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Miss Flora TAI
Clerk to Select Committee
Legislative Council

29 Dec 2003

Dear Miss TAI

I am writing in response to your letter dated 13 December 2003.

I confirm my attendance at the hearing on 10 Jan 2004. I will not be accompanied by any person in the hearing.

Concerning the areas of study (i.e. 1. Academic exchange with the Mainland about the atypical pneumonia situation in Guangzhou, and 2. Outbreak at the Prince of Wales Hospital) I have addressed the questions point-by-point in the enclosed document. I will be happy to answer further inquiry into these two areas on the day of the hearing.

My professional qualifications are listed below

Yours sincerely,

Joseph JY SUNG

RESPONSE TO QUESTIONS RAISED BY THE SELECT COMMITTEE OF THE LEGISLATIVE COUNCIL

Joseph Sung
COS in Medicine, Prince of Wales Hospital

1. Prior to March 2003, I learned from the news that there was an epidemic of respiratory infection in the Guangdong Province. My information came solely from reports by the media. I did not contact any officials in China nor academics for further information until the outbreak at the Prince of Wales Hospital started on 10 March 2003, the day when I returned from a trip in Seoul.

2. On 12 March (Wed), after admitting 23 health care workers to our hospital for high swinging fever and symptoms of pneumonia, I made a phone call to Prof. Hu Pin-jin, Professor of Medicine and Deputy Director of the First Affiliated Hospital, Sun Yat-sen University. I called him because I was supposed to visit Prof. Hu's unit and attended a medical conference during that weekend. I told him about our hospital outbreak and that I would not be able to attend the conference. Prof. Hu told me that, from what he heard, they had a serious outbreak in the Second Affiliated Hospital of their University. Prof. Hu being a Gastroenterologist instead of Infectious Disease physician, was not very sure about the details of the illness. He only told me that the situation in Guangzhou was quite bad. Health care workers needed to put on up-graded protective gears to work in the hospital. Focusing mostly on the management of the diseases, I asked Prof. Hu what was used to treat these individuals. He mentioned a few drugs in Chinese. I could not figure out what these drugs were. There were no other authorities/bodies in the Province of Guangdong that I had contacted.

3. Please refer to Q.2

4. Since the information provided by Prof. Hu was rather indirect and informal, and there was no specific advice on therapy or infection control that I could obtain, I had not taken any specific follow-up action other than reporting this phone call conversation to the Committee on Atypical Pneumonia at Prince of Wales Hospital on 13 March.

5. I reported this to the PWH Committee on Atypical Pneumonia chaired by the CCE (Dr. Fung Hong). I did not report this information directly to the head office of the Hospital Authority.

6. No, I am not aware of the visit of Dr. Y Guan and Dr. B Zheng to Guangzhou in early Feb 2003.

7. In my conversation to Prof. KY Yuen, who came to visit our patients on 12 March upon our request, I did mention my conversation to Prof. Hu Pin-jin. I am not aware of any follow-up action taken.

8. The index patient of Prince of Wales Hospital was a 26 year old male, Mr. Chan T. He attended our Accident and Emergency Department (AED) on 28 Feb for fever and symptom of flu. After seen by doctors in AED, he was discharged with a diagnosis of upper respiratory tract infection. Chlorpheniramine, actifed compound and paracetamol were prescribed. His fever did not respond to the medications and he returned on 4 March 2003 with productive cough and whitish sputum. He also reported diarrhea with brownish loose stool and vomited undigested food a few times before admission. He denied any sore throat, nasal symptom, dyspnoea, chest discomfort, abdominal pain or urinary symptoms. Mr. Chan appeared to enjoy good past health and had no significant history of recent travel. Vital signs showed a temperature of 40.2 °C, blood pressure 106/59 mmHg and a pulse rate of 103/minutes. Chest examination showed a bronchial breath sound at right upper zone. Physical examination was otherwise unremarkable. Chest X-ray showed a right upper lobe consolidation. A diagnosis of community-acquired pneumonia was made and he was admitted to a general medical ward for further management. The health care workers at the AED did not take any special precaution as the symptoms did not satisfy a case of severe community acquired pneumonia. During his visits to the AED, two teams of doctors and nurses had contacts with Mr. Chan. There were 3 doctors and 3 nurses got infected through their contact with Mr. Chan on those 2 occasions.

9. On 4 March, Mr. Chan was admitted to the medical ward 8A through AED. His symptoms included fever, chills, rigor and cough. Chest radiograph showing right upper zone consolidation. Blood counts revealed lymphopenia, thrombocytopenia but no desaturation of oxygen in blood. As he showed no evidence of respiratory failure, he did not require ventilation or admission into the intensive care unit. He did not satisfy the criteria of "Severe Community Acquired Pneumonia" according to the memo of HA dated 21 Feb 2003. Furthermore, the history from this patient gave no indication he had travelled to the Mainland. At that time, he was not recognised as being any different from the pneumonia patients normally seen at the hospital. As a result, no special precaution was taken. In the ward, he was attended to by Dr. Raymond Wong and Dr. Alex Hui (physician-in-charge). He was treated as a case of atypical pneumonia with antibiotics (cefotaxmine, clarithromycin) but showing slow improvement. On 6 March, his attending physician decided to give him bronchodilators through a nebulizer in an attempt to facilitate sputum production. Thereafter, his condition started to improve and became afebrile on 11 March 2003. He never required assisted ventilation and the use of steroid in the course of his illness.

10. When the patient was admitted in 4 March, no special precautionary measure was taken as he did not satisfy the criteria for severe community acquired pneumonia. Our respiratory team physicians were asked to see this patient as he did not show much sign of improvement with antibiotic therapy. Dr. David Hui and his colleagues, as part of their usual practice, wore a surgical mask during the consultation. After the outbreak occurred on 10 March, we implemented an upgraded droplet precaution according to our infection control team: surgical mask and gown for every worker in the ward. The ward 8A was also temporarily closed to all admission and all visitors.

This would be the same infection control measures taken in handling the patient transferred from Union Hospital. We were not, at that time, aware of patients with similar illness admitted to Queen Mary Hospital and Kwong Wah Hospital, thus we cannot compare the infection control policy.

11. On 13 March, Mr. Chan was diagnosed to have atypical pneumonia, which subsequently renamed as SARS, based on clinical and epidemiological evidence. Since he was also suspected to be the source of infection, Mr. Chan was put in an isolation room in ward 8A on that day. He was subsequently confirmed to be the index case at the Prince of Wales Hospital by the Department of Health on 14 March. Up till 14 March, there were 15 doctors, 13 nurses, 7 other allied health staff and 11 medical students being affected. We believe that the use of nebulizer in the ward 8A for the index patient led to the spread of the infection in the ward.

12. I was made to aware of the outbreak on 10 March.

    a. On 10 March (Monday), I was informed by our Department Operation Manager (DOM), Mr. Albert Ng that there were 11 health care workers (7 doctors and 4 nurses) reported sick over the last few days. I called a meeting at noon in which the following decisions were made: ward 8A was closed to all admission and all visitors, informed hospital infection control experts (Dr. Donald Lyon and his team), upgrade infection control measures (gown and surgical mask), trace record of other health care workers who might also be sick but without reporting (doctors, nurses and medical students), inform hospital administration (Dr. Fung Hong, Dr. Philip Li and Dr. SF Lui).

    b. On 11 March (Tuesday), more health care workers reported sick. This included 3 cardiac surgeons in our hospital (2 admitted to our private ward and 1 to Union Hospital) and 1 nurse who was admitted to Kwong Wah Hospital. In the afternoon, the number of health care workers felt sick had gone up to 50. We decided to call all health care workers with fever to return to our hospital for a thorough investigation. We performed physical examination, blood tests, nasopharyngeal aspirate for culture and chest X ray for all of them. After seeing each and everyone, we admitted 23 colleagues to a special room at the AED, namely the Observation Room for isolation. Department of Health NTE Regional Office was informed. Dr. Au TK joined the meeting starting on 11 March 2003.

13. When there are a large number of health care workers on sick leave, the ward manager (WM) of that ward will report to the Department Operation Manager (DOM) as well as the Team Head, while they both report to the Chief of Service (COS). The COS will report to the Hospital Chief Executive (HCE). The management of PWH did consider a large number of health care workers of ward 8A going on sick leave at the same time a potential outbreak situation. After the outbreak surfaced on 10 March, we informed the hospital administration, we conducted surveillance (through our own

staff) to find out whether there were more patients, staff and medical students who were sick.

14. The head office of Hospital Authority was informed of the situation on 10 March. Dr. SH Liu was notified by Dr. Donald Lyon from Department of Microbiology. Dr. Lyon also informed the Regional Office of Department of Health on the same day. The microbiologists and the Infectious Disease Team at PWH started the investigation of the outbreak. When Department of Health came to join us on 11 March, we asked him to take up the work of contact tracing and epidemiological investigation. We set up a Disease Control Center in our hospital in which our staff worked hand-in-hand with staff from Department of Health to investigate the outbreak. There was no precedent incidence at the Prince of Wales Hospital to have such a large number of health care workers reported sick at the same time.

15. Ward 8A was closed to admission, discharge and visiting in the afternoon of 10 March 2003. The ward was closed because of the potential infectious nature of the disease pending investigation. It was a joint decision between myself, members of Department of Medicine, the hospital management, as well as the microbiologists and infection control team of PWH. There was no direct consultation to the head office of HA or HA Board. Legal implication was not, at that moment, one of the factors considered. There was no movement of our chronically ill patients out of ward 8A. At that point, HWFB was not involved in making the decision.

16. In a meeting on 11 March with hospital management and faculty member of the Chinese University, the closure of ward 8A was re-discussed. Two factors were considered, namely 1. Authority to quarantine patients and 2. Adequacy of infection control measures. After 8A was closed, there were complaints from relatives and patients against our no visiting policy and it was feared that patients in ward 8A would discharge against medical advice. This would pose a threat of spreading the infection to the community. The committee's decision was to keep 8A close to further admission but reopen the ward to visits by patient's immediate family. Dr. TK Au of Department of Health was present at the meeting while this decision was made. On 12 March, HA head office and DH regional office were represented in the meeting. The closure of hospital and rearrangement of services were re-discussed.

17. Precautionary measures were taken to prevent visitors to ward 8A from being infected. These include
    a. Informing relatives the incident in ward 8A and discourage them to visit 8A
    b. Only one relative for each patient was allowed at a time
    c. Droplet precautions including surgical mask, gown and glove (if contact is necessary) were provided
    d. Relatives were asked not to come close with patients and not to feed them
    e. Nurses in the ward were to monitor the situation

    Many visitors were turned away. With these precautions, there was no more relative contracting the infection from 8A after 10 March 2003.

18. On 18 March, our respiratory physicians pointed out that the use of nebulizer could be a potential source of spreading the infection. This was subsequently supported by epidemiological investigations. Before this incident, nebulizer had not been reported as a spreader of respiratory infection. After our identification of the risk of using nebulizer in SARS patients, HA was informed immediately and the use of nebulizer was stopped in the Prince of Wales Hospital.

19. Seven patients were discharged from ward 8A on March 12-13. The main reason for discharging patients from 8A was for their protection. Evidence at the time suggested that that there might be a source of infection in the medical ward. It was considered that patients who were fit for discharge and did not have any evidence of infection would potentially contract the disease if they were kept in our ward. We were managing a disease with little knowledge about the infectivity and mode of transmission. We were cognizant that we have no legal right to keep patients in hospital unless quarantine is declared. We realized that the patient might still develop symptoms of the illness after being discharged. We asked them to stay home and kept their personal hygiene. We advised our patients to come back to AED when they developed symptoms at home. The Department of Health was informed of every patients discharged from our hospital for contact tracing if necessary. The decision of discharging patients from 8A was made by the hospital management and the faculty of medicine in the Committee on Atypical Pneumonia at PWH. HA head office and HA Board were not consulted. Each individual case of discharge was reviewed by senior physicians in charge of the wards. The so-called "step-down" ward system was set up on March 29 when we had more knowledge about the incubation period of the illness and the period of infectivity.

20. The index patient in PWH was confirmed to be the source of infection on 14 March by Department of Health. On 13 March, the sister and mother of our index patient were also admitted to the Prince of Wales Hospital. This information had been reported to the head office of HA through our CCE. Since 12 March, a Disease Control Center was set up in our hospital to keep track with admission and discharge of patients with febrile illness. In the Disease Control Center, staff from Prince of Wales Hospital, Chinese University of Hong Kong and Department of Health were working very closely to monitor the data. Everyday, updated information was forwarded to the head office of Hospital Authority.

21. On 12 March, I divided the Department of Medicine into a "Dirty Team" and a "Clean Team" to prevent cross-infection. We also started to cohort patients with suspected SARS in ward 8A. As patients and colleagues with fever were flooding into our hospital, we opened ward 8D as the triage ward to separate cases of suspected and probably SARS. N-95 masks used on the same day. We had also step-up the infection control measures and personal protective gears according to instructions and guideline from Infection Control Team and HA guidelines. We have encountered considerable difficulties in controlling the infection at the Prince of Wales Hospital because of the following reasons

a. An accurate diagnostic tool to differentiate the real cases of SARS from other febrile illnesses was not available
b. High volume of patients admitting to the hospital every day producing a very high viral load in the environment
c. The lack of isolation facilities, adequate ventilation system and the uncertainty over the adequacy of protective gear because it was a new disease
d. Atypical presentation in some cases

22. In view of the increasing number of suspected SARS cases admitting to the Prince of Wales Hospital, and other wards in the hospital could not be evacuated to create new wards for SARS within such a short time, the Cluster Committee decided to divert non-atypical pneumonia emergency medical cases attending AED to AHNH and NDH on 12 March. This policy was put to effect on 13 March.

23. From the very beginning, members in the Cluster Committee for Atypical Pneumonia were cognizant of the dangers that this contagious and deadly condition posed to our community. Indeed during the first meeting with hospital management on 12 March, faculty members of the CUHK and staff member of Department of Medicine warned of the need to close the Prince of Wales Hospital to the public. Based on the fact that no quarantine policy was in place in Hong Kong at that time and the heavy workload imposing on other hospitals, the Committee decided not to close the hospital at that juncture. With the increasing number of patients admitted to PWH, the issue of closing our hospital was further discussed with Chief Executive of HA on 16 March and 18 March. In the meeting on 18 March, CE joined the Cluster Committee on Atypical Pneumonia. After reviewing the updated situation, the CE decided on closing the AED of the Prince of Wales Hospital. On 19 March, our Dean phoned Director of Health and sent her a letter by fax expressing our grave concern of the disease spreading into the community, urging her to "urgently consider all possible measures including quarantine of patients and contacts to contain the outbreak before it was too late." The response was negative.