

**For Discussion on
8 November 1999**

**LegCo Panel on Health Services
Update on Year 2000 Compliance
in Public and Private Health Sectors**

INTRODUCTION

A paper was presented to Members on 21 May 1999 giving an account of the progress of Y2K compliance work undertaken by the Hospital Authority (HA) and the private hospitals and nursing homes registered under the Hospitals, Nursing Homes and Maternity Homes Registration Ordinance (Cap. 165). An update of the situation is reported below for Members' information.

HOSPITAL AUTHORITY

Progress of Rectification Work

2. Of the about 21,300 mission-critical systems/equipment, only 1,500 (7%) systems/equipment require rectification. By the end of October 1999, compliance work for all 1,500 systems/equipment which require rectification had been completed.

3. An updated situation report on different categories of mission-critical systems/equipment is given as follows –

- (a) Mainframe systems – Rectification work for the two mainframe corporate information systems has been completed.
- (b) Non-mainframe systems – Rectification work for the nine non-mainframe systems is now 100% complete.
- (c) Non-corporate information systems – Rectification work for 64 local critical application systems developed by hospitals has been completed.

- (d) X-ray medical equipment – Rectification work for 181 equipment has been completed.
- (e) Non-X-ray medical equipment – Rectification work for 1,114 equipment is now 100% complete.
- (f) Paging system – Rectification work for the two Y2K non-compliant systems has been completed.
- (g) Engineering systems/equipment – Rectification work for 104 systems has been completed.
- (h) Line communication systems – Rectification work for 37 systems has been completed.

Patients' Implants and Home Use Equipment

4. HA has issued a pamphlet in July 1999 to inform the general public and health care professionals of the progress of the Y2K compliance project in HA as well as some Y2K compliance information on implants and home-use equipment. Around 500 items in 25 types of implant and home use equipment that are being used by patients under HA's care have been identified. Enquiries have been made with the concerned manufacturers/vendors for confirmation on the Y2K status of these equipment. Current information reveals that all except one are Y2K compliant. The non-compliant equipment has been identified to have only a date display problem which would not adversely affect patient safety.

Funding Requirements

5. The revised estimates of the Y2K Project budget is \$122.45 million comprising \$33.5 million for information technology systems and \$89.0 million for embedded systems. Funds have been made available to the HA for the purpose.

Contingency Planning

6. An important part of the Y2K project is to formulate contingency plans for unforeseen and uncontrollable events which may affect HA core

functions during the Y2K rollover. The key contingency strategies include increasing manpower and spare capacity, reducing non-urgent activities and switching to manual/paper-based system, if required. At present, contingency and disaster recovery plans for all clinical, non-clinical, civil disasters and all mission-critical equipment/systems, including key corporate information systems, are in place at the hospital, cluster and corporate levels.

7. As part of HA-wide contingency planning, HA has held meetings with the China Light & Power Co, Hong Kong Electric Co, HK & China Gas Co, Water Supplies Department, Hong Kong Oxygen and major telecommunication companies. HA has been informed that the Y2K rectification work of these public utilities has been completed and adequate contingency arrangements are already in place. On blood supply, the Hong Kong Blood Transfusion Service will increase blood supply to HA and private hospitals before Y2K rollover to ensure adequate buffer stock.

8. To prepare for the Y2K rollover, the HA Head Office (HAHO) and Hospitals Y2K Contingency Response Centres will be in operation from the evening of 31.12.1999 till 2.1.2000. Headed by senior Head Office and hospital staff and other supporting/clinical staff, the teams will serve to coordinate and monitor the emergency response actions in all HA hospitals. In addition, cluster contingency plans are already in place to cater for large scale emergency situation.

9. Centrally coordinated contingency drills involving 9 major hospitals and government departments, e.g. Fire Services Department (FSD) and Electrical & Mechanical Services Department (EMSD), were conducted on 5 September 1999 to test the effectiveness of these contingency plans and the result was satisfactory. The drill scenarios covered a variety of clinical areas, like Accident & Emergency Department, Intensive Care Unit, laboratory service, renal unit and wards. Failure of major utilities like power supply, water supply, medical gas supply, town gas, telephone and paging systems were also included. Furthermore, all hospitals had participated in the 9 September 1999 precautionary standby exercise organised by the Administration during which wellness checks on HA's mission-critical equipment were conducted and the result was also satisfactory. HA will continue to participate in the Administration's territory-wide contingency preparations to cater for the Y2K rollover.

DEPARTMENT OF HEALTH

Progress of Rectification Work

10. All mission-critical computers, medical equipment and facilities with embedded systems operating in the Department of Health (DH) have been confirmed to be Y2K compliant.

Contingency Planning

11. After assessing the related risks, DH has drawn up contingency plans for its individual service units to cover scenarios which might occur over the millennium rollover. Possible Y2K problems include failure in the communication system, medical equipment and electricity / water / gas / medical gas supply. The service units have conducted drills to test and to further refine the contingency plans.

12. All DH service units participated in the exercise of Y2K precautionary arrangements on 9 September 1999. The exercise was conducted smoothly and no major problem was identified.

13. As a general principle, all DH services would continue to operate, where the situation permits, in the event of a Y2K problem. DH has requested its staff not to take leave around the turn of the millennium, and will make appropriate adjustments to their workload to reduce the impact of possible Y2K problems, e.g. by decreasing chronic appointment bookings around the turn of the millennium by providing prescriptions for longer periods in advance.

PRIVATE HOSPITALS AND NURSING HOMES

14. DH, as the licensing authority, has been monitoring closely the Y2K compliance status of the private hospitals and nursing homes licensed under the Private Hospitals, Nursing Homes and Maternity Homes Registration Ordinance (Cap. 165). All 12 private hospitals and 2 of the nursing homes were required to carry out Y2K rectification work.

Progress of Rectification Work

15. All computer systems and medical equipment in the 14 licensed institutions, including 12 private hospitals, have been confirmed to be Y2K compliant.

Contingency Planning

16. All institutions have drawn up contingency plans to handle system/equipment failure and breakdown in supply of public utilities, e.g. electricity, water, gas and communication. They have likewise conducted drills to test the feasibility of their contingency plans.

17. The private hospitals will maintain additional stocks of drugs and medical supplies to ensure adequate supply of essential medical items. They will keep to the minimum the number of non-emergency elective admission and elective operations during the fortnight lasting from one week before to one week after the New Year's Day. Like DH, private hospitals will also ask their staff not to take leave for the same period. Additional staff will be deployed at the turn of the millennium to cater for unexpected breakdown of equipment and emergency requests from other hospitals.

18. A control room will be in operation in each private hospital for coordination and communication with DH and other hospitals during the rollover to the new millennium.

19. All private hospitals and nursing homes providing 24-hour services participated in the precautionary exercise on 9 September 1999. Communication and wellness checking processes were satisfactorily conducted.

Business partners assessment

20. Moreover, every private hospital has made an assessment of the Y2K readiness of its major business partners in respect of utilities, communication, pharmaceutical products and medical supplies. Most suppliers have confirmed their Y2K readiness except for a small number of Y2K non-compliant suppliers for whom alternatives have been identified.

PROMOTING Y2K AWARENESS AMONG MEDICAL AND HEALTH CARE PROFESSIONALS

21. DH has sent letters to different healthcare professionals including doctors, nurses, dentists, radiographers and medical laboratory technologists to alert them of the Y2K issue. Similar letters were sent to licensees of irradiating apparatus and radioactive substances and all licensed pharmaceutical traders.

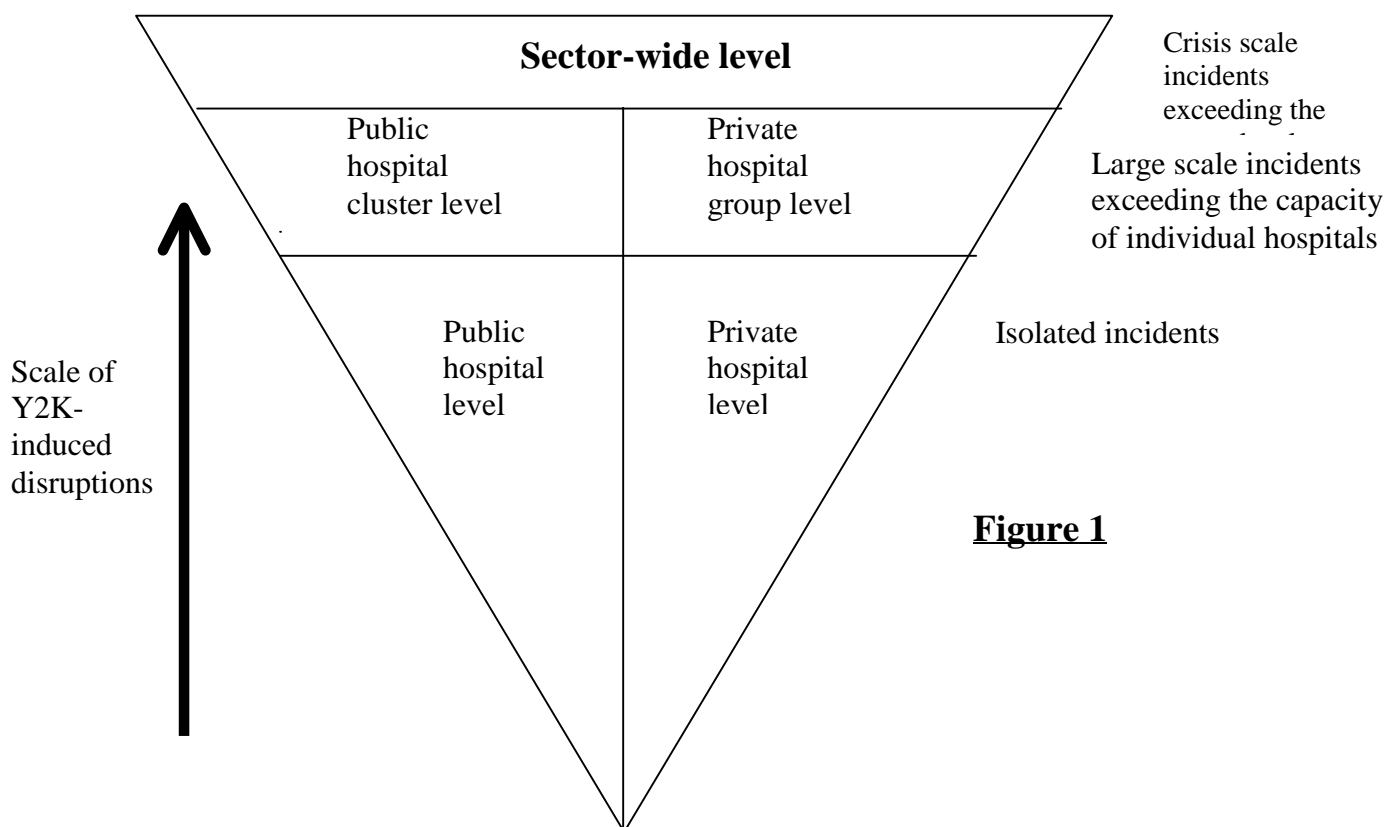
22. Lectures on “Year 2000 Compliance Problem in Medical and Health Services” were organized with speakers from EMSD and HA. These lectures were well attended by the healthcare professionals.

HEALTH SECTOR CONTINGENCY PLANNING

23. To minimize the risk from potential Y2K-induced failures, the principal service providers (PSPs) of the health sector, including HA, Department of Health (DH) and the private hospitals and nursing homes under the purview of DH as the licensing authority, have drawn up contingency plans to address the Y2K risks that may threaten the continuity of their core business processes.

24. Since Y2K-induced failures relevant to the health sector would have a direct impact on the safety of patients, the health sector has been classified as an essential service area. It is necessary to draw up various levels of contingency plans which accord high priority to patient safety to prepare for Y2K-induced disruptions of different scales.

25. In the public hospital sector, there are hospital level and cluster level Y2K contingency plans. In the private hospital sector, there are hospital level and group level (between private hospitals) Y2K contingency plans. These are further supplemented by an inter-sector (between the public sector and private sector) Y2K contingency plan which we refer to as the sector-wide contingency plan (HSCP). Figure 1 illustrates the relationship of these plans.



26. Isolated and localized Y2K-induced incidents should be tackled by implementing the relevant contingency plans and business resumption plans at the hospital level in the first instance. The hospital contingency plans cover the following major aspects –

- (a) rectification for those systems/equipment which could not function properly during the rollover;
- (b) resumption of service by using replacement equipment or switching to manual operation; and
- (c) arrangement of patient transfer between wards of a hospital.

27. If the Y2K disruptions are of a scale beyond the control of individual hospitals, HA hospitals will activate their “cluster level” contingency plans, while the private hospitals will activate the “group level” contingency plans to provide the necessary mutual backup and support -

- (a) Cluster level contingency plan – Public hospitals will cluster and provide mutual support to share resources and transfer patients should the need arise under the critical service areas of intensive

care (including neonatal intensive care), renal, obstetrics, continuous sterile supplies, emergency patient transport, laboratory and blood transfusion.

- (b) Group level contingency plan – Private hospitals have arranged among themselves whereby each private hospital has paired up with one or two other private hospitals to provide mutual backup support for emergency patient transfer should the need arise. Under such circumstance, the initiating private hospital will directly contact its backup private hospital to prepare for the reception of patients.

28. There might also be a need for private hospitals to transfer patients to the public hospitals. The HA and private hospitals have agreed transfer plans to facilitate the inter-sector transfer of patients, when necessary. Each private hospital has a designated public hospital in its region for emergency patient transfer as a last resort should the group level contingency plan be unable to absorb fully the transfer demands. The patients to be transferred will be advised that they will be treated and charged as a patient of a public hospital and they do not have a choice of doctors or hospitals. Under such circumstance, the initiating private hospital will directly contact its designated public hospital to prepare for the reception of patients.

HEALTH SECTOR Y2K CO-ORDINATING CENTRE (HSCC)

29. The HSCC aims to facilitate the coordination of the service providers of the health sector to ensure that the safety of patients will not be affected by Y2K disruptions.

30. The HSCC will comprise representatives from HWB, HAHO and DH Headquarters where appropriate. It will be put into operation to coincide with the Y2K Central Coordinating Centre (CCC) during the millennium rollover. The HSCC will operate alongside the HAHO's Y2K Control Centre in the HA Building in Kowloon.

31. The functions of the HSCC include –

- (a) To receive Y2K incident reports and results of wellness checks from HAHO and DH, with the latter receiving and consolidating reports from private hospitals and nursing homes. Consolidated reports will be sent by HSCC to the CCC at the prescribed intervals on 1.1.2000;

- (b) To receive Y2K news and information from CCC and disseminate them to public and private hospitals through the HAHO and DH respectively;
- (c) To inform the public, service providers and any other concerned parties, through the Central Press Office to be set up by Information Technology and Broadcasting Bureau (ITBB) of the Y2K status of the health sector and other information as necessary; and
- (d) To serve as an emergency command centre under crisis situations where SHW and/or his deputy will coordinate disaster recovery actions within the health sector and interface with the command centres of other essential service areas and the CCC.

32. A schematic model of the communication channels of the HSCC is at Appendix.

33. The health sector has and will actively participate in the Y2K drills and exercises organised by ITBB. The sector-wide and other levels of contingency plans will be updated and refined as and when new information becomes available before the rollover to the new millennium.

Health and Welfare Bureau
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