

**Analysis of responses to the questionnaire on
“Measures relating to Personal Protective Equipment
during Outbreak of Severe Acute Respiratory Syndrome”**

1. Introduction

1.1 The Select Committee appointed to inquire into the handling of the SARS outbreak by the Government and the Hospital Authority (HA) requested 10 hospitals to complete a questionnaire entitled “Measures relating to Personal Protective Equipment (PPE) during Outbreak of Severe Acute Respiratory Syndrome”. These 10 hospitals are -

- (a) Alice Ho Miu Ling Nethersole Hospital (AHNH);
- (b) Kwong Wah Hospital (KWH);
- (c) Pamela Youde Nethersole Eastern Hospital (PYNEH);
- (d) Prince of Wales Hospital (PWH);
- (e) Princess Margaret Hospital (PMH);
- (f) Queen Elizabeth Hospital (QEH);
- (g) Queen Mary Hospital (QMH);
- (h) Tai Po Hospital (TPH);
- (i) Tuen Mun Hospital (TMH); and
- (j) United Christian Hospital (UCH).

1.2 This Appendix contains an analysis of the responses of the 10 Hospitals to the questionnaire. In preparing this analysis, the Select Committee has also made reference to the infection control audit reports of these 10 Hospitals and other relevant information provided by the Hospital Authority (HA) and the Administration.

1.3 The tables in this analysis have been compiled based mainly on the information provided by the 10 Hospitals in their respective responses. According to the Convenor of the Central Committee on Infection Control and the Working Group on Severe Community-Acquired Pneumonia, Dr LIU Shao-haei, the infection control measures taken in all the HA hospitals followed guidelines issued by the Head Office of HA (HAHO). However, methods used to ensure compliance might have varied from hospital to hospital depending on the local requirement and on what was perceived as being most acceptable to staff and effective to serve the purpose.

2. Analysis

Number of HA employees infected

Table 1 – Number of HA employees infected

	AHNH	PWH	PMH	UCH	QEH	PYNEH	TPH	TMH	KWH	QMH
Total no. of HA employees infected	38	110	63	28	18	13	3	14	10	2
Healthcare workers:										
Doctors ^(a)	(7)	(19)	(8)	(4)	(1)	(1)	(1)	(2)	(1)	(0)
Nurses ^(b)	(19)	(63)	(35)	(12)	(12)	(6)	(1)	(8)	(5)	(2)
Other healthcare workers ^(c)	(12)	(24)	(12)	(10)	(5)	(5)	(0)	(4)	(4)	(0)
Non-healthcare workers:										
Categories are listed in note (d)	(0)	(4)	(8)	(2)	(0)	(1)	(1)	(0)	(0)	(0)
Average no. of HA employees employed during the SARS epidemic	1 286	4 044	2 900	3 433	4 523	3 352	850	4 030	2 953	4 070
% of HA employees infected against average no. of HA employees employed during the SARS epidemic	2.95%	2.7%	2.2%	0.8%	0.4%	0.39%	0.35%	0.35%	0.34%	0.05%
No. of SARS patients handled	130	351	585	184	120	93	57	87	82	52
No. of HA employees infected per SARS patient handled	0.29	0.31	0.11	0.152	0.15	0.14	0.05	0.16	0.12	0.04

Note:

- (a) Doctors refer to Consultants, Hospital Chief Executives, Medical and Health Officers, Residents and Senior Medical and Health Officers.
- (b) Nurses refer to Enrolled Nurses, Nurse Specialists, Nursing Officers, Registered Nurses and Senior Nursing Officers.
- (c) Other healthcare workers refer to Common Rehabilitation Practitioners, General Care Assistants, General Services Assistants, Health Care Assistants, Medical Laboratory Technicians, Occupational Therapists, Operating Theatre Assistants, Physiotherapists, Radiographers, Technical Services Assistants, Temporary General Care Assistants, Ward Attendants and Ward Managers.
- (d) Non-healthcare workers refer to Artisans, Clerks, Clerical Assistants, Office Assistants, Personal Secretaries and Workmen.

2.1 Figures in Table 1 and Table 2 are actual statistics. These figures, however, should not be read directly to mean anything related to the performance or effectiveness of the relevant hospitals in the implementation of infection control measures. These figures have to be read against the background of the different circumstances that were faced by the different hospitals during the SARS epidemic, such as the time when the SARS outbreak in the hospital occurred, whether the outbreaks involved any “cryptic” cases, SARS patient load, etc.

2.2 In terms of the percentage of HA employees infected during the SARS epidemic, AHNH has the highest percentage, i.e. 2.95%. In terms of the actual number of HA employees infected, AHNH ranks third with 38. PWH has the second highest percentage of HA employees infected, i.e. 2.7%. In terms of the actual number of HA employees infected, PWH ranks first with 110. QMH has both the lowest percentage and the smallest number of HA employees infected, which are 0.05% and two respectively.

2.3 If the number of HA employees infected is compared to the number of SARS patients handled, PWH has the highest number of HA employees infected per SARS patient handled, i.e. 0.31, but it handled the second largest number of SARS patients, i.e. 351. PMH handled the highest number of SARS patients, i.e. 585, but in terms of the number of HA employees infected per SARS patient handled, it is the third lowest with 0.11. QMH has the lowest number of HA employees infected per SARS patient handled, i.e. 0.04, and handled the lowest number of SARS patients, i.e. 52.

Number of contractors’ employees infected

Table 2 – Number of contractors’ employees infected

	AHNH	UCH	PWH	QEH	KWH	PYNEH	PMH	QMH	TPH	TMH
Total no. of contractors’ employees infected	3	1	2	1	0	0	0	0	0	0
Average no. of contractors’ employees employed during the SARS epidemic	243	105	422	439	50	190	240	216	61	246
% of contractors’ employees infected against average no. of contractors’ employees employed during the SARS epidemic	1.2%	0.95%	0.5%	0.2%	0%	0%	0%	0%	0%	0%
No. of SARS patients handled	130	184	351	120	82	93	585	52	57	87
No. of contractors’ employees infected per SARS patient handled	0.023	0.005	0.006	0.008	0	0	0	0	0	0

2.4 There was no report of infection of contractors' employees in KWH, PYNEH, PMH, QMH, TPH and TMH. As regards ANHN, UCH, PWH and QEH, the number of contractors' employees infected is small with ANHN's number of three being the highest.

Dissemination of guidelines on infection control measures in hospitals

Table 3 – Issuance of instructions or guidelines in addition to HAHO guidelines

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Additional instructions or guidelines issued, with the reason being:										
Adaptation to suit local situations in hospitals			✓				✓		✓	✓
Reformatting guidelines to make them more user-friendly for frontline users				✓						
Photo illustrations to facilitate compliance					✓					
No reason provided	✓							✓		
No additional instructions or guidelines issued										
No reason provided		✓				✓				

2.5 As shown in Table 3, ANHNH, PYNEH, PWH, PMH, QMH, TPH, TMH and UCH issued their own instructions or guidelines on infection control, in addition to those issued by HAHO. KWH and QEH did not issue additional instructions or guidelines.

2.6 The measures taken to make the instructions or guidelines issued by HAHO and the hospitals available and accessible to HA employees are summarized in Table 4.

Table 4 – Measures taken to make the instructions or guidelines issued by HAHO and the hospitals available and accessible to HA employees

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Electronic Means										
Email message	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Website	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Training/Discussion Sessions										
Employee forum	✓		✓	✓	✓	✓		✓	✓	✓
Briefing by hospital personnel	✓		✓	✓	✓	✓	✓	✓		✓
Training session	✓		✓	✓	✓	✓	✓	✓	✓	
Educational talk/lecture/programme	✓	✓	✓		✓	✓	✓			
Management/department/employee meeting	✓	✓	✓		✓	✓		✓		
Discussion session									✓	
Hard Copies										
Notice	✓		✓	✓	✓	✓	✓	✓	✓	✓
Memo				✓						
Ward manual/Ward folder	✓		✓		✓			✓		
Poster and signage			✓		✓	✓		✓		
Fax						✓				
SARS bulletin	✓				✓	✓				
Video and Demonstration										
Educational video on infection control			✓		✓	✓		✓		
Video demonstration of PPE	✓	✓				✓		✓		
Daily site visit and demonstration of PPE		✓						✓		
Others										
Staff ambassadors		✓								
Hotline enquiry	✓				✓					

2.7 All the 10 Hospitals responded that email messages and websites were used to disseminate instructions or guidelines to employees. Staff forums, briefings and training sessions were the most commonly used methods for training purposes. Notices, ward manuals and posters were also used to disseminate information on infection control measures. Some hospitals adopted unique ways to disseminate information. For example, KWH employed “staff ambassadors”, while AHNH and PMH set up a hotline enquiry service to communicate with the frontline workers.

Non-compliance with guidelines

2.8 Responding to the questionnaire, PWH and TPH indicated that they had no recorded incident of non-compliance with the instructions or guidelines on infection control measures issued by HAHO during the SARS epidemic. PWH, however, did point out that some lapses in infection control practices had been noticed. The other eight Hospitals responded that there were incidents of non-compliance. Table 5 summarizes such incidents in the 10 Hospitals, based on their responses to the questionnaire as well as their infection control audit reports.

Table 5 – Incidents of non-compliance in following infection control guidelines

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Use of PPE										
Inadequate changing of gloves		✓	✓				✓		✓	✓
Inadequate changing of uniform		✓	✓		✓			✓		
Improper wearing of mask						✓	✓	✓		✓
Reuse of single-use items		✓				✓				
Double gloving		✓			✓			✓		
Employees not wearing proper PPE								✓		
Nature of improper use of PPE not specified							✓		✓	✓

Table 5 – Incidents of non-compliance in following infection control guidelines (cont'd)

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Practices										
Inadequate washing of hand/ improper technique in washing hands		✓	✓	✓	✓		✓	✓	✓	✓
Improper handling of excreta and/or peritoneal dialysis (PD) fluid	✓							✓	✓	
Improper documentation of triage						✓				
Visitation allowed						✓				
Improper storage of rubbish	✓									
Improper handling of clean/soiled items	✓							✓		
Improper storage of reused PPE								✓		
Improper gown-down procedures				✓						
Training										
Not all employees having received training	✓	✓			✓		✓			
Inadequate knowledge of infection control practices				✓						

Table 5 – Incidents of non-compliance in following infection control guidelines (cont'd)

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Environment										
Gowning areas not well-guarded against intrusion		✓				✓				✓
Indistinct separation of gown-up and gown-down areas				✓					✓ ^(e)	
Indistinct separation of clean and dirty zones				✓					✓	
Shortage of space for proper disinfection of reusable PPE									✓	
Improper labelling of wards	✓									
Overcrowded wards									✓	
Lack of fixed dispenser for liquid soap	✓									
Lack of warning notices	✓					✓				✓
Shortage of posters	✓					✓				✓
Resuscitation trolleys not properly fitted/ not ready for use during resuscitation	✓					✓				
Failure to implement “buddy system”					✓ ^(f)					

Note:

- (e) The reply of TMH indicated that this was due to shortage of space.
- (f) A “Patrol System” was implemented to enforce the correct use of PPE.

2.9 Table 6 summarizes the actions taken by the 10 Hospitals to rectify the incidents of non-compliance in following infection control guidelines.

Table 6 – Actions taken to rectify incidents of non-compliance in following infection control guidelines

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
PPE										
Training/ explanation/ reminder of proper use of PPE	✓	✓	✓				✓	✓		✓
Advise against reuse of single- use items						✓				
Change of gloves							✓		✓	✓
Change of working clothes					✓					
Practices										
Monitoring of/ issuance of reminder on hand washing							✓	✓	✓	
Proper handling of excreta and/or PD fluid	✓								✓	
Proper storage of soiled linen	✓									
Training										
Training/ reinforcement of infection control practices	✓	✓		✓	✓	✓		✓	✓	✓

Table 6 – Actions taken to rectify incidents of non-compliance in following infection control guidelines (cont'd)

	AHNS	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Environment										
Posting of notices and signs to identify gown-up and gown-down areas	✓			✓		✓				✓
Guarding gowning areas against intrusion						✓				
Zoning and patient segregation		✓								
Better identification of clean and dirty zones				✓				✓		
Proper labelling of wards	✓									
Proper separation of clean and soiled items and putting away clean linen from sluice room								✓		
Spacing out patients within ward									✓	
Other										
Posting of warning notices and posters	✓									✓
Setting up of “buddy system”								✓		

2.10 The most common incidents of non-compliance in following infection control instructions and guidelines included -

- (a) inadequate washing of hands;
- (b) inadequate changing of gloves;
- (c) not all staff having received training;
- (d) inadequate changing of uniform;
- (e) improper wearing of masks;

- (f) gowning areas not well-guarded against intrusion; and
- (g) lack of warning notices/shortage of posters.

2.11 All the 10 Hospitals took actions to rectify the incidents of non-compliance in following guidelines on infection control. The most common action taken was to provide training on infection control practices and the proper use of PPE. Reminders were distributed and posters displayed to remind employees to wash their hands. In addition, notices and signs were posted to identify gown-up and gown-down areas. These areas were also guarded against inadvertent intrusion.

2.12 AHNH and TMH conducted follow-up audits after recommendations were made in the first audit. In AHNH, the relevant wards were re-inspected two to three days after the first audit to ascertain if improvements had been made. In TMH, a second audit was conducted in four medical wards which did not perform well in the first audit. To further improve communication, the Infection Control Audit Team in TMH interviewed the ward managers of the four medical wards to better understand their difficulties.

Infection control measures — wearing of personal protective equipment

Table 7 – Differences of infection control measures between high risk areas and non-high risk areas

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Differences adopted in line with HAHO guidelines	✓	✓	✓		✓	✓		✓	✓	✓
Differences adopted according to hospital/cluster guidelines	✓			✓				✓		
No mention of the guidelines adopted							✓			

2.13 As shown in Table 7, KWH, PYNEH, PMH, QEH, TMH and UCH took different infection control measures in the high risk areas and non-high risk areas according to HAHO guidelines. PWH followed its own guidelines as well as those issued by the New Territories East Cluster (NTEC). AHNH and TPH followed the guidelines issued by both HAHO and NTEC. QMH set out in detail, in its response to the questionnaire, the differences between the infection control measures taken in the high risk areas and those in the non-high risk areas.

Table 8 – Time when different infection control measures were adopted in high risk areas and non-high risk areas

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Before 15 March 03^(g)					✓					
From 15 March 03 onwards										✓
From 21 March 03 onwards				✓						
From 26 March 03 onwards									✓	
Before 28 March 03^(h)	✓									
From 9 April 03 onwards						✓				
From 11 April 03 onwards			✓							
Information not provided		✓					✓	✓		

Note:

- (g) The reply of PMH indicated that prior to 15 March 2003, PMH had already admitted patients with Severe Community-Acquired Pneumonia and SARS; hence stringent infection control measures were implemented in the Intensive Care Unit and Infectious Disease wards.
- (h) The reply of AHNH indicated that stratification of different areas of the Hospital was made in different periods: before 28 March 2003, from 28 to 31 March 2003, and after 31 March 2003.

2.14 The periods during which different infection control measures were taken in the high risk areas and non-high risk areas varied among the 10 Hospitals. PMH and UCH were the first two Hospitals to adopt different measures in the high risk areas and non-high risk areas. KWH, QMH and TPH did not provide information on when different infection control measures were taken in the high risk areas and non-high risk areas.

Supply and distribution of PPE

Hospitals with less than seven days' supply of PPE

2.15 QEH was the only Hospital which responded that it was able to maintain no less than seven days' supply of PPE during the SARS epidemic. In terms of the supply of N95 masks and surgical masks, PWH, QMH, TMH and UCH indicated that they had less than seven days' supply at various times during the SARS epidemic. PYNEH responded that it had less than seven days' supply of N95 masks of a certain brand and surgical masks at various times during the SARS epidemic.

2.16 The replies given by AHNH, KWH, PMH and TPH were unclear as to whether these four Hospitals had no less than seven days' supply. AHNH responded that it had "tight supply" of face shields, gloves, N95 masks and surgical masks. KWH indicated that there was "slim buffer in the store" for gloves, and that in the distribution of goggles, eye shields, N95 masks and surgical masks, "priority was given to departments attending SARS patients". PMH responded that it had "slim stock" of goggles, N100 masks, N95 masks and surgical masks at certain times. TPH indicated that PPE items "were supplied to wards by the auto refill system and supplemented by ad hoc provisions", and that "PPE supplies were co-ordinated through a PPE co-ordinator system and supplies were delivered to wards twice weekly according to prevailing infection control guidelines risk level".

2.17 Apart from TPH, the response of which was unclear, all the other nine Hospitals had no less than seven days' supply of shoe covers.

Actions taken with regard to the shortage of PPE

Table 9 – Actions taken with regard to the shortage of PPE

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Whether HAHO was notified										
Yes	✓	✓	✓	✓	✓		✓		✓	✓
Not applicable						✓				
Information provided not clear								✓		
Whether the Hospital attempted to acquire additional PPE after commencement of central procurement										
Yes	✓ ⁽ⁱ⁾	✓		✓	✓				✓	✓
No			✓				✓			
Not applicable						✓				
Information provided not clear								✓		

Note:

- (i) Donation of PPE from the community and “parent organization” was received.

2.18 QEH responded that it was able to maintain no less than seven days’ supply of PPE during the SARS epidemic. TPH responded “not applicable” to the question as to whether HA was notified of the shortage of PPE. The other eight Hospitals responded that they notified HAHO when faced with the shortages of PPE. For these eight Hospitals, prior to the commencement of central procurement, HAHO or the cluster was involved in monitoring the stock supply, liaising with suppliers, procuring PPE items, and arranging deliveries.

2.19 AHNH, KWH, PWH, PMH, TMH and UCH did attempt to procure additional PPE after the commencement of central procurement, while PYNEH and QMH responded that they did not have such a need.

Occasions on which employee's requests for PPE were turned down

Table 10 – Occasions on which employees' requests for PPE were turned down

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Request was not recommended for valid reasons							✓			
No request was turned down	✓	✓	✓	✓	✓	✓		✓		✓
No such record									✓	

2.20 AHNNH, KWH, PYNEH, PWH, PMH, QEH, TPH and UCH responded that no request for PPE had been turned down, except where there were shortages of the PPE item requested. TMH responded that it did not have such a record. QMH responded that some employees had requested to use N100 masks, but the item was not recommended for use. It was therefore not provided by the Hospital.

Complaints about unavailability of PPE

2.21 According to KWH, PWH and UCH, no complaint was received from employees about unavailability of PPE. For the other seven Hospitals, the number of complaints about unavailability of PPE received ranged from one to 11. PYNEH, QEH and TMH each had one complaint; TPH two; AHNNH three; QMH 10; and PMH 11. Table 12 sets out the nature of these complaints.

Table 11 – Number of complaints received from employees

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
One			✓			✓			✓	
Two								✓		
Three	✓									
Ten							✓			
Eleven					✓					
No complaint received		✓		✓						✓

Table 12 – Nature of complaints

	AHNH	PYNEH	PMH	QEH	QMH	TPH	TMH
Request for extra PPE on top of standard provision ^(j)		✓					
Request for adequate supply of PPE			✓				
PPE not distributed fairly among wards			✓				
Noting of healthcare workers purchasing own PPE			✓				
Employees given single-ply paper mask			✓				
Inadequate supply of PPE			✓	✓	✓	✓	
Employees unsure of what PPE to wear			✓				
PPE locked up and not accessible by employees			✓				
Supervisor telling employees not to wear PPE in low risk area					✓		
Ward manager restricting employees in using surgical mask					✓		
Sub-standard PPE					✓		
Colleagues using/procuring own PPE ^(k)					✓		✓
Complaint not specified	✓						

Note:

(j), (k) The exact nature of complaint is not clear.

2.22 Table 13 details the complaint channels of the seven Hospitals which had received complaints from employees about unavailability of PPE. All the seven Hospitals took actions to rectify the situation.

Table 13 – Complaint channel

	AHNH	PYNEH	PMH	QEH	QMH	TPH	TMH
HAHO hotline/staff hotline	✓		✓		✓	✓	
Member of the Legislative Council			✓				
Letter to HAHO/hospital personnel			✓				
Meeting with HAHO			✓				
Trade union meeting			✓				
Nursing/supporting enquiry			✓				
Phone – in programme			✓				
Newspaper			✓				
Channel not specified		✓		✓			✓

Occasions on which employees were not allowed to put on PPE while on duty

Table 14 – Occasions on which employees were not allowed to put on PPE while on duty

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Yes but for valid reasons							✓ ^(l)		✓ ^(m)	
No such occasion	✓	✓	✓	✓	✓	✓		✓		✓

Note:

(l), (m) Employees were advised not to put on inappropriate PPE.

2.23 AHNH, KWH, PYNEH, PWH, PMH, QEH, TPH and UCH responded that there was no occasion on which employees were not allowed to put on PPE while on duty. In QMH, employees were advised not to put on N100 masks and were reminded that it would be at their own risk to do so. TMH responded that inappropriate wearing of PPE while not carrying out duties with infection risks outside the patient care areas was not allowed. Apart from masks, all forms of caps, disposable gowns and linen gowns, shoe covers, gloves, eye goggles, or face shields were not allowed to be worn in communal areas except

when carrying out duties with infection risks. According to TMH, the reason for issuing such an instruction was that it was impossible to differentiate between contaminated PPE and non-contaminated PPE, and that inappropriate wearing of these items in communal areas without infection risks would pose difficulties for the Hospital to enforce infection control measures to safeguard staff and patients.

Occasions on which requests from employees to put on their own PPE were turned down

Table 15 – Occasions on which requests from employees to put on their own PPE were turned down

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Yes but for valid reasons						✓	✓			
No such occasion		✓	✓	✓	✓			✓ ⁽ⁿ⁾	✓	✓
Not aware of such occasion	✓									

Note:

(n) Employees were advised not to put on masks with an exhale valve.

2.24 Seven Hospitals, i.e. KWH, PYNEH, PWH, PMH, TPH¹⁴, TMH and UCH, responded that they did not turn down any requests from employees to put on their own PPE, which was considered by the employees concerned to be offering a higher level of protection than those specified in the instructions or guidelines issued by HAHO at the time when such requests were made. AHNNH responded that its HCE was not aware of any such requests being turned down. QEH advised against the use of self-purchased P100 masks because it was a non-standard PPE item at the time, and there were doubts about the quality of these items and reliability of the vendor. For QMH, there were two occasions on which employees of the Adult Intensive Care Unit had requested to use additional PPE. HCE of QMH and the Infection Control Team held meetings with the employees, who were subsequently convinced to follow hospital guidelines.

¹⁴ TPH indicated that towards the end of March 2003, some employees were advised not to put on masks which they had purchased with an exhale valve because of the risk of the wearer infecting others. They were advised to put on masks in accordance with the prevailing infection control guidelines. The employees concerned followed the advice. One of these employees was infected with SARS in April 2003.

Adequacy of PPE when HAHO issued/revised guidelines relating to PPE to require HA employees to put on mandatory or recommended items of PPE while on duty

Table 16 – Adequacy of PPE when HAHO issued/revised guidelines relating to PPE to require HA employees to put on mandatory or recommended items of PPE while on duty

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Adequate supply	✓		✓	✓	✓	✓		✓	✓	
Limited supply							✓			
Supply in place but did not clarify if it was adequate		✓								
No direct answer provided										✓

2.25 The 10 Hospitals were asked whether, at the time when HAHO issued/revised guidelines to require HA employees to wear certain PPE items, there was adequate supply of such items. Seven Hospitals, i.e. AHNH, PYNEH, PWH, PMH, QEH, TPH and TMH, indicated that they had adequate supply of PPE. KWH responded that it had supply in the Hospital but did not clarify whether the supply was adequate. QMH indicated that there was limited supply of surgical masks in late March/early April 2003. UCH did not provide a direct answer but indicated that there was less than seven days' stock for disposable gowns (fluid resistant), goggles, eye shields, face shields, N95 masks and surgical masks at various times during the period from March to May 2003, and that HA was notified of such shortages.

Allegations of abuse of the use of PPE

Table 17 – Allegations of abuse of the use of PPE

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
No such allegation	✓	✓	✓	✓	✓	✓	✓	✓		✓
No record									✓	

2.26 AHNH, KWH, PYNEH, PWH, PMH, QEH, QMH, TPH and UCH responded that there was no allegation of abuse in using PPE. TMH responded that there was no such record.

Transfer of PPE among hospitals

2.27 Seven Hospitals, i.e. KWH, PYNEH, PWH, PMH, QEH, TMH and UCH, responded that they requested for certain PPE items from other hospitals. Table 18 summarizes the transfer of PPE among hospitals.

Table 18 – Request for transfer of PPE

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Gloves										
Disposable gowns										✓
Protective eye wear		✓				✓	✓			
Face shields										
Shoe covers										
N95 masks		✓	✓	✓	✓		✓		✓	✓
N100/P100 masks			✓		✓		✓			✓
Surgical masks			✓		✓		✓			✓

Contractors' employees

Provision of training on infection control measures prior to and during the SARS epidemic

Table 19 – Responsibility for providing training on infection control measures prior to and during the SARS epidemic

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Prior to the SARS epidemic										
Contractor				✓	✓		✓		✓	✓
Hospital						✓				
Contractor and Hospital	✓	✓	✓					✓		
During the SARS epidemic										
Hospital		✓					✓	✓		✓
Contractor and Hospital	✓		✓	✓	✓	✓			✓	

Table 20 – Measures in place to monitor the provision and effectiveness of training provided by contractors

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Prior to the SARS epidemic										
Yes	✓	✓	✓	✓	✓			✓	✓	✓
Not applicable because training provided by the Hospital						✓				
Information not provided							✓			
During the SARS epidemic										
Yes	✓		✓	✓		✓			✓	
Not applicable because training provided by the Hospital		✓					✓	✓		✓
Information not provided					✓					

2.28 In PWH, PMH, QMH, TMH and UCH, the responsibility for the provision of training on infection control measures rested with the contractors prior to the SARS epidemic. These Hospitals, however, provided such training during the epidemic. The other five Hospitals, i.e. AHNH, KWH, PYNEH, QEH and TPH, were involved in the provision of training both prior to and during the epidemic.

2.29 AHNH, PYNEH, PWH, QEH and TMH responded that during the SARS epidemic, measures were taken to monitor the provision and to assess the effectiveness of the training provided by contractors. In KWH, QMH, TPH and UCH, no such measures were taken as the training was provided by the Hospitals themselves. No information was provided by PMH.

Equipping contractors' employees with PPE prior to and during the SARS epidemic

Table 21 – Responsibility for equipping contractors' employees with PPE

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Prior to the SARS epidemic										
Contractor		✓	✓		✓				✓	✓
Hospital	✓					✓	✓	✓		
Contractor and Hospital				✓						
During the SARS epidemic										
Hospital		✓			✓			✓	✓	✓
Contractor and Hospital	✓		✓	✓		✓	✓			

Table 22 – Measures in place to monitor the provision of PPE by contractors

	AHNNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
Prior to the SARS epidemic										
Yes		✓	✓	✓	✓				✓	✓
Not applicable because PPE provided by the Hospital	✓					✓	✓	✓		
During the SARS epidemic										
Yes			✓	✓		✓	✓			
Not applicable because PPE provided by the Hospital	✓	✓			✓			✓	✓	✓

2.30 In KWH, PMH, TMH, UCH and PYNEH, the responsibility for providing PPE rested with the contractors. During the epidemic, KWH, PMH, TMH and UCH assumed the responsibility for providing PPE for the contractors' employees, while PYNEH shared the responsibility with the contractors. The other five Hospitals, i.e. AHNNH, PWH, QEH, QMH and TPH, were involved in the provision of PPE both prior to and during the epidemic.

2.31 PYNEH, PWH, QEH and QMH responded that during the SARS epidemic, measures were put in place to monitor the provision of PPE by the contractors. AHNH, KWH, PMH, TPH, TMH and UCH responded that no such measures were taken as PPE items were provided by the Hospital themselves.

Occasions on which contractors' employees were not equipped with the same standard of PPE as that for HA employees

Table 23 – Occasions on which contractors' employees were not equipped with the same standard of PPE as that for HA employees

	AHNH	KWH	PYNEH	PWH	PMH	QEH	QMH	TPH	TMH	UCH
No such occasion		✓	✓	✓	✓	✓	✓	✓		✓
No report/record	✓								✓	

2.32 KWH, PYNEH, PWH, PMH, QEH, QMH, TPH and UCH responded that there was no occasion, during the SARS epidemic, on which contractors' employees were not provided with the same standard of PPE as that for HA employees. AHNH and TMH responded that there was no such report/record.