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WRITTEN STATEMENT OF DR. TSE LAI YIN

I have prepared this statement to the best of my knowledge. In providing information to the following questions, many of which cover the work of DH as a whole and work of the Regional Offices of DH, I have sought assistance from my colleagues to provide relevant information and to peruse relevant files and records.

Q1. During the Severe Acute Respiratory Syndrome (SARS) period, what were your responsibilities and duties with respect to the surveillance of infectious diseases, infection control and contact tracing? In performing the above responsibilities and duties, do you have to consult or report to anybody within the Department of Health (DH)?

A1. My main responsibilities during the SARS outbreak period were –

- Disease surveillance. Monitored severe community-acquired pneumonia (SCAP) cases under the SCAP Surveillance System, and the SARS situation in Hong Kong.

- Coordination. Liaised with Hospital Authority Head Office (HAHO), private sector and other relevant parties on reports of SCAP and SARS cases, coordinated investigation reports from DH Regional Offices and Government Virus Unit, gave professional advice on field investigation including contact tracing, and coordinated necessary control measures.

- Risk communication. Provided information to government departments, the medical profession, LegCo and District Council members, media and public, and gave inputs on health advice and guidelines to various sectors, government departments and the public.

- Liaison with the Mainland, World Health Organization (WHO) and other international health authorities.

Dr Thomas Tsang was redeployed to take charge of specific tasks connected with the SARS outbreak from mid-March, on top of his normal duties as Consultant on non-communicable diseases.

In discharging my duties, I have to consult the Director (Dr Margaret Chan) and the Deputy Director (Dr PY Leung) from time to time.

Q2. When and how did DH first become aware of the atypical pneumonia (AP) outbreak in Guangdong? Did DH obtain such information through the media? Did the Government take any action as a result of that knowledge? If it did, what were the details of the actions taken and did that include approaching the Office of the HKSAR in Beijing for information/assistance? If the Office of the HKSAR in Beijing had been approached, what information/assistance was provided by that Office? Did that Office have any role to play in the surveillance/notification system for infectious diseases?

A2. DH was aware of the AP outbreak in Guangdong on 10 February through the media. On the instruction of the Director (Dr Margaret Chan), I telephoned health officials in the Municipal Health and Anti-epidemic Station in Guangzhou and the Director General of the Department of Health, Guangdong that very morning but was unable to establish contact. A letter enquiring about the reported outbreak was subsequently faxed to both offices. Follow-up phone calls went unanswered. I understand that Dr Margaret Chan then approached the Ministry of Health in Beijing direct for assistance. On the following day (11 February), the Guangzhou Bureau of Health announced that the situation in Guangzhou was under control. The Office of the HKSAR in Beijing was not approached.

Also on 11 February, I verbally enquiried with the Hospital Authority (HA) while my colleagues contacted private hospitals and sentinel doctors for any unusual pattern of influenza-like illness or pneumonia in Hong Kong. None was detected. Dr Margaret Chan then 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.

To step up surveillance efforts, HA set up on 11 February 2003 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. After discussing with me reporting arrangements for referring SCAP cases to DH for investigation, HA promulgated the agreed arrangements to its hospitals on 12 February. On 13 February, DH requested private hospitals to make similar notifications of SCAP cases upon admission.

To enhance communication with HA, I joined the HA Working Group from the 2nd meeting on 17 February.

Q3. Was there a surveillance/notification system in place for infectious diseases between the HKSARG and the health authorities in the Mainland prior to the outbreak of SARS? If there was, what were the details of that system, including if there were different levels of surveillance, how each of these levels would be triggered off and the channel(s) of communication? Did DH receive any notification of AP cases from the health authorities in the Mainland under the surveillance/notification system between November 2002 and February 2003?

A3. A standing arrangement then existed for sharing of experience and exchange of information on infectious diseases between the HKSAR and the health authorities in the Mainland. This comprised the exchange of monthly reports on four infectious diseases, i.e., cholera, malaria, viral hepatitis and HIV/AIDS with Guangzhou, Zhuhai, Shenzhen, Hainan and Macao; and ad hoc meetings /conferences on disease surveillance. DH would also liaise with the Mainland health authorities if there were any unusual reports of infectious diseases.

DH did not receive any notification of AP cases from the health authorities in the Mainland under the surveillance/notification system as AP was not one of the four infectious diseases previously identified for information exchange.

Q4. Was contacting the health authorities in the Mainland part of the surveillance/ notification system? Did it cover liaison with health authorities in Beijing, such as the Chinese Centre for Disease Control and Prevention in Beijing?

A4. The answers are yes to both questions.

Q5. Was there a mechanism, either as part of the surveillance/notification system or independent of the system, to gather "soft" intelligence into a single picture of assessment from a public health perspective? Would responsible officers make reference to local and Mainland newspapers?

A5. In surveillance of infectious diseases, DH made reference to both official reports and local and Mainland newspapers.

Q6. What were the indicators, if any, of the surveillance system for infectious diseases, either existing independently in Hong Kong or under which the Guangdong authorities were a party, prior to the SARS outbreak which would trigger off follow-up actions? What were the follow-up actions?

A6. The indicators include unusual pattern of illness or upsurge of infectious diseases. The follow-up actions include initiating investigation, contact tracing and control measures as may be necessary.

Q7. Was there any strategy or contingency plan for dealing with an outbreak of infectious disease prior to the SARS outbreak?

A7. DH had disease protocols for 36 infectious diseases and contingency plans on influenza pandemic, dengue fever and biological attack.

Q8. Was DH aware of an investigation report issued by Health authorities in the Mainland in January 2003 to alert health units in Guangdong Province of an AP outbreak? If yes, when did DH first learn about the report? Did DH obtain a copy of the report? If so, please provide a copy of the report for the Select Committee.

A8. DH was not aware of the investigation report at that time.

Q9. What actions did DH take in response to the outbreak of AP cases in Guangdong Province and the announcement in February 2003 by the Chinese Centre for Disease Control and Prevention in Beijing that Chlamydia pneumoniae was the probable cause of the AP outbreak?

A9. Please see my reply to Question 2 in respect of the outbreak of AP in Guangdong Province.

We noted the information regarding the announcement about Chlamydia pneumoniae. Dr Margaret Chan had maintained contact with her counterparts in the Mainland. In the meantime, we continued with our efforts in monitoring SCAP cases in Hong Kong.

Q10. Was DH aware of the visit made by Dr Y Guan and Dr B Zheng of the Department of Microbiology of the University of Hong Kong to Guangzhou in early February 2003 to conduct influenza research studies? If yes, how did DH learn about the visit? Did DH approach the University for findings of the visit? If yes, what information was provided by the University.

A10. I was not aware of the visit.

Q11. Was DH aware of other academic exchanges between Hong Kong and the Mainland around that time? If yes, what were these exchanges and did DH approach the persons / organizations concerned for information? What information, if any, was provided to DH?

A11. I was not aware of any academic exchanges between Hong Kong and the Mainland around that time.

Q12. Was DH aware in early 2003 that WHO had begun stationing a team of experts in Beijing on 23 February 2003? If yes, how did DH become aware of the stationing of the WHO team of experts in Beijing? Did DH approach WHO for information? If yes, when did DH approach WHO and what information was provided by WHO? What was DH's reaction to WHO's stationing of experts in Beijing?

A12. This matter was handled by Dr Margaret Chan personally.

Q13. When did WHO inform DH of the transfer of the American Chinese patient from Hanoi to the HKSAR? What details about the condition of the patient were provided by WHO? Did WHO provide any advice or instructions on how the patient should be handled? When did DH inform the head office of HA (HAHO) and/or Princess Margaret Hospital (PMH) of the transfer of the patient and whom did DH inform?

A13. The Regional Office of Western Pacific (WPRO) of WHO informed me 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. They asked me to inform the hospital staff to take protective measures. I immediately checked with Dr. Lai Sik To of PMH but he was not aware of the transfer. I then further checked with WPRO about the transfer and was told that the patient would be leaving Hanoi in the evening. I also informed Dr SH Liu of HAHO of the event.

Q14. Did DH make the decision that the patient was to be transferred to PMH? If yes, why was the decision made by DH and not by HAHO? Who made the decision and what were the reasons for the decision?

A14. DH did not make the decision. The patient was transferred to Hong Kong at the request of the patient's family. The WPRO told me that the patient was being transferred to PMH.

Q15. What details about the patient were provided to HAHO and/or PMH? Did DH give any advice or instruction to HAHO and/or PMH on how the patient should be handled?

A15. Please see answer to Question 13.

Q16. Was the American Chinese patient from Hanoi classified as a Severe Community-Acquired Pneumonia (SCAP) case? If yes, when and how was DH notified?

A16. HAHO notified DH of the Hanoi patient as a SCAP case on 6 March 2003 by e-mail.

Q17. What were the procedures that HAHO should follow in notifying DH of Severe CAP cases? What details should be provided in the notification? How did DH follow up such information? Was this notification part of a surveillance system for infectious diseases?

A17. Under the surveillance system of SCAP, HAHO required HA hospitals 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 was an enhancement of the surveillance system on pneumonia.

Upon receipt of notification, DH Regional Offices would start investigation in accordance with a checklist developed by DPCD. The investigation included detailed history taking and contact tracing. I 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.

Q18. Were private hospitals required to notify DH of Severe CAP cases? Could private hospital refuse to notify DH of Severe CAP cases? If yes, had there been such cases? If not, what would be the consequences of such refusal?

A18. Private hospitals were required on 13 February to notify DH of SCAP cases upon admission. They were cooperative.

Q19. Was DH invited to sit on HA's Working Group on SCAP? If yes, when and why was DH invited? Were you the representative of DH on the Working Group? If yes, what was your role? Did you attend all the meetings of the Working Group? If no, why did you not attend all the meetings?

A19. At the invitation of HA, I joined the Working Group on SCAP at its second meeting on 17 February for information sharing and monitoring of the surveillance system on SCAP cases. Of the six meetings scheduled between 17 February and 18 March, I attended two. I could not attend the others because there were other urgent matters to attend to. I maintained close communication with HAHO and followed up on decisions and issues discussed at the meetings.

Q20. Was it contemplated that information would be exchanged between the Working Group and DH when the Working Group was set up? Was there such exchange during the SARS outbreak? If yes, how was information exchanged and what was the information? What action did DH take on such information?

A20. I represented DH in the HA Working Group since its second meeting. Information such as individual case report, summary statistics of SCAP cases and guidelines on management of SCAP was shared between the Working Group and DH. I disseminated relevant information to other concerned colleagues in DH. The Working Group had its last meeting on 18 March.

Q21. Did the Working Group discuss the cases of [redacted] and the American Chinese patient from Hanoi? What specific follow-up action had been taken by you or DH in respect of these two cases?

A21. According to the notes of meetings, Dr. Ko Wing-man of HA gave a briefing on the American Chinese patient from Hanoi during the meeting on 12 March. Dr. Yee of HA also briefed members of the Kwong Wah Hospital cases like referencing on a death case involving a professor from Sun Yat-sen University.

Upon notification by HAHO of the two cases, DH conducted investigation and contact tracing as with other SCAP cases. Health advice was given to the contacts and they were put under medical surveillance. Both DH and HA carried out exhaustive laboratory investigations on the causative agents.

Q22. When exactly did DH learn that [redacted] had stayed at [redacted] Hotel? Was the question of launching an investigation at the hotel raised in DH at that point? If yes, who raised the question? What was the decision and who made the decision? Were there any objective criteria for deciding whether to launch an investigation?

A22. Please see the attached Staff News No.2 (Annex 1) and No.3 (Annex 2) which set out actions taken by DH regarding the case of Prof Liu ("AA"). I would highlight /elaborate the following points -

- HA notified DH of the case on 24 February. The investigation notes taken by DH Kowloon Regional Office (KRO) on the same day indicated that [redacted] arrived Hong Kong on 21 February at around 12:30 p.m. He had lunch with relatives in a restaurant near Mongkok Railway Station and went shopping with his sister's (CC's) husband in Central afterwards. He then checked into [redacted] Hotel before having dinner at CC's home. He attended Kwong Wah Hospital (KWH) on the following day at around 11 a.m. and was admitted to its intensive care unit at 11:47 a.m.

- KRO did not raise the question of launching an investigation at the hotel because -

- It was an imported case given that AA had been in Hong Kong for less than 24 hours before he attended at KWH.

- The risk of respiratory tract infection was highest through close person-to-person contact. As such, the appropriate measure to be adopted was contact tracing.

I was informed of the case on 24 February and agreed with the course of action taken by the KRO.

Q23. Did DH carry out any contact tracing in respect of AA's relatives who were residing in Hong Kong at that time? If yes, were there any measures used to monitor if AA's relatives might develop AP at a later date so that when it happened the health authority could be notified as soon as possible? When exactly did DH learn that the sister, brother-in-law and daughter of AA had been hospitalized?

A23. In the case investigation and contact tracing exercise carried out on 24 February, KRO established contacts with sister CC and put the contacts under medical surveillance. I understand that KRO phoned sister CC on a daily basis to ascertain if the contacts had become symptomatic. The medical surveillance stopped on 28 February when CC refused to provide information. CC was hospitalized on the following day, 1 March while her husband was admitted into hospital on 28 February. DH was notified on 3 March of these two cases.

KRO learnt on 4 March in a contact tracing interview that AA's daughter had fever on 27 February and was hospitalized in Guangzhou on the same day.

Q24. When exactly did DH learn that the American Chinese patient from Hanoi had stayed at M Hotel? Was the question of launching an investigation at the hotel raised in DH at that point? If yes, who raised the question? What was the decision and who made the decision?

A24. DH learnt that the American Chinese patient from Hanoi had stayed at [redacted] Hotel through WHO on 20 March. Investigation had already been carried out at the Hotel on 19 March.

Q25. When did the Singapore Ministry of Health (MoH) first inform DH that three persons who had been hospitalized after travelling to Hong Kong had stayed at [redacted] Hotel? Was the question of launching an investigation at the hotel raised in DH at that point? If yes, who raised the question? What was the decision and who made the decision?

A25. During a conversation on 8 March on another subject, a doctor from the Singapore MoH informed me that three persons who had been hospitalized after travelling to Hong Kong had stayed at [redacted] Hotel in Hong Kong around 20-25 February. 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, I considered that there was insufficient evidence to suggest that their illnesses had been related to the Hotel. I asked the Singapore MoH to keep me informed of any positive laboratory findings.

Q26. When exactly did DH learn that the Canadian tourist who had been transferred from St Paul's Hospital (SPH) to Queen Mary Hospital (QMH) had stayed at [redacted] Hotel? Was the question of launching an investigation at the hotel raised in DH at that point? If yes, who raised the question? What was the decision and who made the decision?

A26. DH was notified of the case on 13 March and investigated immediately. During the investigation, the Hong Kong Regional Office of DH noted that the patient had stayed at [redacted] Hotel prior to his hospitalization. The question of launching an investigation at the hotel was not raised because for respiratory tract infection, the place of residency of the patient was apparently insignificant. Moreover, there was no indication of any environmental factors that would suggest the need for launching an investigation at the Hotel.

Q27. When exactly did DH learn that the index patient for the SARS outbreak in Toronto had stayed at [redacted] Hotel? Was the question of launching an investigation at the hotel raised in DH at that point? If yes, who raised the question? What was the decision and who made the decision?

A27. DH learnt that the patient in Toronto had stayed at [redacted] Hotel on 18 March when we received a fax on patient's information from Health Canada. With the 3 Singaporean patients also staying in [redacted] Hotel, I brought the matter to the attention of Dr Margaret Chan. We decided that DH should launch an investigation at the Hotel and examine exhaustively patient records of SCAP cases and those of PWH cases.

Q28. Did the Department of Health (DH) conduct contact tracing in respect of the patient who was transferred from Union Hospital to Prince of Wales Hospital (PWH) in February 2003 and reported to be a Severe Community-Acquired Pneumonia (CAP) case? If yes, what did DH find out from the tracing? Did DH follow up the case after the patient discharged herself from PWH in early March 2003 against medical advice? If not, why not?

A28. The DH was notified by PWH on 22 February of the patient transferred from Union Hospital to PWH and 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.

Q29. Was DH notified by PWH of the admission of the PWH index patient in early March 2003 as a Severe CAP case? If yes, when and by whom was DH notified? When did DH learn that the patient had visited [redacted] Hotel? Was it before DH decided to launch an investigation at the Hotel? If yes, was the question of launching an investigation at [redacted] Hotel raised at that point? If yes, by whom was the question raised? What was the decision and who made the decision?

A29. The PWH index patient was not notified to DH because it was not a SCAP case. As explained in the answer to Question 27, DH decided on 18 March to launch an investigation at the hotel and examine exhaustively patient records of SCAP cases and those of PWH cases. Following the decision, DH questioned the PWH index patient repeatedly and eventually on 19 March, he revealed that he had visited a friend in Metropole Hotel around the time [redacted] had stayed.

Q30. Did DH request private doctors to report SCAP cases and also advise them to take infection control measures? If yes, what were the details of the request and advice? How was such request/advice conveyed? In writing or through public announcement or otherwise? How many SCAP cases were reported by private doctors?

A30. SCAP cases referred to cases of community-acquired pneumonia requiring assisted ventilation or Intensive Care Unit/High Dependency Unit care. By definition, they would be hospitalized. DH wrote to private hospitals on 13 February requesting them to make notifications of SCAP cases upon admission. Up to 18 March when the Working Group on SCAP cases had its last meeting, a total of four SCAP cases were reported by private hospitals.

Q31. When did DH first learn that a significant number of healthcare workers (HCWs) in Ward 8A of PWH had gone on sick leave at the same time? How did DH first learn about the outbreak? Was there a system for reporting an outbreak of infectious diseases among HCWs in a hospital to DH?

A31. Through the media on 11 March. 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. With the experience of the PWH outbreak, DH requested private hospitals on 12 March to increase surveillance on the sick leave taken by their HCWs and inform DH of any suspected clustering of HCWs reporting sick. A similar letter was also sent to all doctors.

Q32. Did staff of DH meet with the management of PWH to discuss the general outbreak or outbreak among HCWs in Ward 8A? If yes, when was such meeting(s) held? Who attended the meeting(s)? Was the cause of the outbreak identified at the meeting? What infectious control and other measures, if any, were recommended by DH? Was there a contingency plan in DH/Hospital Authority (HA) for dealing with an outbreak of infectious disease in a hospital? If yes, what was the plan and was the plan put into operation?

A32. On 11 March, there was media coverage about an abnormal pattern of sick leave among HCWs in PWH Ward 8A. The Community Physician in New Territories East Regional Office (NTERO) of DH, Dr TK Au (a directorate officer) immediately contacted the hospital management and learnt that a special meeting would be convened at the hospital that morning. He volunteered and attended the meeting with PWH management.

Prof Sung chaired the meeting with participation of key members of PWH. PWH advised that admission and discharge of Ward 8A had been stopped and visitors restricted. The cause of the outbreak had yet to be determined and PWH set up a special staff clinic in the evening to recall staff for screening and monitoring.

Dr Au advised PWH to isolate cases, screen other wards and monitor the sick leave pattern of staff. He agreed that NTERO would design a questionnaire and conduct an epidemiological survey that evening for a list of staff reported sick which would be provided by PWH. The

survey was to better understand the cluster and provide a basis for working out the case definition and estimating the incubation period.

DH has established protocols for investigation of outbreaks of infectious diseases which are also applicable in a hospital setting.

Q33. Did DH station a team of staff at PWH following the outbreak in Ward 8A? If yes, why was it necessary to do so? How many staff members were there in the team and what were their respective functions?

A33. The NTERO of DH stationed a team of staff at PWH on 13 March to facilitate communication and outbreak investigation. The team comprised an experienced medical officer and two nursing staff. They conducted contact tracing in the hospital.

Q34. Was the outbreak in Ward 8A discussed by the Working Group on SCAP? If yes, what was the advice, if any, given by DH to the Working Group?

A34. I understand that there were updates on the outbreak situation in Ward 8A at the meetings of Working Group on SCAP held on 12 and 14 March.

I would like to draw the attention of the Select Committee that the Community Physician in NTE in charge of the PWH outbreak investigation had daily meetings with the PWH management at the time where views were exchanged and advice tendered. Specifically, as explained in my answer to Question 32, Dr Au advised PWH on 11 March to isolate cases, screen other wards and monitor the sick leave pattern of staff. Then on 14 March, Dr Au advised that the first wave of cases was likely to have peaked but another wave from those of the affected close contacts incubating the disease might prop up in the following week and asked PWH to prepare for it.

Q35. Did DH conduct contact tracing in respect of the HCWs who had gone on sick leave? Were there other persons in respect of whom DH had conducted contact tracing? Did they include patients in and visitors to Ward 8A? How was case information passed from PWH to DH for contact tracing? Who in DH was leading the contact tracing work? What were the procedures and methodology adopted in contact tracing work, and what staff resources were allocated to the work? How were the results of contact tracing assessed and made use of? Did PWH participate in the contact tracing work conducted by DH? Did DH inform PWH of the results of its contact tracing?

A35. As explained in the answer to Question 32, PWH provided in the afternoon of 11March a list of 36 staff and medical students who had reported sick. NTERO successfully interviewed 26 of them that night. Most were found to have symptoms of fever and chills. NTERO advised all of them to seek immediate medical treatment at the PWH special staff clinic. Advice on personal hygiene was also given. The remaining 10 were followed up on the following day.

Dr Au presented his preliminary epidemiological findings at a meeting with PWH management on 12 March. He also worked out a case definition which was agreed with PWH at the meeting. Thus a reporting system for PWH to notify DH based on the case definition was established. Based on the agreed case definition, PWH started to provide DH daily a master list of persons for epidemiological investigation and tracing the community contacts.

DH's investigation and contact tracing work also included patients in, and visitors to, Ward 8A. To illustrate this point, I set out herewith the work performed in identifying the index patient of the PWH cluster. On 14 March, NTERO identified 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.

Dr. T.K. Au led the contact tracing work in the PWH outbreak.

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 A&E Department of PWH for further assessment as arranged. In addition, the information identified through contact tracing was assessed to help understanding the disease like the attack rate and mode of spread.

In view of the magnitude of the outbreak, NTERO set up a Special Control Team in the office within 24 hours of learning of the outbreak (i.e. 12 March). The team was subsequently strengthened through internal redeployment in DH to cope with increasing workload. At the same time, NTERO stationed a team of staff at PWH from 13 March onwards to facilitate communication, outbreak investigation and contact tracing. The aforesaid manpower deployment and enhancement as well as the corresponding caseload are summarized at Annex 3.

Q36. Was contact tracing conducted on the PWH index patient? When did DH learn that some of his relatives were also hospitalized? When did DH first suspect that there was a community outbreak of infectious disease and by whom was the suspicion raised? What was DH's conclusion and what were the bases of that conclusion?

A36. Contact tracing on the PWH index patient was conducted. Please refer to my answer to Question 35.

Q37. Was DH consulted on the setting up of a Disease Control Centre (DCC) in PWH? How was the contact tracing work between DH and DCC coordinated? Were the contact tracing procedures and methodology adopted by DH the same as or different from those of DCC? What were the differences and similarities?

A37. The investigation of the PWH outbreak was a joint effort between PWH under the HA and DH. PWH management set up their own DCC to coordinate the vast amount of data generated from the hospital. DH was not consulted on this internal management issue. 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 gradually improved the flow of information between PWH and DH. Indeed, I understand that PWH colleagues also used the questionnaire designed by NTERO for contact tracing (3rd paragraph in my answer to Question 32 refers).

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.

Q38. Who made the decision to close Ward 8A and re-open Ward 8A subsequently? If the decision was not made by DH, was DH consulted on the closure of Ward 8A and the subsequent re-opening of Ward 8A to visits by the immediate family of patients? If yes, what was the outcome of the consultation? If not, when did DH know about the closure and re-opening?

A38. DH was not consulted on the closure and re-opening of Ward 8A. Dr Au attended the first meeting with PWH on 11 March. He was informed by PWH that admission and discharge from Ward 8A had been stopped since 10 March and visitors were refused that day. He was further informed that the Ward had been re-opened to visitors but was restricted to the immediate family of patients and they were required to put on protection gear before entry to the Ward.

Q39. Did and by what measure DH know the fact that patients were being discharged from Ward 8A and their details? If yes, what did DH do? Were discharged patients placed under observation or surveillance by DH? If yes, how was such work carried out? If not, why not?

A39. At the meeting of 11 March, DH was informed by PWH that Ward 8A had stopped admission and discharge of patients. DH was not informed by PWH of any change of policy. The agreement with PWH was that the hospital would make available to DH a daily master list of persons for case investigation /contact tracing. DH would look into every person on the master list (whether discharged or not) and take appropriate follow up action.

Q40. Did DH follow up the Amoy Gardens index patient after he was discharged from Ward 8A of PWH? If not, who made the decision that follow-up action was not necessary and why? What were the criteria for taking follow-up action?

A40. DH was not aware of the discharge of the Amoy Gardens index patient (YY) until NTERO carried out the investigation on 23 March upon notification of the case on that day. When YY was discharged home on 19 March, DH was not informed.

YY first appeared on the PWH master list which was referred to DH in the evening of 16 March. On 17 March, NTERO embarked on case investigation of persons on the master list of the 16th, starting from the more serious cases. We had no record of YY having been interviewed by NTERO. Given the normal practice that NTERO would discuss

with PWH colleagues the latest clinical conditions of cases before taking action, it was likely that by the time YY was to be interviewed, he had already been tested positive for influenza A and no follow-up action was taken. In fact, the name of YY disappeared from the master list on 20 March, an indication that PWH also did not consider that follow up action was required of DH.

Q41. Was the issue of closure of PWH raised with DH? If yes, under what circumstances, by what means, and to whom was it raised and by whom? Who participated in such discussion? What was the advice, if any, given by DH? Who made the decision not to close the hospital and what were the considerations? Was legal implication one of the factors? If yes, what were the details of the legal implication discussed?

A41. I was not aware of the question of closure having been raised with DH.

Q42. Was DH notified of suspected cases of Severe Acute Respiratory Syndrome (SARS) involving the patients and HCWs in Ward E1 of Alice Ho Mui Ling Nethersole Hospital (AHNH)? If yes, when was DH notified and by whom? Did DH conduct contact tracing? If yes, when did DH conduct the contact tracing and what were the findings

A42. DH was notified of suspected SARS cases involving the HCWs and patients in ward E1 of AHNH on 1 April by the Infection Control Nurse of AHNH. DH conducted case investigation and traced the close contacts of the cases on the same day. DH also followed up discharged patients and visitors exposed to the cases when the hospital provided the list on 3 April.

For the outbreak in AHNH, DH traced more than 900 discharged patients and visitors of the affected wards. Among these contacts, 45 subsequently turned out to be SARS cases.

Q43. Were suspected SARS cases differentiated according to the level of seriousness by DH? If so, what were the levels and their definitions, and what were the corresponding follow-up actions taken by DH at each level? What were the differences, if any, between the procedures for admitting suspected and confirmed SARS patients?

A43. Suspected SARS cases were not differentiated into categories by DH. Procedures for admitting suspected and confirmed SARS patients were administered by HA.

Q44. Into which hospital was the brother of the Amoy Gardens index patient admitted to? When and by whom was it found out that the patient was the index patient's brother? When was DH notified of the case and did DH conduct contact tracing? If yes, what was the result?

A44. The Amoy Gardens index patient was notified to NTERO on 23 March. Upon contact tracing, NTERO managed to contact his father on 24 March and was told that all family contacts were asymptomatic. On 25 March, the father reported that the brother, who lived in Block E of Amoy Gardens with his wife, 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 conducted contact tracing for the brother's home contact on the same day. The brother's wife (i.e., the sister-in-law of the Amoy Gardens index patient) did not have any symptoms then and was put under medical surveillance.

Q45. Into which hospital was the sister-in-law of the Amoy Gardens index patient admitted? When and by whom was it found out that she was the index patient's sister-in-law? When was DH notified of the case and did DH conduct contact tracing? If yes, what was the result?

A45. As mentioned in my answer to Question 44, the sister-in-law of the Amoy Gardens index patient, who lived in Block E of Amoy Gardens, was asymptomatic on 25 March and put under medical surveillance. She worked in an elderly home and had taken leave since 25 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 sister-in-law, among other residents. She was still asymptomatic. On 30 March, DH was notified that the sister-in-law 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.

Q46. When was DH notified that residents of Amoy Gardens began arriving at Union Christian Hospital (UCH) displaying symptoms of SARS? What follow-up action did DH take? Did DH conduct contact tracing in respect of suspected SARS cases? If yes, what were the guidelines for conducting contact tracing on suspected SARS cases? If not, when did DH start to conduct contact tracing on suspected SARS cases? When did DH learn that most of the suspected SARS cases came from Block E of Amoy Gardens?

A46. On 26 March, KRO was notified by UCH of 15 suspected SARS cases from Amoy Gardens. A DH team made a field visit to the housing estate on the same day. They interviewed 20 available units on seven floors with suspected cases, all in Block E. Apart from placing family members of suspected SARS cases under medical surveillance and initiating contact tracing, DH also distributed letters to other Block E residents asking them to contact DH or seek medical attention if they had symptoms. Pamphlets about SARS were also distributed to all residents in the housing estate. The building management was instructed to disinfect common areas of all blocks, starting with Block E.

Q47. Why were site visits made to Block E of Amoy Gardens? How many site visits were made in total and when were they made? Who made the site visits and what were the findings of each visit? Did representatives of World Health Organization go on any of the site visits? If yes, what was the purpose?

A47. Noting a concentration of cases in Block E, site visits were made to that block for contact tracing, medical surveillance, identifying possible source of outbreak and instituting control measures. Site visits were made daily between 26 and 31 March, a total of seven visits in six days. Details of each site visit are as follows -

KRO made the first site visit to Amoy E in the afternoon on 26 March. They interviewed 20 available units on seven floors with reported cases. Letters were distributed to all Block E residents, asking them to contact DH or seek medical attention if they had symptoms. Pamphlets about SARS were distributed to all Amoy Gardens residents. The building management was instructed to disinfect Block E first, then other blocks.

KRO made a second site visit to Block D of Amoy Gardens on 27 March. They interviewed available units on floors with reported cases. Advisory letters were distributed to all Block D residents.

Dr. Thomas Tsang visited Amoy Gardens with a WHO team on 28 March to study the disease pattern and environment. They inspected the building infrastructures, interviewed households, and took pictures of various parts of building.

In the early hours on 29 March, Dr. Thomas Tsang and a KRO team visited Amoy Gardens. DH staff interviewed all available units in Block E until 3-4 a.m.

That afternoon (29 March), Dr. Thomas Tsang led a multi-disciplinary team with members drawn from Water Supplies Department, Hong Kong Police Force, Electrical and Mechanical Services Department (EMSD), Environmental Protection Department (EPD), Food and Environmental Hygiene Department, Drainage Services Department (DSD) to Amoy Gardens. They inspected potable water tanks and pipes, sewer pipes integrity and connections, soil stack on roof top, elevator rooms and lift shafts, pests infestations, garbage disposal, Amoy Plaza ventilation and water supply systems.

In the morning of 30 March, Dr. Thomas Tsang's team made another visit to Amoy Gardens, interviewed some households and collected environmental and water samples.

On 31 March, Dr. Thomas Tsang and DH staff made a visit to Amoy Gardens jointly with Buildings Department, EPD, EMSD, DSD and Government Laboratory. DH and EPD entered available Units 7 and 8 to examine the floor drains. EPD and EMSD conducted airflow experiments with the lift shaft and collected environmental samples.

Q48. How was information on suspected SARS cases involving residents of Amoy Gardens exchanged between DH and HA?

A48. HA faxed DH daily a list of hospitalized patients suspected with SARS, and this list included addresses of Amoy Gardens residents. DH conducted investigations and contact tracing on receipt of this list every day.

Q49. Did DH provide health and infection prevention advice to residents of Amoy Gardens? If yes, what was the advice and how was it conveyed to the residents? Did DH consider stationing its medical staff at Amoy Gardens? If not, why not?

A49. Family members of SARS cases from all affected blocks of Amoy Gardens were put under medical surveillance, and contact tracing was conducted. Letters were distributed to Amoy Gardens residents including all those Block E residents, asking them to contact DH or seek medical attention if they developed symptoms. Pamphlets about SARS were distributed to all Amoy Gardens residents.

DH staff went from door to door to conduct medical surveillance and interviews with available units in Block E and other affected blocks.

Medical stations were set up on 29 March at two entrances of Block E, manned by the Auxiliary Medical Services to provide pamphlets, masks, temperature taking and to answer enquiries.

Thorough cleansing and disinfection operation was conducted with the cooperation of the Owners' Corporation, residents concerned and the joint efforts of various government agencies for all flats and common areas of Block E, Amoy Gardens between 7 and 10 April. Advice was given to residents of other Blocks in Amoy Gardens to disinfect their flats as precautionary measures. Guidelines and disinfectants were provided to residents. In particular, the importance of maintaining water seal at the U-traps of drainage outlets was stressed.

Q50. Why was SARS not added to the list of infectious diseases specified in the First Schedule to the Quarantine and Prevention of Disease Ordinance immediately after World Health Organization issued the travel advisory on 15 March 2003? Did any person in DH propose that the disease should be added immediately? If yes, when was it raised and by whom? When was it decided that the disease should be added? What were the factors considered? Were there measures which could only be implemented if authority was provided by the Ordinance?

A50. The HKSAR Government adopted a graduated enhancement strategy in introducing public health control measures during the SARS outbreak, taking into consideration the effectiveness, implementability and acceptability by the public of the measures.

At the meeting of the HWFB's Task Force on SARS held on 26 March, Dr Margaret Chan recommended a basket of measures to deal with the developing situation, including the following -

- Setting up designated medical centres for surveillance of close contacts.
- Introducing a requirement for health declaration by travellers.

Implementation of the above measures required the inclusion of SARS as a notifiable disease in the Quarantine and Prevention of Disease Ordinance. On 27 March, the Director of Health made two Orders to include SARS to the list of infectious diseases specified in the First Schedule to the Ordinance as well as the specified notification form.

Q51. When did DH find out that most of the cases in the outbreak at Amy Gardens came from units 7 and 8 of Block E? Had the hypothesis of infection through environmental factors been raised in DH? If yes, when was it raised and by whom? Had it been considered that residents should be moved out of Block E, and if so, when was it first considered that residents should be moved out? Had the hypothesis of infection through rodents been raised in DH, given that the University of Hong Kong had conducted research on infection of SARS through rodents in Amoy Gardens?

A51. DH noticed that most of the cases in the outbreak came from units 7 and 8 of Block E in the evening of 28 March. 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 informed that field investigations found preliminary evidence suggesting that the sewerage and drainage system might have been involved in the vertical spread of SARS cases in Block E. The decision was made during the day for the evacuation.

The hypothesis of rodents and pests in disease transmission had been studied during the investigation. It was found that they were likely to be no more than mechanical carrier for the virus in this outbreak.

Q52. Did the Government consider that actions should be taken to prevent residents of Blocks A, B, C and D of Amoy Gardens from getting infected? If yes, what were the actions and were they carried out? If not, why not?

A52. Actions were taken to prevent infection from spreading to Blocks A, B, C, and D. These included isolation and subsequent evacuation of Block E residents, thorough disinfection, elimination of rodents and other pests, contact tracing and medical surveillance. For details, please see my answer to Question 47.

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.

A thorough disinfection and pest control exercise was undertaken by the Food and Environmental Hygiene Department in Amoy Gardens and surrounding area, including Lower Ngau Tau Kok Estate, a public housing estate in the vicinity of Amoy Gardens. With the cooperation of the Owners' Corporation and residents concerned, all units and common areas of Amoy Gardens Block E were thoroughly cleansed and disinfected between 7 and 10 April. Guidelines and disinfectants were provided to residents of other blocks in Amoy Gardens to disinfect their flats. The importance of maintaining water seal at the U-traps of drainage outlet was also emphasized.

Q53. Were you involved in making the decisions on the issuance of the Isolation Order and the subsequent Removal Order on Block E of Amoy Gardens? If yes, what were the circumstances surrounding the two decisions? When were the decisions made and which other officials in the Administration were involved in making the two decisions? Why were the Orders not issued earlier?

A53. I was not involved in making the decision.

Q54. Did DH conduct contact tracing and medical surveillance in respect of all those residents of Block E of Amoy Gardens who had moved out before the Isolation Order and had subsequently reported to DH? If yes, did DH find out whether any such residents had been infected? If not, why not?

A54. 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.

As we did not record during contact tracing whether the contacts had moved out of Amoy Gardens before isolation, we have no data on whether any such residents had been infected with SARS.

Q55. Were you involved in making the decision to require all household contacts of confirmed SARS patients to confine themselves at home for a period of up to 10 days since the last contact with the confirmed cases? If yes, what were the factors considered? When was the decision made and which other officials in the Administration were involved in making the decision? Why was such a requirement not made earlier?

A55. I was not involved in making the decision.

Q56. Were you involved in making the decision to require all household contacts of suspected SARS patients to confine themselves at home for a period of up to 10 days since the last contact with the suspected cases? If yes, what were the factors considered? When was the decision made and which other officials in the Administration were involved in making the decision? Why was such a requirement not made earlier?

A56. I was not involved in making the decision.

Q57. When did DH start to release the names of buildings of SARS cases on its website? Were you involved in making the decision? If yes, what were the factors considered? Why was such information not made available to the public earlier despite repeated demand by the public? Why were office/commercial/non-residential buildings not included in the list?

A57. I understand that some members of the community had demanded the residential addresses of SARS patients be disclosed. DH did not agree to this suggestion as disclosure of personal data would not add to public health control of the outbreak. A 'mid-way solution' was reached to disclose only the names of buildings where SARS patients resided before hospital admission. DH started to release the names of buildings of SARS cases on the website on 12 April. The listing of affected buildings was extended to those with suspected SARS cases on 25 April.

There is no evidence suggesting that workplace (except health care settings) is at high risk for spreading of SARS and its inclusion in the list was not warranted.

Q58. Were you involved in making the decision that all new cases referred by DH's designated medical centres should be received by one designated hospital? If yes, what were the circumstances surrounding the decision? Why was a designated SARS hospital necessary? Why was Princess Margaret Hospital (PMH) considered suitable? Was PMH adequately prepared.

A58. I was not involved in making the decision.

Q59. When did DH's New Territories West Regional Office (NTWRO) set up a control centre at PMH to facilitate the flow of information between them? Why was the control centre necessary? What information did DH ask for? Were similar centres set up in other SARS infected hospitals

A59. In the light of the designation of PMH as the SARS hospital, a team of public health workers was stationed in the hospital to man the control centre from 31 March to facilitate information flow and case investigation. A similar team had been stationed in PWH.

Q60. Did DH conduct an investigation into the outbreak at Tai Po Hospital (TPH)? If yes, what was the result of the investigation? Did DH provide any advice to TPH on the management of the cases? If yes, what was the advice?

A60. On 23 April, DH received notification from TPH that 15 in-patients of TPH, who had history of staying in the AHNH wards with SARS outbreak, developed SARS symptoms. Two staff were also affected. DH immediately initiated investigations and contact tracing. DH also advised TPH to stop admitting patients to the affected wards and cohort in-patients for 10 days from their last day of exposure to cases, freeze staff movement, stop visitors to the affected wards, and refer the discharged patients and visitors with history of exposure to the cases to DH for follow up.

For the TPH outbreak, DH traced about 60 discharged patients and visitors and they were put under surveillance. In addition, DH noticed that TPH had discharged a batch of 83 patients to elderly homes on 21 and 22 April and these patients could not be excluded from having a history of exposure to SARS cases in TPH. DH traced all these discharged patients and put them and their elderly homes under surveillance. Overall, for the TPH outbreak, a total of three staff, 29 in-patients admitted for other diseases, three visitors and two close contacts were found to have SARS.

Date : 5 January 2004

Dr. Tse Lai Yin

Annex 1 (English)

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 AA 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)

7 November 2003

Annex 1 (Chinese)

香港特別行政區政府
衛生署

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

衛生署員工通訊第 2 號

廣州旅客（二之一）

廣州爆發非典型肺炎後，香港即在 2003 年 2 月對嚴重社區型肺炎個案進行監察。2 月 24 日，醫院管理局按照監察機制，向衛生署通報一宗嚴重社區型肺炎個案，指一名廣州旅客於 2 月 22 日被送入廣華醫院。該名病人在沙士專家委員會報告中是以 AA 作為代號。AA 於 3 月 4 日不治，遠早於世界衛生組織在 3 月 15 日首次採用嚴重急性呼吸系統綜合症(沙士)的名稱。死者的樣本在 4 月進行冠狀病毒測試，結果呈陽性。

3 月 19 日，衛生署公布 AA 是涉及 M 酒店羣組當時發現了 7 宗個案的源頭病人。有批評指衛生署在追查曾與 AA 接觸人士的過程中，應將調查範圍包括 M 酒店在內，這樣或可改變威爾斯親王醫院的疫情發展。專家委員會經審視各項證據和當時情況後，認為當局處理手法合理，但是有關的評論仍然甚囂塵上。因此，我們希望藉着本文，讓各位同事更深入了解衛生署在事件中所採取的行動。

<u>追查接觸者的過程摘要</u>

- 2 月 24 日，衛生署接報該宗嚴重社區型肺炎個案後，派出一名公共衛生護士到廣華醫院跟進。但 AA 當時已經插喉，無法接受查問。

- 該名護士翻查醫院診治記錄，記錄中並無提及 AA 曾告知職員他具傳染性。

- 該名護士致電向 AA 的妻子和女兒以及在港的妹妹 CC 查問，前兩者同是由廣州來港，查問之下，得知 AA 在 2 月 21 日從廣州抵港後，曾與親屬(包括 CC 及其丈夫)在旺角火車站附近的一家酒樓吃午飯，下午又與 CC 的丈夫到港島中區購物，晚上則留在 CC 家中吃晚飯。調查亦發現 AA 夫婦只曾在 M 酒店留宿一晚。

- 調查得知有 5 人曾與患者有密切接觸，各人均獲給予健康指引。他們是 AA 的妻子、女兒、兒子、妹妹 CC 及其丈夫，其中只有 AA 的妻子報稱有發燒，獲勸諭到醫院求診，但她選擇於當晚(2 月 24 日)偕同女兒返回廣州。

- 追查接觸者的其中一個目的是協助找出感染源頭。從所得資料所知，AA 是廣州一家醫院的醫生，一向健康良好。2 月 15 日，他開始發燒、發冷和顫慄，其後咳嗽及帶痰。在這些症狀出現前的一個星期，他曾接觸兩名有高燒和胸肺病徵的病人。他自行服用抗生素以治療。2 月 21 日，他和太太來港，打算出席外甥(CC 兒子)的婚禮。

- 鑑於香港在數日前證實兩宗禽流感個案，該名護士於是查問 AA 在出現病徵前曾否接觸家禽。在得知他既無飼養雞鴨及雀鳥，亦無到過飼養活家禽的市場後，衞生署便停止循這個方向作調查。

- 衞生署就 AA 的病情進展與有關主診醫生保持聯絡。衞生署追查接觸者的工作，包括由 2 月 24 日起每日致電 CC，監察其健康狀況。在 2 月 28 日當 CC 拒絕繼續接受健康監察後，有關的監察工作便告停止。除 AA 的妻子於 2 月 24 日返回廣州後入院治療外，其他 4 名密切接觸者當時均無出現病徵。

<u>其後發展</u>

- 3 月 3 日，衞生署接報 CC 及其丈夫分別在 3 月 1 日及 2 月 28 日進入廣華醫院接受治療，於是再次就個案進行調查，並追查曾與病者接觸的人，得知與 AA 在 2 月 21 日午飯的親屬中，有一名由廣州來港的外甥；調查亦發現這名已返回廣州的外甥亦出現了感冒的徵兆。

- 3 月 4 日，為追查曾與病者接觸的人，衞生署進行跟進查問，得知 AA 的女兒在 2 月 27 日發燒，並於該日在廣州進入醫院接受治療。

- 因此，到了 3 月 4 日，衞生署知悉共有 5 名曾與 AA 有密切接觸的人發病，他們分別是三名在廣州居住的親屬(妻子、女兒、外甥)和兩名香港的親屬(妹妹 CC 及其丈夫)。雖然親屬之間因密切接觸而感染呼吸道疾病的情況並不罕見，但衞生署署長仍表關注，並與其中一名主診醫生和衞生署政府病毒科的顧問醫生商議，探討須採取什麼進一步的行動以助查出病原體。有關人員為 AA 進行廣泛的化驗調查，結果發現 AA 除腺病毒抗體的滴度上升 4 倍之外，對所有非典型肺炎的已知病原體的測試均呈陰性反應。

(待續，請留意通訊第 3 號)

2003 年 11 月 7 日

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.

24 November 2003

香港特別行政區政府
衞生署

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

衞生署員工通訊第 3 號

廣州旅客 - AA(二之二)

<u>對追查曾與病人接觸者工作的檢討</u>

AA 於 2003 年 2 月 21 日午後初段時間由廣州抵港，在旺角火車站附近一家酒樓與親人吃午飯，下午與妹夫(即其妹 CC 的丈夫)到港島中區購物，晚上則留在 CC 家中吃晚飯。當晚，他與妻子在 M 酒店留宿，在翌日(即 2 月 22 日)到廣華醫院求診後留醫。

2 月 24 日，醫管局向衞生署通報一宗嚴重社區型肺炎個案，留院病人為 AA，衞生署隨即在當天展開調查，同時追查曾與 AA 接觸的人士；追查之下，得知有 5 人曾與患者有密切接觸，分別是他的妻子、女兒、兒子、妹妹 CC 及其丈夫。他的兒子已在 2 月 23 日返回內地，而妻子則於 2 月 24 日晚與女兒一同返回廣州。

衞生署每日致電 AA 在港的妹妹 CC，監察其健康狀況。在 2 月 28 日當 CC 拒絕繼續接受健康監察後，有關的監察工作便告終止。當時只有 AA 妻子一人出現病徵。醫院診治記錄並無顯示 AA 具有很強的傳染性，而 AA 主診醫生在與衞生署的討論中，亦沒有提及過有關傳染性的問題。

3 月 3 日，衞生署獲通知 CC 及其丈夫入院的消息。衞生署追查曾與患者接觸的人，發現 AA 在廣州居住的外甥出現了感冒的徵兆，而 AA 的女兒亦已被送入廣州一家醫院；因此，到了 3 月 4 日，衞生署知悉共有 5 名曾與 AA 有密切接觸的人發病，分別是他在廣州的妻子、女兒及外甥，和在香港的妹妹 CC 及其丈夫。親屬之間因密切接觸而感染呼吸道疾病的情況並不罕見，而當時沒有醫護人員染病的報告，亦沒有任何與 AA 或酒店 M 職員有關的呈報個案。

根據衞生署所知的資料，又或在合理情況下預期衞生署可查明的資料，當時並無證據顯示本署的調查和追查接觸者的工作範圍應包括 M 酒店或其他 AA 曾到過的地方。AA 曾在該酒店留宿一夜，惟沒有環境因素顯示衞生署當時需要調查該酒店。

基於所有有關證據，專家委員會認為，就當時所得的資料而言，香港有關當局的處理手法合理，亦能因應當時所得的證據跟進調查。

新加坡的口頭報告

AA 入院後第 14 天(即 3 月 8 日)，新加坡衞生部在與衞生署就另一事情通電話時，指 3 名在 2 月底訪港的人士因為患上肺炎，已被送入新加坡一家醫院，3 人都曾經入住 M 酒店，其中兩人屬朋友關係；當時 3 人的化驗調查仍未有結果，而病人經接受抗生素治療後情況已有改善。由於當時並無足夠證據顯示各人的病況與 M 酒店有關，故衞生署請新加坡衞生部在化驗結果呈陽性時給予通知。

鑑於在沙士事件所得的經驗，我們已為衞生署疾病預防及控制部的沙士中央個案及接觸資料系統電腦化，以便及早追查感染源頭，預防疫情擴散。

然而，要注意的是，即使衞生署在 3 月 8 日展開對 M 酒店的調查，亦無法改變威爾斯親王醫院疫情的發展。事後流行病學資料顯示，雖然疫情於 3 月 11 日才為人知悉，但是威院羣組中有超過 30 宗個案都在 3 月 8 日或之前出現病徵。由於威院源頭病人是 M 酒店的訪客而非住客，故衞生署亦不可能一早查出其身分。該病人最初是在 3 月 13 日被懷疑是源頭病人，並在翌日獲得證實。及至他被確定為源頭病人和在多番詢問後，他才透露曾經在該段期間到過 M 酒店。

醫護人員受到感染

衞生署在 3 月 13 日獲通報一宗廣華醫院醫護人員受感染的個案，追查之下，發現該醫護人員可能是受 CC 丈夫(即 AA 妹夫)所傳染，其後，我們得悉另有一名廣華醫院醫護人員可能受到 AA 所感染。衞生署當時沒有接獲後一宗個案的報告，因為該宗不屬於嚴重社區型肺炎個案。

查出M酒店群組

3 月 11 日，有本地傳媒報道有關威院醫護人員感染呼吸系統疾病的消息，衞生署隨即展開個案調查，我們亦在翌日將有關情況通知世衞，促使世衞發出全球警報。當衞生署接獲新加坡和加拿大的報告後，更即時展開緊急調查，因而成功於 3 月 19 日查出包括 AA 及威院源頭病人在內的 M 酒店羣組的來龍去脈；AA 為該羣組的源頭病人。

2003 年 11 月 24 日

Annex 3

Special Control Team at NTERO
Staff Composition

Date	Principal Medical & Health Officer	Senior Medical & Health Officer	Medical & Health Officer	Senior Nursing Officer	Nursing Officer	Registered Nurse	Clerical staff	Total
11 Mar (Tue)	1	1	4	1	3	2	2	14
12 Mar (Wed)	1	1	4	1	3	2	2	14
13 Mar (Thu)	1	2	3	1	3	5	3	19
14 Mar (Fri)	1	2	4	1	6	4	3	21
15 Mar (Sat)	1	3	7	1	5	4	3	24
16 Mar (Sun)	1		1		3			5
17 Mar (Mon)	1	2	5	1	7	4	3	23
18 Mar (Tue)	1	3	7	1	7	6	3	28
19 Mar (Wed)	1	3	8	1	7	6	4	30
20 Mar (Thu)	1	3	8	1	7	6	4	30
21 Mar (Fri)	1	4	8	1	8	7	5	34
22 Mar (Sat)	1	4	8	1	9	8	5	36
23 Mar (Sun)	1		2		4			7
24 Mar (Mon)	1	4	8	1	9	10	5	38
25 Mar (Tue)	1	4	8	1	9	12	5	40

DH Team at PWH
Staff Composition

Date	Principal Medical & Health Officer	Medical & Health Officer	Nursing Officer	Registered Nurses	Total no. of Staff
13 Mar (Thu)		1	1	1	3
14 Mar (Fri)		1	1	1	3
15 Mar (Sat)		2	3	1	6
16 Mar (Sun)		1	1	0	2
17 Mar (Mon)		2	2	2	6
18 Mar (Tue)		2	2	0	4
19 Mar (Wed)		1	2	0	3
20 Mar (Thu)		1	2	0	3
21 Mar (Fri)	1	2	2	1	6
22 Mar (Sat)	1	2	1	1	5
23 Mar (Sun)		1	2	1	4
24 Mar (Mon)	1	2	1	1	5
25 Mar (Tue)	1	2	1	1	5

Prince of Wales Hospital Cluster

Work done by DH Team at PWH and Special Control Team at NTERO

Date	Total No. of Referred Cases & Contacts Interviewed	Referred Cases Interviewed		Contacts Follow-up	
		Total No.	*No. turned SARS*	Total No.	*No. turned SARS*
11 Mar (Tue)	87	26	*24*	61	*0*
12 Mar (Wed)	66	17	*13*	49	*1*
13 Mar (Thu)	227	77	*12*	150	*3*
14 Mar (Fri)	133	26	*9*	107	*10*
15 Mar (Sat)	161	29	*18*	132	*19*
16 Mar (Sun)	95	4	*2*	91	*3*
17 Mar (Mon)	101	26	*5*	75	*5*
18 Mar (Tue)	63	20	*8*	43	*2*
19 Mar (Wed)	129	41	*12*	88	*6*
20 Mar (Thu)	179	56	*7*	123	*4*
21 Mar (Fri)	34	9	*3*	25	*1*
22 Mar (Sat)	805	37	*7*	768*	*1*
23 Mar (Sun)	53	6	*2*	47	*0*
24 Mar (Mon)	60	2	*2*	58	*1*
25 Mar (Tue)	77	10	*10*	67	*3*
Total	2270	386	*134*	1884	*59*

*Note: The figure includes 599 contacts of a private practitioner, 82 hospital visitors, 34 contacts of an ambulance man and contacts of other cases.