the latter to issue a global alert. Reports from Singapore and Canada triggered off an urgent investigation by DH, leading to the discovery on 19 March of the Hotel M cluster which included AA and the PWH index patient. AA was identified as the index patient of this cluster.