8 January 2019

FINDINGS OF INVESTIGATION INTO INCIDENT AT TAN TOCK SENG HOSPITAL DENTAL CLINIC

1. The National Healthcare Group (NHG) Review Committee chaired by the Chief Executive Officer of the Institute of Mental Health (IMH), Professor Chua Hong Choon, has completed the independent investigation into the incident at the Tan Tock Seng Hospital (TTSH) Dental Clinic, where eight (8) packs of instruments[1] did not complete the final step of sterilisation (steam sterilisation) and were used for patient treatment between 28 November 2018 and 5 December 2018.

2. Following the incident, the NHG Review Committee, which includes experts from other health clusters, conducted a thorough review of the incident and has submitted its full investigation report with follow-up actions to the Ministry of Health (MOH) on 8 January 2019.

3. The NHG Review Committee has identified human error with a lapse in adherence to the established sterilisation process and verification protocol as the main cause of the incident. Specific recommendations have been made to improve the processes and systems at the TTSH Dental Clinic, including counselling and retraining of its staff.

4. We apologise for the lapse, and have started on improvements to ensure that quality and safe care remains paramount in all that we do.

Sequence of Events

5. On 4 December 2018, a TTSH Dental Clinic staff found a dental instrument that had not gone through the final step of steam sterilisation. On 5 December 2018, a physical check of all dental instruments was initiated. By 7 December 2018, it was confirmed that eight (8) packs of instruments processed on 28 November 2018 did not complete the last step of the sterilisation process and could have been used for patient treatment at the Dental Clinic between 28 November 2018 and 5 December 2018.

6. Investigations showed that on 28 November 2018, a staff from the TTSH Dental Clinic failed to follow established protocol and loaded packs of instruments into the autoclave machine without initiating the steam sterilisation cycle (that is, the last stage of sterilisation). Another staff subsequently unloaded and stored the packs, without realising that the packs had not undergone the final step of sterilisation. These packs were not verified for sterility before use.

[1] Each pack is used for one (1) patient. Some patients may use more than one (1) pack.

7. On 9 December 2018, TTSH began contacting all five hundred and seventy-five (575) patients who were treated at the Dental Clinic during the affected period to inform them of the incident and reassure them of the extremely low risk of infection.

8. Elective procedures at the Dental Clinic were suspended for a safety time-out from 8 to 12 December 2018. During this period, all dental instruments were thoroughly checked and confirmed to have undergone the complete sterilisation process. Additional control measures were implemented to ensure that the sterilisation process was conducted in accordance with established processes and that the verification protocol was strictly adhered to. Concurrently, staff awareness across the whole Hospital was heightened and the message of adherence to all processes for patient safety and care was reinforced.

Causes of the lapse

9. The NHG Review Committee assessed that the incident was a result of human error, contributed by a lapse in adherence to the established sterilisation processes and verification protocols. In addition, weaknesses in some of the sterilisation protocols and work instructions were found to be contributing factors.

10. There were also gaps in the level of vigilance. At various points in the process, staff had failed to verify the sterility of the instruments before use.

11. The Committee also found that the timeliness of incident reporting was sub-optimal, where earlier escalation and faster response could significantly reduce the impact of the incident.

Corrective Actions

12. Following the TTSH Dental Clinic incident, TTSH has reinforced safety controls across the Hospital to improve vigilance and adherence to processes, so as to prevent any recurrence.

13. Specifically, safety controls for the TTSH Dental Clinic have been fortified in the following key areas:

- Strengthening the Dental Clinic's on-site sterilisation process and ensuring strict adherence by dedicated staff. The steps of loading the autoclave machine and starting of the sterilisation cycle must be linked. The unloading of packs after the sterilisation cycle must only occur after verification of sterilisation;

- Ensuring strict adherence to the pre-procedure protocol to check for the sterility of instruments before use;

- Optimising the workflow to improve the reliability of the sterilisation process to reduce the probability of human error;

- Strengthening incident reporting frameworks and ensuring escalation protocols are well understood and adhered to by staff; and

- Refining training, competency assessments and regular audits to reinforce staff compliance and understanding of the importance of safety checks that are built into the system, and with full adherence to all processes.

14. An Oversight Committee has been appointed by the Chairman of the NHG Clinical Board to oversee the implementation of the recommendations by the NHG Review Committee. The Committee will share the findings and recommendations from the incident across all NHG institutions. External audits will be conducted to ensure that staff adhere fully to all processes for quality and safe care for patients.

Disciplinary Actions

15. Counselling and disciplinary action will be taken on eighteen (18) staff, including senior management and supervisors, who have not adhered to the expected requirements of quality and safe care of patients. The disciplinary actions include warnings and financial penalties. Appropriate retraining and education will also be undertaken.

16. Professor Philip Choo, Group Chief Executive Officer of NHG, said, “On behalf of NHG, we sincerely apologise for the incident. I would like to thank the Committee for its work in reviewing the incident and the recommendations put forth to improve our systems and processes. Patient safety will continue to be our utmost priority, and we hold our staff to the highest standards of quality and safe care of patients. We will work harder to ensure that the well-being and safety of our patients are best served in all our institutions.”

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About the National Healthcare Group

The National Healthcare Group (NHG) is a leader in public healthcare in Singapore, recognised at home and abroad for the quality of its medical expertise and facilities. Care is provided through an integrated network of six primary care polyclinics, acute care and tertiary hospitals, national specialty centres and business divisions. Together they bring a rich legacy of medical expertise to our philosophy of integrated patient-centred care.

NHG’s vision is “Adding Years of Healthy Life”. This vision goes beyond merely healing the sick to the more difficult and infinitely more rewarding task of preventing illness and preserving health and quality of life. With some 18,000 staff, NHG aims to provide care that is patient-centric, accessible, seamless, comprehensive, appropriate and cost-effective.

As the Regional Health System (RHS) for Central Singapore, it is vital for NHG to partner and collaborate with stakeholders, community advisors, and voluntary welfare organisations. Together with our patients, their families and caregivers, we aim to deliver integrated healthcare services and programmes that help in Adding Years of Healthy Life to all concerned. More information is available at www.nhg.com.sg.