For Discussion
on 8.1199

LegCo Panel on Health Services
Meeting to be held on 8 November 1999

Report on the haemodialysis incident at the Hong Kong Sanatorium & Hospital

Background

A Coroner's Inquest was held to look into the cause and circumstances leading to the deaths of three patients on 20 August 1998 while undergoing haemodialysis at Hong Kong Sanatorium & Hospital. This paper serves to brief members of the progress of follow-up actions on the recommendations put forward by the Coroner.

Investigations

2. The Department of Health formed an investigation team on 20 August 1998 to look into the cause of the incident. The investigation was completed in October 1998 and a copy of the investigation report was forwarded to the Police for reference. The Department of Health at the same time also issued a set of safety guidelines on haemodialysis to all providers of such service. The guidelines aimed to facilitate service providers in drawing up their own set of procedures to ensure safety of haemodialysis service provision in their own settings.

Coroner's Inquest

3. The Coroner's Inquest was held from 15 April 1999 to 5 May 1999. A verdict of accidental death was returned on 20 May 1999. It was also concluded at the inquest that the incident was due to contamination of water treatment system used for haemodialysis by formalin introduced the night before for disinfection of the water distribution system. A number of factors acted together to result in the tragic event.

4. The Coroner made 16 recommendations. Six were related to hospital management, three were in respect of staff training, two were on nursing records, four were for the suppliers and one for the health authority. The list of recommendations is set out in Appendix.

Follow up Action

5. The recommendations of the Coroner were promulgated to the management of all the private hospitals and private renal dialysis centres for implementation. They were also sent to the Hospital Authority for reference. The Hospital Authority reports that a well-established monitoring system and elaborate clinical guidelines are in place to ensure the quality of dialysis service in public hospitals. Similarly, private hospitals and renal dialysis centres have implemented measures to safeguard the safety of haemodialysis which are in line with the safety guidelines on haemodialysis issued by the Department of Health and the recommendations of the Coroner. All have Clinical Management Teams responsible for the overall control and supervision of the dialysis service including the use and change of use of disinfectants and testing reagents. Staff have received adequate training on dialysis equipment and procedures before being assigned to operate the machines. There is proper documentation of dialysis procedures, servicing and repairs. The management of dialysis centres have made it clear to the suppliers that they should be responsible for making recommendations regarding the use of disinfectants and appropriate testing agents, and to include the information in manuals and training demonstrations.

6. The Coroner has also recommended that the health authority, in liaison with the Government Laboratory, should monitor and approve the use of disinfectants and testing agents in all dialysis centres in Hong Kong, in both public and private hospitals and keep such centres informed of the efficacy of any new products as they become available. The Department of Health has worked out an arrangement with the Government Laboratory to provide analytical and expert advice on the safety and quality assurance of chemical disinfectants and testing reagents for haemodialysis. The position was reported to the Coroner on 25 August 1999. So far, requests on the testing of two new reagents have been made to the Government Laboratory. Analysis is being undertaken.

Action taken by the Hong Kong Sanatorium & Hospital

7. The operation of the haemodialysis centre of the Hong Kong Sanatorium & Hospital was immediately suspended on 20 August 1998 following the incident. The Hospital decided to replace their single continuous loop dialysis system with a different disinfection procedure. To date, the installation, testing and commissioning of the equipment has not been completed. The Hospital will implement all measures stipulated in the safety guidelines on haemodialysis issued by the Department of Health and the recommendations put forward by the Coroner to ensure the safety of their patients. The haemodialysis unit of the hospital would only resume operation after the new set-up has been inspected and approved by the Department of Health. Meanwhile, patients requiring haemodialysis are put on stand alone haemodialysis machines.

Department of Health
November 1999

Appendix

Coroner's Recommendations
Deaths at Hong Kong Sanatorium & Hospital on 20 August 1998

Hospital Management

1. The present consultation exercise, concerning the proposed new haemodialysis service, should seek opinion and advice, not only from visiting Honorary Consultants in Nephrology, but from permanent nursing staff of the proposed new H.D.U. and I.C.U. who will operate the equipment.

2. An appropriate back-up system for the water purification system should be incorporated for use in the event of failure of the principal system.

3. A Clinical Management Team should be appointed to be responsible for the overall control and supervision of all haemodialysis in the hospital and should include representatives from both resident and visiting doctors as well as experienced nursing staff.

4. Such a team should approve the use and any change of use of disinfectants and testing agents used in haemodialysis.

5. An "on-call" Doctor or Senior Nursing Staff should always be available for immediate consultation by the units on a 24 hour basis.

6. The hospital should review their Board membership and management structure to ensure the active involvement of specialist consultants in full-time professional practice.

Staff Training

7. All nursing staff (including new staff as they are recruited) assigned to work in both units (HDU and ICU) and resident doctors should undergo compulsory training on dialysis equipment and procedures. A Training Co-ordinator should be assigned to organize such training and to assess and, where necessary, improve the levels of understanding and expertise amongst such staff.

8. Procedural manuals, approved by the Training Co-ordinator and Clinical Management Team should be available for all assigned nurses and be

strictly adhered to.

9. Clear instructions should be provided to all dialysis staff on procedures to be followed in the event of any system failure.

Nursing Records

10. To avoid misunderstandings, all dialysis procedures relating to disinfection and rinsing should be properly recorded with the use of informal notes actively discouraged.

11. The details of any system failure and any steps taken in response to it should be properly recorded and shown to the supplier's Service Engineer before any repair or servicing is commenced.

Suppliers

12. Comprehensive procedural manuals for all equipment should be supplied to the Hospital in both English and Chinese, unless the Hospital indicates this is not required. These should be identical in both languages.

13. An accurate and immediate record of all emergency and other "call outs" for servicing and repairs should be kept.

14. Service Engineers should report to the Nurse in charge prior to and at the conclusion of such works. No servicing or repairs should be undertaken during haemodialysis treatment unless by agreement with the Nurse in charge.

15. Recommendations should be made to hospitals regarding disinfectants and appropriate testing agents. Their use should be incorporated into any training demonstrations.

Health Authority

16. The Health Authority, in liaison with the Government Laboratory, should monitor and approve the use of disinfectants and testing agents in all dialysis centres in Hong Kong, in both public and private hospitals, and keep such centres informed of the efficacy of any new products as they become available.