Management of SARS in Kowloon East Cluster (KEC)

A. United Christian Hospital (UCH)

1. Overall Situation

1.1 Early phase (10-23 March 2003):

All along, UCH has been admitting sporadic cases of atypical pneumonia with no contact history. Admission of 12 such cases within 1 day was reported to Hospital Authority Head Office (HAHO) on 15 March, and the cases were cohorted in a special ward. The hospital started to defer less urgent elective cases from 17 March, to prepare for any sudden surge in admissions.

1.2 Peak phase (24 March and go on):

On 24 March, the 1st case from Amoy Gardens was admitted. On 25 March till midnight, 3 families from Amoy Gardens were admitted. The outbreak was immediately reported to HAHO and Department of Health (DH) on 26 March at 8:30AM. The plan of HA at that stage was to convert Princess Margaret Hospital (PMH) into a SARS hospital to admit all cases in Hong Kong. However, before PMH began to take all cases from 29 March, UCH had admitted over 100 cases from the community outbreak. During the peak of the crisis in early April 03, UCH had around 150 cases of SARS in the wards.

Unfortunately, from 31 March, our staff get infected (details please see section below). To cope with the crisis situations, with the help of other clusters, female medical admissions were stopped from 2 April, and all medical admissions were stopped from 6 April. Our Accident &Emergency (A&E) service never stopped.

1.3 Plateau phase (7-20 April 2003):

Because of the large number of cases requiring ICU care, a total of seven seriously ill cases were transferred to other hospitals from 13 April. Convalescent cases were transferred to WTSH. Medical admissions were resumed from 14 April. With the decreasing number of SARS cases in the hospital, admission of a proportion of SARS cases was resumed on 20 April 2003.

1.4 Resolution phase (21 April and go on):

There were no more staff infections from 20-4-03. UCH resumed the admission of all SARS cases from 28-4-03. Non-urgent elective services were also resumed steadily.

In total, UCH had managed 194 cases of clinical SARS.

2. Organization

With the rapid influx of cases, wards were deployed within short notice to do SARS work. Deployment of manpower from non-medical departments to help the SARS work was also done with good cooperation & commitment from the staff. Designated wards include SARS ICU, SARS wards, triage wards and step down ward.

3. Staff Infections

From 31 March to 20 April 2003, there were 28 staff who got infected. 14 were from one general ward (12A), where a number of unsuspected SARS patients were admitted around the peak of the community outbreak. Out of the other 14 infected staff, only 8 were from SARS wards, despite the total of over 190 confirmed cases managed there. The other 6 were from A&E (1), Radiology Dept (1), SOPD (1), and other general wards (3).

The outbreak in ward 12A was investigated. The main reasons are as follows :

(a). A number of unsuspected SARS cases were admitted in late March to Ward 12A. There were a few secondary SARS cases as well. On analysis, 2 primary cases and 1 secondary case were the likely index cases that caused the infection among the staff. One of them presented with fever and loin pain, one with mental confusion, and the other was a terminal Ca lung patient with little fever. Because SARS was not initially suspected, no extra precaution was taken when caring for these patients.

(b). Before 1 April 2003 the level of infection control in 12A was at general level. Following HAHO and hospital guidelines, all staff were put on surgical masks during clinical duty. Surgical masks with eye shield were used in high risk procedures. Surgical masks were not routinely provided to patients. Patients requiring droplet precaution but not suspected of SARS were put either in isolation rooms or together in a same cubicle. Goggles and disposable gowns were not used at that period of time. Cotton gowns were used for patients in isolation rooms and cubicles with patients requiring droplet precaution. Gloves were used as indicated but not as a standard measure.

(c). Social contacts among the staff might also have contributed.

We learned painfully from the unfortunate incident. With more supplies available, we upgraded the protective gears for our general wards. Infection control training were reinforced, and alertness to unsuspected cases emphasized. There were no more new infections among staff from 20-4-03.

Most of the infected staff have since recovered and discharged. Unfortunately, 2 HCAs infected during their work in ward 12A have passed away.

4. Infection Control

Training, monitoring, auditing, and raising the alertness of our staff in infection control was emphasized. The wards are divided into ultra-high risk, high risk & moderate risk areas with the appropriate infection control policies. Work practice (e.g. of Health Care Assistants (HCA) was re-designed to minimize infection risk. Appropriate personal protective equipments were provided.

5. Clinical Management

Dr. K.S. Chan, Consultant from Haven of Hope Hospital, joined our respiratory team to manage the SARS patients. Advice from Professor YUEN Kwok Yung & Professor Joseph SUNG were sought in managing the cases.

Our nurse counsellors, chaplains and Medical Social Workers provided psychosocial support to the patients and this family.

6. Staff Sentiment, Communication & Staff Support

Staff fear was genuine because of the deadly virus. Our staff got emotional when our staff were infected. Despite these emotions, our staff have been very committed and professional in their duties, and worked in good team spirit. Regular updates & open forums were given to maintain good communication. Channels for individual psychosocial support were also provided. Great effort was made to secure adequate personal protective equipments for the staff. Temporary accommodation was arranged for staff working in high risk areas.

7. Management of Contact Cases

Protocols on the management of unsuspected cases admitted to general wards, and for non-SARS cases admitted to triage wards were drawn up.

B. Tseung Kwan O Hospital (TKOH)

TKOH has been admitting SARS patients from mid-March 2003. Some were family clusters from the community. A total of 58 clinical SARS cases have been managed there. Deployment from non-medical departments was done and wards were designated for SARS work (SARS ICU, SARS ward, triage wards). Staff morale remained high in TKOH, and only 2 staff got infected in TKOH.

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