SARS @ TTSH (Part 9)

By Prof Chee Yam Cheng, Editorial Board Member

Editorial note:

The following article was submitted on 11 November 2003. The first half of Part 9 was published in the December issue, and the rest is continued here. Contents are current at the time of submission.

STAFF ISSUES

Let me now discuss the other two points raised regarding staff issues. Staff were reconstituted into different teams for the work at hand, given adequate Personal Protection Equipment (PPE) and taught how to use them effectively. Furthermore, they were checked to ensure that PPE was properly worn at all times. It is easy to have policies, but more difficult to have them implemented, and most difficult of all, is to ensure consistency in compliance – all the time, every time, with no slip-up. One weak link, one forgetful moment, and the chain of protection is broken. Vigilance is paramount. Staff need to be alert, not sleepy, stressed or overworked.

I have explained about PPE in earlier articles. The other critical pillar of staff protection is that sick staff should detect their sickness early and stop work at Tan Tock Seng Hospital (TTSH) immediately. As SARS is a nosocomial infection, spread is great within the hospital from staff (doctor, nurse, allied health professionals, porters, *amahs*, clerks, and others) to staff, and from staff to patient, and staff / patient to visitor and vice versa. To break this cycle, staff must be monitored for possible SARS because their work place is a high-risk area.

So, the staff clinic becomes a critical piece of the defence armour against SARS. Rules like the following were implemented for strict compliance. Every sick staff must be made known to senior management, and their whereabouts and contacts monitored.

1. All staff had their oral temperatures taken thrice daily – on coming to work, before leaving work, and once in between.

Contact tracing was essential so that HQOs could be served in a timely and appropriate manner.

2. If staff had fever, cough, breathlessness, generalised muscle aches or upper respiratory tract symptoms, they had to report directly to Emergency Department (ED) TTSH for management. ED TTSH was the screening centre for SARS for the whole of Singapore, including our staff.
3. If staff had other complaints, they had to see the doctor at the staff clinic, which closed mid-March and reopened on 14 April 2003. In retrospect, it appears that diarrhoea was a presenting complaint in some 20% of the cases, and if the staff had no fever, they still would have seen this clinic instead of ED. As the staff clinic was closed outside of office hours, all sick staff after office hours went to ED.
4. Medical certificates (MC) / leave from family physicians were not accepted unless it was endorsed by the doctor of the staff clinic. The reason behind this was for us to be sure of the reason for the MC as we would then pick up "clusters" of sick staff by symptoms or work location. For example, a doctor and a nurse in the same ward might both be sick at the same time, but no one would know why, nor the fact that they were from the same ward. By having the HR Department collate these MCs, it was hoped a clearer picture of localised nosocomial infection would emerge.
5. The staff clinic doctor would duly endorse MCs issued by obstetric / gynaecology specialists for conditions relating to pregnancy. The clinic would also endorse MCs given by TTSH specialists. Details of diagnosis / symptoms would be listed in the MC.
6. All heads of department had an important duty to monitor the health and temperature of their staff. Everybody in TTSH knew their body temperatures, and if at any time, it went above 37.5°C, they were not to move about, but wait for half an hour and retake / recheck their temperatures. If still raised, they were to put on a surgical mask and head for the ED. Strangely enough, the morning temperatures of female staff were raised but they cooled off soon after. The reason was that they had just ovulated. So, in a way, a basal body temperature chart was monitored and the females had the bonus of knowing how their cycles were coping with the stress of SARS.
7. Staff given MC were deemed to be on home quarantine, that is, the laws of the Home Quarantine Order (HQO) applied to them and they were to remain home, monitor themselves and their temperatures, and report back to ED TTSH should their temperatures rise beyond 38°C. The purpose was to detect SARS early and start isolating the staff at home (HQO), even before SARS could be diagnosed.

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As Chairman of the Medical Board at TTSH at that time, I received lists of doctors admitted into TTSH, classified into categories like suspect SARS, probable SARS and for observation. And yes, we were worried and concerned for all our staff. In the end, I think less than half of the 239 SARS cases in Singapore were staff.

STAFF OBSERVATION FACILITY

Staff were being shunned during the early stages of the SARS outbreak. Buses would not stop by TTSH, and taxi drivers did not want to bring staff (or anybody else for that matter) to TTSH. Some neighbours and even family members kept themselves away from our staff. It seemed as though overnight, we became "unclean", and as in the days of leprosy, we had to ring a bell to announce our presence and everybody would quickly disappear from sight. Fortunately, with better understanding of the disease, better education of the public, and strong support from our government and political leaders, this unwarranted fear of us died away. Soon, the pendulum swung in our favour. We were praised, presents were heaped upon us, and accolades flowed.

As some members of the public felt that the HQO was too troublesome or inconvenient to be served out at home, they could opt to go to Loyang Aloha Village and rent a bungalow to relax in. The HQO had stipulated that those living in the same house, especially children, were considered as contacts and so could not leave the house too. This impacted on their schooling. In the same vein, staff on MC being deemed in effect to be on HQO (although not a physically served one as such) may have wanted not to be at home.

The National Healthcare Group (NHG) therefore set up the staff observation facility (SOF). This was a stay-in facility at Pearl's Hill. For staff on HQO (because they were patients well enough for hospital discharge, or were contacts of patients), or on MC with fever, who wished to stay away from home, this 28-unit facility was available to them. Located at Block 201 Pearl's Hill Terrace, each unit was fully furnished with a bathroom and kitchenette. Meals were provided but not laundry service. It was in operation from 26 April till 30 June 2003. However, it was under-utilised with 15 occupants in total.

JUNE SCHOOL HOLIDAYS

With Singapore declared SARS-free on 31 May 2003 by WHO, the school holidays meant that staff could go on leave again with their families. So, some rules were put in place to allow this to happen, while maintaining vigilance against SARS. There were five rules:

1. Staff on leave locally or overseas had to be contactable at all times and monitor their temperatures daily. This was to ensure immediate contact tracing to detect fever clusters among staff who may have been incubating the disease, only to manifest it when on leave.
2. There was no restriction imposed on travel to non-SARS countries.

The initial phobia of HCWs soon gave way to praise and tokens of appreciation from the community.

3. No official travel to SARS-affected countries was allowed, whether for business or for training.
4. Personal travel to SARS-affected countries was not approved unless in extenuating circumstances. Should such travel be approved, upon return to Singapore, the staff had to stay home for ten days using annual leave, before returning to work. If there were good reasons, this leave could be granted as half-day unrecorded leave.
5. If a staff travelled to a non-SARS country, which subsequently became classified as a SARS-affected country, then the ten-day home quarantine above would apply. In both cases, should staff fall ill with SARS, the normal medical leave and benefits would apply.

Staff could take annual leave once again, but overseas travel needed approval and proper precautions.

CHILDREN OF STAFF

TTSH has a childcare centre on-site on Level 4. When SARS hit TTSH, this centre was closed (22 March 2003). The services relocated to Boon Keng Road for the time being, starting 21 April. Because their parents were healthcare workers of TTSH, these children were also at risk of contacting SARS. So, health declaration forms and temperature taking were the norm daily. Learning Vision International, which runs the centre, won the COOL award for best practices in SARS prevention. This award by SPRING Singapore is based on a nine-point requirement for best practices. Hence, our staff were reassured that their children were given adequate protection against SARS. The centre reopened at TTSH on 4 August.

SARS-FREE SINGAPORE

In June, at TTSH, although Singapore was taken off the WHO list of SARS-affected countries, we continued to maintain the "orange alert" level of infection control. MOH relaxed its rules on movements of healthcare workers (HCWs) and patients across institutions but temperature surveillance

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of workers was mandatory (MOH Directive 104/03 dated 3 June 2003). Nursing students and medical students were slowly allowed back into hospitals, but were restricted to specific wards and not allowed to be free roaming. Their movements were tracked across the hospital just in case contact tracing had to be done. Because of SARS, the usual elementary clinics for medical students in the third year could not be carried out in hospitals. They either went to GP clinics or used each other to test their basic skills. Furthermore, the new house officers enlisted into the workforce in May could not be posted to us at TTSH, and so did the first two months of their four-month posting in other hospitals.

As Toronto was off the SARS list and then on it again, we had to be extra cautious not to let our guard down. Patients prior to discharge needed to be cleared for SARS infection, especially those with chronic illnesses which may mask SARS symptoms. For them, their stools PCR had to be negative twice before discharge. Furthermore, if they were bound for the nursing homes, they also had to be afebrile for 72 hours and have a normal, or abnormal but stable, CXR. Our ED began normalising operations by admitting emergency cases to medical and surgical divisions. By mid-June, ambulances were allowed to call at TTSH again, and finally the day arrived when we could tell all and sundry to come to TTSH if they needed help. All these new admissions were housed in separate wards to those already hospitalised in May 2003 and before. There was no mixing of new and "old" inpatients. Two definitions in operation were afebrile, meaning temperatures less or equal to 37.5°C, and chronic illness, meaning chronic lung conditions, diabetes, heart failure, chronic liver or kidney disease, chronic rheumatological or autoimmune disorders, malignancies, and patients on immunosuppressive drugs like steroids.

Our outpatient facility was fully reopened on 2 June 2003. For the previous two weeks, we had been recalling our "old" patients to return for follow-up and our attendances gradually increased. To facilitate faster temperature checks, instead of using aural thermometers, we opted for thermal scanners the way the Changi Airport uses them. These have been installed, properly calibrated and in use up till now. Taking temperatures of all and sundry several times a day, and stickers of multiple colours to affirm one's body temperature have become a way of life for us, TTSH staff, as well as all our visitors.

MEMORIAL SERVICE

On 19 June 2003, the staff of TTSH gathered in great members for the memorial service for two of our staff who gave their lives in sacrifice against the SARS virus. It was an event to mark the close of one chapter, not only for the staff but also the families of Dr Ong and Nursing Officer Hamidah. We appreciated their presence. We had very much wanted to convey to them and share with them our feelings of great loss. Today, there remains a plaque with both their names, suitably placed in the foyer of the lecture theatrette on the first level.

RESURGENCE?

On 14 May 2003, WHO removed Toronto from the list of areas with recent SARS transmission because 20 days had lapsed since the most recent case of locally acquired SARS was isolated or a SARS patient had died, suggesting that the chain of transmission had terminated. However, unrecognised transmission continued in a particular hospital, which on 23 May, was finally closed to all new admissions other than patients with newly identified SARS. HCWs at this hospital were placed under ten-day work quarantines and instructed to avoid public places outside work and close contact with friends and family, and to wear a mask whenever public contact was unavoidable. As of 9 June, of 79 new cases of SARS that resulted from exposure at this hospital, 78 occurred before these measures were implemented on 23 May.

On 18 June, MOH issued Directive 108/03 on SARS and movement of non-SARS patients between acute care hospitals and institutions. This superseded earlier directives dated 19 April on the inter-hospital transfer of inpatients, and another dated 23 April on the readmission policy on patients from SARS-exposed hospitals. Patients with co-morbid conditions and who may have SARS may present with many atypical clinical features. The frequent and free movement of such patients between healthcare institutions represents therefore the single most important factor in the propagation of SARS outbreaks.

The directive stated that a patient who requires readmission within 21 days of discharge from an acute care hospital / institution must be readmitted to the same hospital / institution. In general, an inpatient should not be transferred from one acute care hospital / institution to another, except for the following situations. The first is a medical emergency where the patient will receive treatment at the hospital he presents at. The second is if there is no medical capability, for example dialysis, at this hospital, then the transfer should be within the same cluster hospital / institutions. The third is that private hospital patients can seek subsidised care in a public hospital, and so be allowed transfer. If it is still deemed necessary to transfer a patient who does not meet the exceptional criteria above, the approval of MOH must be sought.

The receiving hospital of such patients must be within the 21 days of transfer and patients must be managed in an isolation room, unless or until the following three conditions are satisfied. Firstly, they must be afebrile for at least 48 hours. Secondly, a chest X-ray is clear of pneumonic changes or respiratory distress syndrome. Thirdly, for patients with co-morbidities, stool or nasapharyngeal aspirate must be negative for coronavirus PCR.

As a further precaution, discharged SARS patients of TTSH who needed hospitalisation within 21 days of discharge had to be admitted back to TTSH. With these precautions in place, it has been back to the new "normal" hospital practice in all hospitals including the main building at TTSH. While we may be prepared for another droplet outbreak of SARS, we hope it will not happen again.

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