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SC2 Paper No. : W10(C)



醫院管理局
HOSPITAL AUTHORITY

QUEEN MARY HOSPITAL

瑪麗醫院

Department of Microbiology

To
Miss Flora Tai,
Clerk to Select Committee,
Legislative Council,
Hong Kong SAR,
People's Republic of China,
Your Ref: CB2/SC2

12/12/2003

Dear Miss Tai,

In response to the summon by the Legislative Council on the 4 December 2003, for appearing in the inquiry on the 20th of December and to give evidence on two areas, I now provide my written report. The report is according to the two queries as requested in the summon.

Thank you very much,

Yours sincerely,

Dr Seto Wing Hong



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Response to query (i)

The Handling of the case of Mr Au [REDACTED], who was transferred from St Paul's Hospital to Queen Mary Hospital on 8th March 2003.

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The Handling of the case of Mr. Au [REDACTED] admitted to QMH on 8th March 2003

The following documents and summaries are provided:

Appendix I: The referral letter from St Paul's hospital.

Appendix II: Clinical summary and chronology of patient's treatment, medication, condition and staff PPEs.

Appendix III: Survey results of Infection Control practices by the QMH staff providing care for Mr. Au [REDACTED] conducted on 20th March 2003

Table 1: Number of staff providing care for Au [REDACTED]

Table 2: Comparing Infection Control practices in Isolation ward and other clinical areas.

Table 3: Infection Control practices by rank.

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Introduction

As the ICO of QMH, this report will emphasize on the Infection Control aspect in the handling of the patient Mr. Au [REDACTED]. Data would be presented with explanation wherever possible. The patient first went through the A&E to a general medical ward. Next he was transferred to the ICU. He improved in the ICU and was again transferred back to the general ward. Here, it was finally realised that he was a possible case of SARS and was then admitted into the isolation ward. The handling of the patient in all these different areas will now be described with comments.

A. Handling during the course of illness (see table in Appendix II for summary):

Reason and condition of transfer from St Paul's (8th March 03)

1. Mr Au [REDACTED] was admitted to St Paul's hospital as a case of community acquired pneumonia and was transferred to QMH without prior notice to the A&E on 8th March because of respiratory failure requiring more intensive treatment. He was not transferred because of SARS, as the syndrome at that time was not known (see appendix I – referral letter).
2. He was on the 9th day (or the 2nd week) of his illness on admission to QMH.
3. On admission, he had no fever and CXR did not show deterioration.
4. The diagnosis from the A&E was community-acquired pneumonia with respiratory failure.

Initial Handling at the A&E and General Medical Ward A2 (All within 8th March 03)

1. In QMH, a case of community acquired pneumonia in adults, especially in the 2nd week of illness, with no definite pathogens identified was cared for by "Universal Precautions". This was rather similar to the present "Standard Precautions" adopted presently by the Hospital Authority*. In "Universal Precautions", barrier precautions (eg. mask, gloves etc) are not to be used at all time, but only when deemed necessary (eg. in cough inducing procedures). However, handwashing must be done every time before and after each patient contact. [*Note: the recommended precautions by the CDC for acute respiratory infectious disease in adults, when the pathogen is not known is 'Standard Precautions']
2. The patient was admitted through the A&E and then to A2 for 6.5 hours before the transfer to the ICU. He was given O₂ therapy before the transfer to the ICU (see Appendix II).

Handling of the patient in the ICU (8th March to 14th March 03)

1. The patient was placed in a well spaced out single-bed cubicle.

2. Treatment was given for the respiratory failure in the ICU. This included BIPAP, bronchodilators by nebulization and antibiotics.
3. Patient remained afebrile and improved with treatment.
4. Universal Precautions was again adopted in the care of the patient.

Return to the General Medical Ward A2 (14th March to 15th March)

1. With improvement, he was again transferred back to A2.
2. He was now only on nasal canula O₂.
3. Universal precautions were again adopted in the care of the patient.

Transferred to the Isolation and Cohort ward (16th March to 17th April, 2003)

1. The patient nephew-in-law, a known close contact, even when Mr Au [REDACTED] was staying in the hotel and in St Paul's Hospital, was admitted to QMH as a case of suspected SARS on the 15th March 03 (confirmed SARS on the 22nd March 03).
2. Based on the illness of this close contact, Au [REDACTED] was immediately listed as "suspected SARS" and transferred to the isolation ward in the morning of 16th March 03 (confirmed SARS on 21st March 03).
3. In the Isolation ward, the precautionary measures taken were "Droplets and Contact Precautions". This means that mask, gloves and gown should be worn in all direct patient care (not at all times). Handwashing as before must be done before and after each patient contact (at all times).
4. Patient remained afebrile except for a kick of fever on the 18th March 03.
5. He was discharged directly from the isolation ward on the 17th April 03.

Comments

1. It should be noted that Mr Au [REDACTED] was admitted before the WHO global alert on the 12th March 03 and thus it was even before the word SARS was coined. He was thus managed as a case of severe community-acquired pneumonia.
2. On retrospect, he was probably still infectious when he was transferred to QMH as he was in his 2nd week of illness (SARS was shown to be infectious in the 2nd

week) and he had also infected 3 HCWs, another patient in St Paul's and also his nephew-in-law.

3. No staff or patient in QMH was infected in the entire episode.

B. Infection Control Measures

Survey on Infection Control measures undertaken by staff (conducted on 20th March 03)

A survey was conducted on all staff who had cared for Mr Au [REDACTED], from admission up till four days after he was transferred into the Isolation ward. The results are shown in Appendix III. A total of 81 staff reported that they had provided care for the patient (see table 1)

Comparison of practices between Isolation Wards and other clinical areas.

This is shown in table 2. There is evidence that there was good compliance to infection control practices even in early March during the care of Au [REDACTED]

In the Isolation ward, as shown, wearing of mask was 100% and handwashing was 94%. The measures adopted in the isolation ward was "Droplets and Contact Precautions" where wearing of mask and handwashing should be observed at all time. Gloves and gown are lower in percentages but these were only to be worn when providing patient care.

In the other clinical areas, Universal Precautions was adopted. Handwashing was to be observed for all patient contact. As can be seen in table 2, it was at the high level of 98%. Other barrier precautions were to be used in the course of patient care, only when contact with blood and body fluid was a possibility. As shown in table 2, this was at about 40%. As expected, it was not as high as the Isolation ward, where these are to be worn in all patient care.

Comments.

In early March, SARS was not yet a well define syndrome. Mr Au [REDACTED] was admitted to QMH and diagnosed only as a case of community acquired pneumonia. Thus before the 16th of March, only Universal Precautions was observed in the care of the patients when he was not in the isolation ward..

However no staff or other patients were infected. The reasons are probably

1. Universal Precautions was rigorously practiced and in fact a high percentage of 98% was observed for handwashing. This is by far the highest percentage ever reported in a non-isolation clinical area, before we are aware of SARS.
2. The patient was kept most of the time in the ICU in a well-spaced cubicle. Other beds were at least over 6 feet away. This made any droplets produced incapable of infecting other patients.
3. The patient was ill and was bed-ridden; and did not move around in the ward. This must be one reason why the other patients were not affected.

Final Comments

Queen Mary Hospital has a long history of actively cultivating an Infection Control culture in the hospital since 1985. The infrastructure for Infection Control was already in place for many years, including fully trained ICO and ICNs; and an ICN/bed ratio of 1:250 as recommended. Ongoing education on all aspects of infection control was conducted continuously, like handwashing and isolation principles. These were probably helpful in drastically reducing the risk of cross infections in the SARS outbreak.

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Response to query (ii)

The communication between the head office of the Hospital Authority
and individual hospitals

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Introduction:

I am the ICO of QMH and Hong Kong West cluster and therefore I can only provide perspective as an important member of the Infection Control team in a cluster. Although I am a member the Central Infection Control Task Force, this was mainly an advisory group to the head office on all aspects of Infection Control, but did not basically have the responsibility of communication to the individual hospitals.

Means of Communication

Every mean of communications were applied. In the Infection Control Task Force, I am also formally representing the Hong Kong West Cluster and would be responsible to bring the message back to the cluster. Communication was bi-directional and a summary of the different types is given below.

Communication to the Head Office:

1. Report of surveillance data
Reporting of severe community-acquired pneumonia cases in February/March 03
Reporting of all suspected and confirmed SARS cases with epidemiological details required, finally using the eSARS programme to do it
Update report of all suspect and confirm SARS cases in the eSARS
2. Summary of any outbreak occurrences and investigation.
3. Feedback and comments for guidelines that are circulated.

Communications from the Head Office

1. Guidelines for the handling of SARS including treatment and Infection Control practices.
2. FAQ on various aspects of SARS.
3. Daily newsletter of SARS to the frontline.
4. Copies of press release from the head office.
5. Information on SARS available in the HA intranet.

Other Communication Channels

A very useful communication network that was extremely helpful during the SARS outbreak was between the ICOs of the different hospitals. Any information deemed important will be conveyed to all ICOs/Microbiologist in the network by the email. A microbiologist is on duty every month and sometimes the information is directed through this person via the head office.

Appendix IV

One example of such a communiqué which was particularly useful for us was an e-mail (~~original is available~~) by Dr D. Lyon on the 10th March 2003, in which he immediately informed us about the outbreak when it first broke out in ward 8A of PWH. This was the first time we in QMH knew about the outbreak. It had helped us to be specially alerted and we in QMH quickly formulated our strategy, including setting up our special cohort area for all suspected SARS as from 15th March 03.

Comments

The alert from Dr D Lyon was very important. Up till the outbreak in PWH, all we knew was that there were outbreaks of atypical pneumonia in China. However the incidence of community-acquired pneumonia in Hong Kong was not drastically higher than previous years. The outbreak in PWH was a nosocomial outbreak and this was quite different. This was the key indicator that there might be a new pattern requiring drastic action.

Any ICO could also response to communiqué sent out to the network and my response to D Lyon's e-mail was one such example.

Subsequent to the e-mail from D Lyon regarding the outbreak in ward 8A, PWH, we met for more information regarding the outbreak. However I was disappointed at the lack of information on the outbreak. To me, the outbreak in ward 8A PWH was a critical turning point in the development of events and we needed to know more in order to prevent such a repeat in our own cluster.

Appendix V and Appendix VI

I wrote sternly to the head office in two e-mails on the 13th and 14th March 03 (~~original is available~~) regarding my disappointment on the lack of outbreak information. In the field of Infection Control, critical outbreaks must be investigated immediately. I wrote on this in the two e-mails calling for an immediate investigation of the PWH outbreak and even listed some of the key steps required.

These content of these e-mails represented my personal opinion but I had worked in the field for over 20 years. I did not have any response from the head office at that time and did not know of any consequential action.

Final Comments

In my opinion, communication was adequate during the SARS outbreak. However, although communication is critical in Infection Control, the actions recommended, the timeliness and the implementation of the recommendations are probably more important.



聖保祿醫院

St. Paul's Hospital

2 Eastern Hospital Road, Causeway Bay, Hong Kong. Tel: 23906008

8th March 03

Consultant Physician

A&E

QMH

Re: Mr. Au [redacted] M/72

Please admit this patient with acute community acquired pneumonia with respiratory failure.

Patient admitted on 2nd March 03 for fever for 4 days. Assumed to have pneumonia, started on IV. Coart with clinical response, subjectively well and ↓ fever.

Sudden deterioration with hypoxaemia today. O₂ 85% on 5 litres. Likely need ICU care.

PMH:- IHD on medical tx, DM on metformin.

His IHD has been stable upon admission. bronchodilator pff

On Pleur = 0.0 Deltagen = 0.0 aspirin, nitro = 0.0

Combivent pff pm. Beco 600 pff. Ranitidine = 0.0

On IV. Coart 500mg Q24hr for 6 days since 2/3/03

[Signature]

何栢輝醫生
DR HO HOK FAI
SPECIALIST IN RESPIRATORY MEDICINE
M.B.B.S.(H.K.) M.R.C.P.(U.K.) F.R.C.P. (Edin)
F.H.K.C.P., F.H.K.A.M. (Medicine)
Rm 001, McDonald's Building
48 Yee Wo Street Causeway Bay H.K.

Appendix II

Clinical Summary and chronology of patient's treatment, medication, condition and staff PPEs.

Au
M/

Admitted to A2 (medical ward) QMH via A&E
Date of Admission: 8 March 2003n at 13:02 hr
Transferred to C2 ICU: 8 March 2003 at 19.35 hr
Transferred to A2 (medical ward): 14 March 2003 at 19.36 hr
Transferred to B6 (SARS cohort ward): 16 March 2003 at 10.10 hr
Date of discharge: 17 April 2003

Reported as Severe CAP: 12 March 2003
Reported as SARS: 21 March 2003
Staff survey conducted on: 20 March 2003

Travel & contact History:

Canadian resident from Toronto came to Hong Kong on 12th February 2003. He stayed at 9th floor, M Hotel, Mongkok where the index case, medical professor of Guangzhou also resided. He played Mahjong and Yum Cha nearly everyday however none of the social contacts reported acquiring SARS. Mr. was admitted on 2 Mar to St. Paul hospital where one patient in the same room and 3 nurses were confirmed SARS. The other patients were admitted to QMH while the 3 nurses were admitted to PYNEH. His nephew-in-law reported signs and symptoms of SARS and was admitted to QMH on 15 March 2003.

Chief Complaint on admission:

Started to have fever with nonproductive cough on 25th February 2003. Seen by GP on 25th February and was subsequently admitted to St Paul's Hospital on 2nd March 2003 till transfer to QMH on 8th March 2003.

Patient's progress:

Mr. Au stayed in general ward on 100% for 6.5 hours before transferring to the ICU because of type I respiratory failure. In the ICU, he was put on BiPAP with 10-14L O₂. He was also on open form of nebulizer in ICU, general medical ward and even in the SARS cohort ward since 8 Mar until 18 Mar.

Patient had no fever on admission until 18.3 and only for one kick. He responded slowly with the help of BiPAP, nebulized medication and 14 days of Tazocin and Klacid. He was put on Ribavirin only from 22 to 28 Mar and steroid therapy from 22 Mar till 1 May. Finally his condition was progressing well and discharged on 17 April 2003.

Patient isolation:

In the ICU, the patient was nursed in an open well spread out one-bedded cubicle and not in the isolation room. He was put on universal precaution. The patient was transferred back to general ward on 14 Mar after 7 days in the ICU. He was suspected to be SARS on 15 Mar when his nephew-in-law was admitted to QMH for suspected SARS. At the same time, DH confirmed that Mr. Au had contact history at ██████████ Hotel. The patient was then transferred to the cohort ward on 16 March where droplet precaution was implemented. A staff survey was performed for 81 staff who had contacted Au ██████████ (for details please refer to Appendix 1). Out of the 81 staff reported having contact with Au ██████████, sixty-three reported had contacted with the patient in the general ward and ICU. Of the staff in the general ward and ICU, only 46% worn masks, 41% worn gloves, 40% worn gown and 98% practiced handwashing. (Table 2)

All wards were without any alteration of air condition during the whole period. The isolation wards were slightly positive pressured with 9-12 air changes per hour.

Cohort ward and Staff PPE:

Staff was instructed to implement droplet precautions when severe CAP monitoring had started in Feb 2003 (when outbreak in Guangdong).

Cohort ward started operation on 15 Mar 2003. Initially, staff PPE in the cohort wards only included disposable gown and surgical mask. At around 20 Mar 2003, all staff in Cohort Ward wore cap, goggles, N95mask, gown & gloves as part of droplets and contact

precaution. Glove all the time is not allowed. All staff was instructed not to reuse N95 and to discard on each removal. This practice has been continued since admission of SARS patient in QMH. Audit and patrol was performed in May.

Chronology of patient's treatment, medication, condition and staff PPE

Date	Time	Location	Activities & Treatment	Medication	Condition	PPE status
8 Mar	< 12:33 hr	St Paul's Hospital	Transfer patient to A&E QMH. No prior notice was provided to A&E QMH		SaO ₂ 80% on 50% O ₂ Mask	No special IC measures (Confirmed by St Paul's Hospital)
QMH						
	12:33 hr	A&E Triage	Admission to A&E, QMH 50% O ₂ mask		Temp 37.3°C SaO ₂ 78%	No special IC measures
	12:41 hr	A&E Resuscitation Room	50% O ₂ mask		SaO ₂ 80%	Mask + glove (1 Staff only)
	12:45 hr		↑100% O ₂ Consult ICU		SaO ₂ 94%	
	12:52 hr		For admission to Medical ward (according to ICU)		SaO ₂ 94%	
	13:02 hr	A2 - Bed 22 Medical ward	Warded A2 - <i>Not in isolation room</i> Dx: Severe Community Acquired Pneumonia, Type I Respiratory Failure, likely atypical pneumonia For 2 nd line antibiotics and Klacid. Consult ICU	Start Tazocin & Klacid IV		Hospital to implement Droplet precautions for Severe CAP In A2, 8 out of 19 staff (42%) wore Surgical mask. Handwashing practice was assessed showing 96% Compliance.
	14:30 hr		100% O ₂ . Seen by Dr Tobin, Admit to ICU, for BiPAP			
	19:35 hr	C2 ICU - Bed 8	Severe Community Acquired Pneumonia. Type I Respiratory Failure <i>Not in isolation room. Nursed in open well spread out one-bedded cubicle on northern side of C2</i> Started BiPAP, R/R 12/ min, O ₂ ↑ 6 l/ min to 12 l/ min ↑ O ₂ to 15 l/ min		Temperature 36.2°C	In ICU, 10 out of 41 staff (24%) wore mask (4 staff wore paper mask) Handwashing practice was assessed showing 96% Compliance.
	19:45 hr					
	21:15 hr			Nebulizer : Ventolin + Atrovent Q4H prn, given at 21:00 hr	Afebrile & stable R/R 15/ min On IV drip	
9 Mar	04:00 hr			Nebulizer : Ventolin + Atrovent		

9 Mar	15:30 hr			↓ O ₂ to 10 l/ min			Afebrile & fair CXR- patchy consolidation
10 Mar	0:00 hr					Nebulizer : Ventolin + Atrovent	
10 Mar	03:30 hr			↑ O ₂ to 15 l/ min		Nebulizer : Ventolin + Atrovent	SaO ₂ 90% Afebrile Chest physiotherapy
	09:45 hr			Change to liquid diet		Nebulizer : Ventolin + Atrovent @ 08:00, 12:00, 16:00 & 20:00	
	23:30 hr			BiPAP continue 15 l/ min Ventolin inhalation		Nebulizer : Ventolin + Atrovent @ 00:00	SaO ₂ 88%
11 Mar				Continue BiPAP 15 l/ min		Nebulizer : Ventolin + Atrovent @ 04:00 & 08:00	Afebrile
12 Mar	12:00 hr	C2 ICU - Bed 8		↓ O ₂ to 12 l/ min BiPAP			Afebrile. Not dyspnoeic
12 Mar	17:30 hr			To CT thorax (no report available, 2 nd CT on 28/3 confirmed SARS) Continue O ₂ to 12 l/ min BiPAP			
13 Mar	08:00 hr			↓ O ₂ to 10 l/ min BiPAP			Afebrile. Not dyspnoeic. R/R 13/ min
	12:30 hr			Try O ₂ via nasal cannula 6 l/ min when improved			SaO ₂ 99%
	14:00 hr			↓ O ₂ to 8 l/ min BiPAP			SaO ₂ 97%
14 Mar	08:00 hr			6l BiPAP.			SaO ₂ 97%
	09:00 hr			Off BiPAP O ₂ to 3 l/min via nasal cannula			
	18:00 hr			↓ O ₂ to 3 l/min via nasal cannula			SaO ₂ 99%
	19:00 hr			Plan transfer to A2			Afebrile
	19:36 hr	A2 - Bed 9 (medical ward)		Transfer to A2 - <i>Not in isolation room</i> O ₂ 3 l/min via nasal cannula			Stable. Afebrile
15 Mar	19:30 hr			O ₂ 4 l/min via nasal cannula			SaO ₂ 99%
							In A2, 8 out of 19 staff (46%) wore Surgical mask

21:30 hr		Transfer patient to B6 mane			Stable SaO ₂ 96%	Handwashing practice was assessed showing 96% Compliance.
16 Mar	10:10 hr	<u>B6 - Bed 1</u> (SARS Cohort ward)	Transfer to B6 Cohort Ward, <i>All staff in Cohort Ward wore mask, gown & glove as part of droplets and contact precaution. Glove all the time is not allowed.</i>	Nebulizer : Ventolin + Atrovent Q4H	Stable O ₂ 4 l/min via nasal cannula SaO ₂ 94%	All staff wore either surgical or N95 mask and disposable gown. Handwashing practice was assessed showing 94% Compliance.
17 Mar	16:10 hr		O ₂ 2 l/min via nasal cannula, Continue physiotherapy	Nebulizer : Ventolin + Atrovent Q4H	SaO ₂ 94%	
18 Mar	10:05 hr		Try off O ₂ 2 l/min prn	Off Ventolin + Atrovent nebulizer		
	20:30 hr		↑ O ₂ to 6 l/min		Fever 38.3°C SaO ₂ 90%	
19 Mar	08:45 hr		Try ↓ O ₂ to 4 l/min	Off Klacid	Tolerate well.	
	10:00 hr		↓ O ₂ to 2 l/min, off physiotherapy		Afebrile	
20 Mar	Am		O ₂ to 2 l/min	Off Tazocin	Well	Hospital implement Full PPE since 20 Mar.
21 Mar	Am		O ₂ to 2 l/min		Afebrile 100%	Cotton gown, N95, goggle, cap & shoe cover; glove when procedure.
22 Mar	11:00 hr			Start Ribavirin P.O. 1.2 g BD Methylprednisolone IV 500mg x 1/7		Handwashing practice was assessed showing 95% Compliance.
23 Mar	03:00 hr			Off Methylprednisolone Start Prednisolone 30 mg QD	Afebrile with sputum Cough whitish	

Off O₂ 24 March 2003
Off Ribavirin 28 March 2003
Off Prednisolone 1 May 2003
Discharge on 17 April 2003

ICN-QMH (12/2003)

Appendix III

Table 1

No. of Staff Providing Care for Au [REDACTED] (20/3/2003)

Ward	<u>Provided Care</u>	<u>%</u>	<u>Didn't Provide Car</u>	<u>%</u>	Total
A2 (Medical)	19	86%		0%	22
C2 (ICU)	41	87%	6	13%	47
B6 (Isolation)	18	100%	0	0%	18
A&E	3	60%	2	40%	5
Total	81		8		92

Infection Control Unit - QMH (12/03)

Table 2-ammendment

Comparing Infection Control Practices to Isolation Ward and other Clinical Areas (20/3/2003)

	Isolation Ward B6, n=18			Other Wards A2 (Medical), C2 (ICU), A&E, n=63	
	<u>Yes</u>	<u>%</u>		<u>Yes</u>	<u>%</u>
Mask	18	100%	Mask	19*	30%
Glove	8	44%	Glove	26	41%
Gown	14	78%	Gown	2	3%
Handwashing	17	94%	Handwashing	61	97%

*=5 wear paper mask

Infection Control Unit - QMH (12/03)

Table 3-amendment

Infection Control Practices - by Rank (20/3/2003)

	Isolation Ward B6, n=18			Other Wards A2 (Medical), C2 (ICU), A&E, n=63		
		<u>Yes</u>	<u>%</u>		<u>Yes</u>	<u>%</u>
Mask	Doctor	N.S.		Doctor	3	33%
	Nurse	16	100%	Nurse	13	29%
	HCA	2	100%	HCA	3	33%
Glove	Doctor	N.S.		Doctor	2	22%
	Nurse	6	38%	Nurse	18	40%
	HCA	2	100%	HCA	6	67%
Gown	Doctor	N.S.		Doctor	0	0%
	Nurse	12	75%	Nurse	2	4%
	HCA	2	100%	HCA	0	0%
Handwashing	Doctor	N.S.		Doctor	9	100%
	Nurse	15	94%	Nurse	43	96%
	HCA	2	100%	HCA	9	100%

N.S. = Not surveyed

-----Original Message-----

From: Shao Haei LIU Dr, HOPS&HR SEM(PS)1
Sent: Monday, March 10, 2003 4:48 PM
To: James Donald LYON Dr, PWHMIC Cons(MIC)
Cc: W H SETO Dr, HKWC CD(Q&RM) / HKWC CC(MIC) / QMHMIC COS; W M KO Dr, HOPS&PA D (PS&PA)
Subject: RE: problems in PWH

Thanks. I have also passed to Seto who is the Duty microbiologist.
There will be a meeting this week to review the situation again.

SH LIU

-----Original Message-----

From: James Donald LYON Dr, PWHMIC Cons(MIC)
Sent: Monday, March 10, 2003 2:44 PM
To: N C TSANG, QEH CON(Path); T K NG Dr, PMH CON(Path)
Cc: Shao Haei LIU Dr, HOPS&HR SEM(PS)1
Subject: problems in PWH
Importance: High

Please note the following:

1. A 40 year old man was admitted to PWH ward 9A in the early hours of Sunday AM [REDACTED]. He became ill last Sunday when he was on business in Guangdong. Despite treatment in China, he developed fever & cough which became more severe. He deteriorated quickly after admission to PWH and died this morning. CXR showed early pneumonic changes. He was accompanied from China by his sister, who is currently asymptomatic. The case has been referred to the coroner. NPA and clotted blood were sent and results are pending.
2. We have an outbreak of a 'flu like illness in another medical ward (8A) - not apparently related to the above. 17 patients and 11 staff members have become unwell since Friday. Fever, chills, & sore throat are the typical symptoms. We have met with our

Medical Dept. and HCE and have implemented controls - ward is closed to admissions, samples are being collected, symptomatic staff put off work, droplet precautions for symptomatic patients, visitors restricted and educated on droplet precautions, asymptomatic staff told to promptly report flu like illness. The first round of IF testing for NPA samples should be available later on this afternoon.

Dr. Donald Lyon,
Dept. of Microbiology,
Prince of Wales Hospital,
Shatin, Hong Kong.
Tel: 852 2632 2305
Fax: 852 2645 1256

W H SETO Dr, HKWC CD(QRM) / HKWC CC(MIC) / QMHMIC COS

From: W H SETO Dr, HKWC CD(Q&RM) / HKWC CC(MIC) / QMHMIC COS
Sent: 2003年3月13日星期四 上午 11:07
To: Shao Haei LIU Dr, HOPS&HR SEM(PS)I
Cc: W M KO Dr, HOPS&PA D(PS&PA)

Dear SH,

I feel that I need to make an important point regarding the PWH situation to Dr. Ko and you. However just not to be misunderstand - it is just to be taken as my comments. I do understand that as someone from QMH, I do not want to sound critical on another teaching hospital.

However regarding the outbreak in PWH, I was quite disappointed at the report given to us yesterday and it does seem like good epidemiology has not been applied. Now back to to basics in outbreak investigation in the hospital.

1. Get a working case definition
2. Then go through all cases and make a line listing (like the chart Dominic produce for us). This must certainly include key information like time of onset, contacts etc. From this we should work out an idea on who is index case or a few possibilities This is important. If we do not know the index case in a nosocomial outbreak - we are walking in the dark. The line listing also help us to exclude some cases.
3. Usually we draw an epidemic curve
4. We go through all important lab results. Aparrently there were a splatter of results from the NPAs but as you know, when I asked whether they are from staff in 8A - they do not seems to know?
5. There were like 70 cases (or 50 according to the press). Whatever the numbers are enough to do some case control analysis - like contact to the index cases or other risk factors.

Well I can go on and on ... and be over technical. I do not also want to sound over critical about another hospital.

However if we do not do good epidmiology we will rely on impressions and this is very dangerous when panic is in the air. I write this note to just appeal that we keep our heads cool and collect good epidemiology data. Also can we make sure our PWH colleagues will just get on to do some good shoe leather epidmiology.

Well just comments form me and I certainly do not want to add fire to any controversy; but I hope we can get a better epidmiological profile from the PWH outbreak.

Thank you,

WH Seto

W H SETO Dr, HKWC CD(QRM) / HKWC CC(MIC) / QMHMIC COS

From: W H SETO Dr, HKWC CD(Q&RM) / HKWC CC(MIC) / QMHMIC COS
Sent: 2003年3月14日星期五 上午 9:22
To: Shao Haei LIU Dr, HOPS&HR SEM(PS)I
Cc: W M KO Dr, HOPS&PA D(PS&PA)
Importance: High

Dear SH,

I again just want to sent a note to Dr. Ko and your true self, commenting also as the microbiologist on duty.

I had already commented on the lack of good epidmiology when the PWH data was presented to us the other day. As you know we are dealing with a background of atypical pneumonias that already have a high incidence in the winter months and also high mortality (as shown by data in the previous years). So if we do not collect meticulous epidemiology data, we will not be able to differentiate between any real new outbreak from China from out background data. Also with such high incidence and mortality already in the background, we can easily take this background data and allow impressions to take over and think that we have a new outbreak.

I think we did the right thing when we heard news of the outbreak in China and Dominic has been doing a great job tracking all severe CAP, making line list etc.

However when we have a hospital outbreak, the situation changes a little. Now we have a cluster among staff/patients who are all in the hopital. The basic principles remain the same. We work out a case definition (which should be refine all the time) and then collect data on all cases meticulously. Now the items for the line listing must also be ever evolving all the time. The line list table we use for the community outbreak is probably not sufficient. For example you obviously wants to know the kind of contact the staff have with the index case. You may also (epecially if the subject is the suspected index case) want to know the full detail of illness of family members and the contact this person has. Then if there is a possible risk factor (eg. like a cardia surgeon is suppose to have come down with the illness and even spread it to other staff), then contact with him from all cases may need to be collected. This must progress real time and be done quickly if we want to advert panic or developing wrong impressions. Only if enough data is collected are we in position to do any meaningful case control analysis.

I am not sure how we ensure that such epidmiological i/v is done properly but I certainly hope that we will not get a repeat of the PWH situation.

Thank you,

WH Seto