



醫院管理局

HOSPITAL  
AUTHORITY

# PROGRESS REPORT ON SENTINEL EVENTS

1 October 2007 – 31 March 2008

HOSPITAL AUTHORITY  
HONG KONG

**July 2008**

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Appendix 1: Summary of Individual Sentinel Events and Recommendations for Improvement

# 1

## EXECUTIVE SUMMARY

1. On 1 October 2007, the Hospital Authority (HA) introduced a Sentinel Event Policy (the Policy) to assist in continuously enhancing patient safety through further strengthening the reporting, management, monitoring of serious incidents and learning from the reported events.

2. The Policy has been implemented across all HA hospitals and has gained increased acceptance from the staff. It is a significant step and a landmark in the journey to improve patient safety. The Policy and its procedures have ensured appropriate reporting, management and investigation of sentinel events.

3. During the six months ending 31 March 2008, a total of 23 sentinel events were reported. The most common type of event was the death of an inpatient from suicide including suicide committed during home leave (12 cases, 52.2%). The second most common event was retained instruments or other material after surgery / interventional procedure requiring re-operation or further surgical procedure (5 cases, 21.7%). The third most common type of event was surgery or interventional procedures involving wrong patient or body part (3 cases, 13%).

4. The outcomes of the reported sentinel events were death in 13 cases (12 suicidal events and one maternal death associated with delivery), major or moderate consequences in 4 cases and minor or insignificant consequences in 6 cases.

5. Important lessons learned from the reported events have been shared amongst all HA staff in the bi-monthly newsletter 'HA Risk Alert'. Appropriate risk reduction strategies, such as the structured assessment of a patient's psychological and emotional status before home leave, strengthening of checking procedure on gauze, equipment and guidewire counting, and the use of barcode scanning system, are being implemented to reduce the recurrence of similar incidents.

6. Based on the valuable experience gained in the past six months, a series of improvement activities will be undertaken to further enhance patient safety. They include:

- (a) further clarification of some of the reporting criteria for the Policy;
- (b) enhancement of some of the supporting processes, such as the methodology of conducting effective root cause analysis and application of open disclosure;
- (c) implementation of effective risk reduction measures; and

- (d) further enhancement of safety culture through strengthening proactive, sharing and learning, and 'Just' culture. A HA-wide survey on patient safety culture will also be conducted to enhance the understanding of the organizational factors that have an impact on patient safety.

# 2 INTRODUCTION

7. With the development of more advanced and diversified healthcare services, the healthcare system has become more complex. Medical incidents sometimes occur, possibly due to problems with the system and work procedures or human error. Noting that some of these medical errors are preventable, healthcare providers worldwide, including HA, have been striving to introduce effective measures to prevent medical errors and to improve patient safety.

8. As one of the key measures to promote the safety of patients, since October 2007, HA has implemented a Sentinel Event Policy to further strengthen the reporting, management and monitoring of adverse medical incidents classified as sentinel events in public hospitals. The objectives of the Policy and implementation of the reporting system are set out in chapter 3.

9. After an initial period of adaptation, the Policy is now fully implemented. Adverse events which fulfilled the sentinel event criteria have been appropriately managed, reported in a timely manner and thoroughly investigated as stipulated. Risk reduction strategies have been formulated and necessary follow up actions taken accordingly. The Policy has strengthened the sharing and learning culture across HA as the reported cases and learning points are shared via the bi-monthly newsletter 'HA Risk Alert'. These activities have facilitated the identification and reduction of clinical risks and improved patient safety as a result.

10. This document serves as the progress report of sentinel events reported by HA hospitals from 1 October 2007 to 31 March 2008, covering a review of the reported cases, learning points, recommendations made and actions taken.

# 3

## HA SENTINEL EVENT POLICY

### *Objectives of HA Sentinel Event Policy*

11. A sentinel event is defined as an “unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof<sup>1</sup>”. The Policy statement stipulates that “hospitals must report, investigate and respond to sentinel events promptly, and make necessary efforts to prevent similar events from happening in the future.”

12. The Policy seeks to ensure immediate and appropriate handling of sentinel events by senior management of the respective hospitals and if necessary, the HA Head Office (HAHO) in order to:

- (a) minimize harm to patients;
- (b) minimize the impact of such events;
- (c) support the staff involved with the events;
- (d) investigate and understand the causes that underlie a sentinel event;
- (e) improve the systems and procedures where necessary and appropriate to reduce the probability of recurrence of the event in future; to share the lessons learned among staff of different clusters of the HA; and
- (f) maintain patients’ and the public’s confidence on the public healthcare system.

### *Implementation of the reporting system*

13. From 1 October 2007, nine specified types of sentinel events are required to be reported to HA within 24 hours of awareness of their occurrence. These types of events include:

Category 1 Surgery / interventional procedure involving the wrong patient or body part;

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<sup>1</sup> The US Joint Commission, sentinel event policy and procedures (2008)  
<http://www.jointcommission.org/SentinelEvents/PolicyandProcedures/>

- Category 2 Retained instruments or other material after surgery / interventional procedure requiring re-operation or further surgical procedure;
- Category 3 Haemolytic blood transfusion reaction resulting from blood group incompatibility;
- Category 4 Medication error resulting in major permanent loss of function or death of a patient;
- Category 5 Intravascular gas embolism resulting in death or neurological damage;
- Category 6 Death of an inpatient from suicide (including suicide committed during home leave);
- Category 7 Maternal death or serious morbidity associated with labour or delivery;
- Category 8 Infant discharged to wrong family or infant abduction; and
- Category 9 Unexpected death or serious disability reasonably believed to be preventable (not related to the natural course of the individual's illness or underlying condition). Assessment should be based on clinical judgment, circumstances and the context of the incident.

Actions by the hospital concerned

14. In the event that an incident falling within any of the above categories occurs, the hospital concerned should take the following actions:
- (a) undertake immediate remedial action to mitigate the harm to the patient;
  - (b) support the staff involved with the event;
  - (c) report the incident via the HA-wide electronic Advanced Incident Reporting System (AIRS);
  - (d) disclose the event to the patient and his/her family in an open and honest manner;
  - (e) conduct a thorough root cause analysis on the incident, for the purpose of identifying possible underlying organizational deficiencies which may not be immediately apparent and which may have contributed to the cause of the event; and
  - (f) submit the report of the root cause analysis, including any proposed risk reduction strategies to prevent recurrence of similar event, to HAHO within eight weeks of the occurrence of the sentinel event.

Actions by the HA Head Office

15. The HAHO will follow up on the reporting of a sentinel event as below:

- (a) if the event has immediate major impact on the public healthcare system, disclose the event to the public;
- (b) regularly review, through the HA Sentinel Event Report Review Panel, all the submitted reports and recommend strategies across HA to reduce the risk of further recurrence of similar incidents through a sharing and learning process;
- (c) issue, bi-monthly, a “HA Risk Alert” newsletter to all HA staff on the learning points from the reported sentinel events; and
- (d) compile, every six months, a report on sentinel events for submission to the HA Board and release to the public. Appropriate level of confidentiality will be applied to the report to protect the identity of patients and staff concerned.

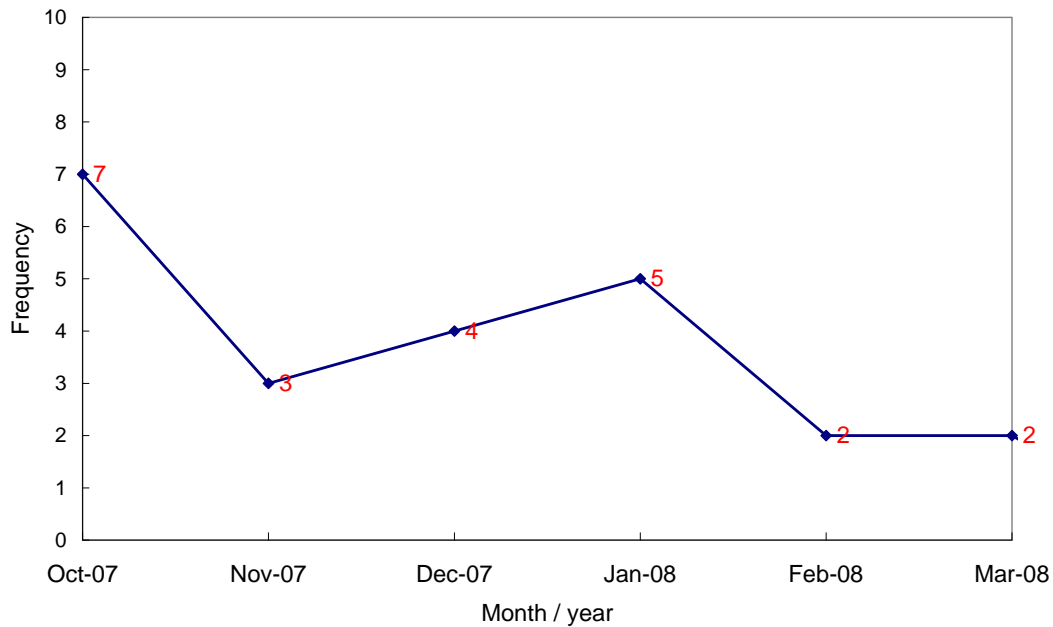


# 4

## SENTINEL EVENTS REPORTED FROM 1 OCTOBER 2007 TO 31 MARCH 2008

### *Number of reported cases*

16. Twenty-three sentinel events were reported during the six months from 1 October 2007 to 31 March 2008. Monthly statistics are as shown in Figure 1:



*Figure 1: Number of sentinel events by month*

The incidence rate (for six months) was 2.8 per 1,000,000 episodes of patient discharges and deaths / attendances.<sup>2</sup>

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<sup>2</sup> including total inpatient and outpatient discharges and deaths and ambulatory service attendances defined in HA Controlling Officer's Report: 2008-2009

*Types and frequency of reported sentinel events*

17 Types and frequency of the reported events are as shown in Figure 2:

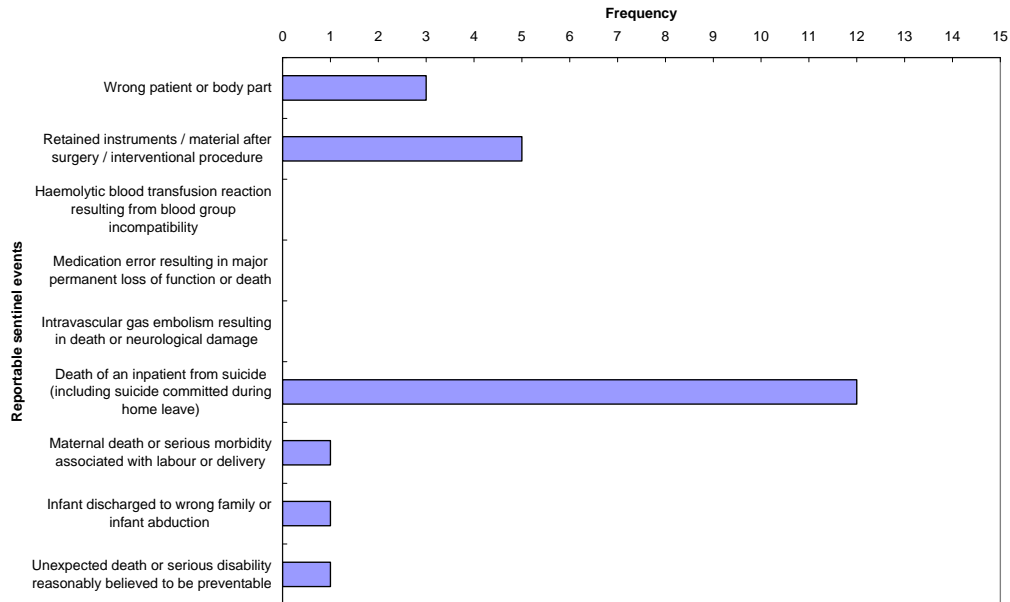


Figure 2: Frequency of sentinel events by type

These events are further analysed as follows:

- Death of an inpatient from suicide (including suicide committed during home leave): 12 cases (52.2%)
  - 1 patient committed suicide in hospital, another was missing and found committed suicide outside hospital, 10 committed suicide during home leave.
  - half of these patients suffered from psychiatric illnesses while the other patients were suffering from malignancies, chronic illnesses or permanent disability.
  - distribution of their care units is as shown in Table 1:

Setting	Frequency
General acute hospitals	5
Psychiatric units within general hospitals	4
Psychiatric hospitals	2
Convalescence hospitals	1

Table 1: Care units of the suicide patients

- Retained instruments or other material after surgery / interventional procedure requiring re-operation or further surgical procedure: 5 cases (21.7%)
  - 3 cases were retention of intravascular guidewire
  - 1 case was retention of surgical gauze and
  - 1 case was retention of a piece of peeled off laparoscopic instrument coating.
  
- Surgery or interventional procedures involving the wrong patient or body part: 3 cases (13.0%)
  - mix-up of blood specimens of two patients leading to unnecessary blood transfusion to one patient and delayed transfusion to the other.
  - mix-up of biopsy specimens of two patients leading to delayed diagnosis of prostate cancer for one patient and unnecessary radiation for the other
  - wrong patient's treatment regimen was retrieved from computer system leading to a patient receiving wrong radiation dosage
  
- Maternal death associated with delivery: 1 case
  
- Infant abduction: 1 case
  
- Unexpected death or serious disability reasonably believed to be preventable: 1 case

### ***Outcomes of reported sentinel events***

18. The outcomes of the reported events are as follows:

- Extreme consequence (i.e. death): 13 cases (56.5%)
  - 12 cases due to suicide
  - 1 case of maternal death associated with delivery

- Major / moderate consequence: 4 cases (17.4%)
  - 1 case due to unnecessary blood transfusion to one patient and delayed transfusion to the other
  - 1 case due to retention of surgical gauze
  - 1 case due to delayed diagnosis of prostate cancer for one patient and unnecessary radiation for the other
  - 1 case due to retention of a piece of peeled off laparoscopic instrument coating
  
- Minor or insignificant consequence: 6 cases (26.1%)

### ***Hospital settings where the sentinel events occurred***

19. Most of the events (69.6%) took place in general hospitals (Table 2):

Setting	Frequency (%)
General hospitals	16 (69.6%)
Psychiatric units within general hospitals	4 (17.4%)
Psychiatric hospitals	2 (8.7%)
Convalescence hospitals	1 (4.3%)

Table 2: Settings where the sentinel events occurred

### ***Individual sentinel events***

20. A summary of individual sentinel events are set out in Appendix 1.

# 5

## ACTIONS TAKEN AND DISCUSSION

### *Implementation*

21. The Policy, implemented on 1 October 2007, is a landmark policy addressing patient safety. Forums were held to introduce it and the operational logistics to facilitate staff's understanding and acceptance of the Policy.

22. Initially the frontline staff and hospital management have to familiarize themselves with the reporting criteria and process, and were uncertain of the interpretation of some clinical situations as sentinel event. Frontline staff also required support and training on effective investigation process (root cause analysis) and application of open disclosure incident to the patient / family member. Further forums were held to clarify some of these operational issues. A series of seminars and training workshops on root cause analysis were conducted.

23. Some frontline staff have expressed different views on the need to report suicide case while the patient was on home leave. While understanding it is necessary and valuable for some patients with psychiatric illnesses to undergo a period of "home leave" in preparation for discharge from hospital and that suicide may not be totally preventable, nevertheless, worldwide, it is common for most organizations to define suicide of an in-patient as one of the reportable sentinel event types. This issue will be reviewed after 6-month implementation.

### *Management of sentinel events and follow up*

24. Individual hospital has taken timely actions upon the reporting of a sentinel event, especially to minimize the harm and the impact of an incident to the patient concerned, to support the staff involved and to disclose the event to the public as appropriate. The HAHO has also worked closely with the hospitals on the management of the sentinel events.

25. The hospitals have conducted appropriate root cause analysis on the events and submitted reports within the stipulated time of eight weeks.

26. A Panel has been set up by HA to review the submitted root cause analysis reports and to make overall recommendations on risk reduction strategies / actions.

27. The HAHO has visited respective hospitals to gain a better understanding of some of the major or significant sentinel events and to discuss recommendations to reduce the recurrence of such events. To evaluate the

effectiveness of the improvement measures, half-year follow-up visits to the hospitals are also conducted.

### *Analysis of reported sentinel events*

#### The trend of reporting

28. There is a downward trend of reported cases over the six months. Worldwide, no international reference is available regarding the “acceptable” level of sentinel event reporting for benchmarking. In Australia, the Victorian Department of Human Services received 82 reports of sentinel event in 2006 – 2007<sup>3</sup> (for approximately 1.3 million admissions to public health facilities during the above period). In the US, the Joint Commission (JC) received an average of 383 reports of sentinel case per year<sup>4</sup>.

#### Types of sentinel event reported

29. In HA, patient suicide was the top reported sentinel event (12 /23 cases, 52.2%). Retained instruments or other material after surgery / interventional procedure was the second most commonly reported sentinel event (5 cases, 22%) whilst surgery / interventional procedure involving the wrong patient or body part was the third (3 cases, 13%).

30. The JC and the Victorian Department of Human Services of Australia have also listed in their reports suicide and wrong patient or site amongst the top three categories. In Victoria, 11 out of 82 sentinel events were suicide in an in-patient unit and 20 were wrong patient or body part in 2006-07.

31. According to the World Health Organization (WHO), in 2000 approximately one million people died from suicide with a "global" mortality rate of 16 per 100,000<sup>5</sup>. In Hong Kong, the suicide rate has increased from 11.5 per 100,000 in 1990 to 18.6 (n = 1278) in 2004<sup>6</sup>. The 12 suicidal cases reported as sentinel events represented a rate of 2.6 per 100,000 inpatient admissions during the reporting period.

#### Contributing factors for the sentinel events

32. The small number of cases reported and the varied nature of the reported sentinel events limit the value in determining the contributing factors of all the reported sentinel events. However, it is of value to identify contributing factors for similar type of events such as surgery / interventional procedures involving the wrong

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<sup>3</sup> The US Joint Commission, sentinel event statistics: as of March 31, 2008, <http://www.jointcommission.org/SentinelEvents/Statistics/>

<sup>4</sup> The Australian Victoria Government Department of Human Services, sentinel event program: annual report 2006 – 2007.

<sup>5</sup> World Health Organization: suicide prevention (SUPRE).

[http://www.who.int/mental\\_health/prevention/suicide/suicideprevent/en/](http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/)

<sup>6</sup> World Health Organization: suicide rates , by gender, China, Hong Kong SAR, 1955 - 2004. [http://www.who.int/mental\\_health/media/chinzhongk.pdf](http://www.who.int/mental_health/media/chinzhongk.pdf)

patient or body part, retained instrument and material as below:

- Key contributing factors for surgery / interventional procedures involving the wrong patient or body part:
  - Failure to verify patient's identity against all relevant documents before procedure.
  - Specimens / label sheets of more than one patient were handled at the same time.
  - Computer system design was error prone or failed to alert possible error.
- Key contributing factors for retained instruments or material:
  - No protocol to confirm the removal or counting (for guidewire).
  - Counting / checking not thoroughly conducted (for gauze and coating)

### *Risk reduction programmes*

33. To prevent the occurrence of similar incidents, HA is implementing various system and process improvements. Some of the major activities are highlighted below:

#### For prevention of patient suicide

- enhance the assessment of patient's psychological and emotional status before home leave to identify suicide risk
- set up a multi-disciplinary group to explore risk reduction strategies and programs to reduce suicide risk, especially for patients with chronic and terminal diseases

#### For prevention of wrong patient, procedure or site

- make use of barcode scanning system to prevent misidentification of patient
- adopt a "time-out" policy to ensure verification and documentation of correct patient identity and operation procedures before surgery

#### For prevention of retained instruments or material

- strengthen the checking procedures to ensure correct gauze, equipment and guidewire counting

For prevention of infant abduction

- explore advanced security tag for infants to strengthen security measure

*Learning and sharing*

34. The sentinel events reported and the learning points have been shared in the bi-monthly newsletter 'HA Risk Alert' since November 2007. It also updates HA staff on other identified local and overseas healthcare risks so that precautionary measures can be taken to prevent or mitigate such risks.



# 6

## CONCLUSION

35. The Policy has been smoothly implemented and accepted by staff and stakeholders. It has enhanced and ensured appropriate management of serious incidents. It is an important step in enhancing patient safety, as over this short six-month period, the Policy has highlighted some known and unknown clinical risks. Appropriate risk reduction strategies are being implemented for greater patient safety. The learning and sharing process is a positive step forward and will contribute to the strengthening of safety culture. The HA will continue to accord the highest priority to patient safety.

# 7

## THE WAY FORWARD

36. Based on the valuable experience in the past six months, a series of improvement activities will be undertaken to further enhance patient safety:

- (a) clarify and refine some of the reporting criteria for the Policy;
- (b) enhance some of the supporting processes, such as the methodology of conducting effective root cause analysis and application of open disclosure;
- (c) prevent recurrence of similar sentinel events through implementation of effective risk reduction measures; and
- (d) further enhance safety culture through strengthening proactive, sharing and learning, and 'Just' culture. A HA-wide survey on patient safety culture will also be conducted to enhance the understanding of the organizational factors that have an impact on patient safety.

## APPENDIX 1

### **SUMMARY OF INDIVIDUAL SENTINEL EVENTS AND RECOMMENDATIONS FOR IMPROVEMENT**

#### **Category 1: Surgery / interventional procedure involving the wrong patient or body part**

##### **MIX-UP OF BLOOD SPECIMENS**

Manual laboratory test request forms were used during Clinical Management System (CMS) / Generic Clinical Request System (GCRS) downtime.

During delivery of specimens from ward to laboratory, in some wards, request forms and specimens from different patients were put into the same (one) bag. A batch of specimens and forms including that of patient A and patient B were delivered to the laboratory.

At the reception area of laboratory, an error occurred in pairing up the request forms and specimens from patient A and patient B, as the serial numbers appeared similar. Pre-printed "paired labels" were stuck onto the 2 sets of specimen and request form. As the request forms and specimens were wrongly paired up, the laboratory number affixed to patient A's specimen was wrongly paired with the laboratory number of patient B's request form and vice-versa.

The Haemoglobin (Hb) results of specimens A and B were released to the relevant wards and wrongly taken as that for patient B and A respectively. Patient A's Hb result was reported as 6.2 g/dl (the result of patient B). Two units of blood were given. The Hb was re-checked on the next day and found to be 16.0 g/dl. This triggered off the delta check mechanism and the error was discovered. Patient B had her Hb re-checked which was found to be low. Blood was then transfused. This event resulted in delay in blood transfusion for one patient while another patient had unnecessary blood transfusion.

#### ***Key contributing factors***

##### System factors

- a) The Clinical Management System (CMS) / Generic Clinical Request System (GCRS) was down for maintenance and staff had to revert to using the manual laboratory request system.
- b) The specimen was labeled with *a serial no.* torn from a corner of the manual request form and a handwritten *ID no.* affixed to the specimen for identification purpose during GCRS downtime. Checking of patient identity using two "standard" identifiers (name and ID Number) was not adopted.
- c) Specimens and request forms from different patients were placed together in the same bag.
- d) Computer checking (delta check system) could not spot the discrepancy to raise alert of a possible specimen error.

Human factors

- e) Specimens from different patients were handled at the same time.
- f) Specimens and forms were wrongly paired up resulting in wrongly labeled specimen tubes.
- g) Failure to note the discrepancy between the laboratory result and the patient's clinical signs and symptoms to trigger a re-check of the test.

***Risk reduction strategies***

For ward staff

- a) To adopt the policy of "one bag for one specimen and form" when manual request form is used during GCRS downtime.
- b) To label specimen with pre-printed label with patient's name and ID number (rather than using the serial number of manual form).

For laboratory staff

- c) To handle one specimen at a time.
- d) To verify vigilantly the patient's identifiers on the label of the specimen against the request form.

IT system

- e) To minimize the frequency and duration of CMS / GCRS downtime by better coordination of all the IT maintenance activities.

**MIX-UP OF BIOPSY SPECIMENS**

Patient A attended a Day Centre for prostate biopsy twice nine months apart. Surgery for prostate cancer was suggested based on the second histopathology report. When the surgeon reviewed the medical record before operation, he found great discrepancies between the two histopathology reports and initiated further investigation. Subsequent DNA tests confirmed that the prostate biopsy taken from the first attendance belonged to Patient B who attended the same Day Centre on the same day. The mix-up resulted in delayed diagnosis of prostate cancer for Patient A and unnecessary radiotherapy for Patient B.

In preparation for biopsy sessions, a sheet of gum labels was collected from each patient's record and clipped together in sequence according to the appointment time on a clipboard. Identities of Patient A and B were verified when they arrived at the reception counter and before they entered the procedure room. Patients were called into the procedure room according to the order of their medical records laid out according to the appointment time. However, there was a change in the order of attendance of the two patients. The order of the medical records was altered accordingly, but without a corresponding adjustment in the sequence of the collected label sheets. Verification of patient identity prior to the labelling of specimens was not performed.

***Key contributing factors***

- a) Change in the sequence of biopsy session for the two patients.

- b) Biopsy specimens were labeled according to the sequence of label sheets laid out beforehand without further confirmation of the patient's identity.

***Risk reduction strategies***

- a) To check patient identity before taking and labeling any specimens.
- b) To avoid putting label sheets of different patients onto the same clipboard for subsequent use.

**WRONG RADIATION THERAPY REGIMEN GIVEN**

A patient received a prostate radiation therapy regimen which was meant for another patient. The former patient attended the clinic and presented his follow-up card. Radiotherapist A confirmed the patient's identity in the follow-up card, treatment record and prescription. Radiotherapist B intended to retrieve this patient's treatment data from the computer system but made the mistake of clicking the name of another patient on the list for prostate radiotherapy, which resulted in the wrong treatment regimen (wrong dosage) being uploaded into the machine. Radiotherapist C called the patient into the room according to the follow-up card. Radiotherapist A confirmed the patient identity again with the treatment record. After helping the patient to the couch, they checked the setup of the treatment parameters with the computer data but without further checking the name of patient on the retrieved computer data. As a result, wrong dosage of radiation was given.

***Key contributing factors***

- a) Failure to check the patient's identity against the data retrieved from the computer system.
- b) No explicit duty description for individual team members.
- c) Error-prone design of computer screen, e.g. information (patient's name) displayed on the computer monitor was in small font.

***Risk reduction strategies***

- a) To **ensure the checking procedure is adequate** to verify patient identification and the treatment to be given, including verification of the patient's identity with the uploaded treatment regimen. To adopt "Time Out" for the checking procedure.
- b) To define the duty and responsibility of individual team members.
- c) To explore safety measures to prevent picking the wrong patient from the patient list on a selection panel.

**Category 2: Retained instruments or other material after surgery / interventional procedure requiring re-operation or further surgical procedure**

**RETAINED GUIDEWIRES AFTER CENTRAL VENOUS CATHETERIZATION**

***Case 1***

Femoral venous catheterization was performed for a patient receiving an elective surgery by an experienced staff member. The femoral artery was accidentally punctured. A Cavafix was subsequently inserted into the antecubital fossa. The patient was discharged uneventfully. An out-patient PET-CT scan revealed a retained guidewire in the abdominal area.

***Case 2***

Femoral venous catheterization was performed for a critically ill patient in Intensive care Unit (ICU) by a trainee intensivist. The procedure was performed smoothly. Two days later, a retained guidewire was noted on a routine chest X-ray during a senior round.

***Case 3***

A central line was inserted in a patient in ICU with the use of guidewire. Resistance was noted during saline flushing and blood aspiration. Another catheter set was opened and a new guidewire was used to guide the removal of original and insertion of the new central venous catheter. Upon completion of the insertion procedure, a scheduled CT scan examination revealed a retained guidewire. It was likely that the first guidewire was left in-situ during the insertion process and the second guidewire had further advanced the first guidewire into the venous system.

***Key contributing factors***

System factor

- a) No protocol to confirm the removal / counting of the guidewire after procedure.

Human factor

- b) Staff might not be aware of the potential mishap of retaining a guidewire.

***Risk reduction strategies***

- a) To increase staff awareness of such potential mishap during training and supervision of the procedure.
- b) To allow only certified competent staff to perform central venous catheterization with the use of guidewire.
- c) To document the checking procedure in case notes / electronic record system:
  - i. Counting of guidewire must be performed at the end of the procedure;
  - ii. Counterchecking of the number and integrity of used guidewire(s) by another staff member.

## **RETAINED GAUZE IN PATIENT AFTER SURGERY**

A patient underwent low anterior resection for rectal cancer. After operation, a curvilinear shadow was noted in X-ray imaging and retained raytec gauze was suspected. A CT scan was performed and retained gauze was confirmed.

### ***Key contributing factors***

- a) Multiple handovers for scrub nurses and circulating nurses (e.g. for meal breaks)
- b) Time constraint for thorough gauze counting.
- c) Ineffective communication between different disciplines and teams in the Operating Theatre – assumptions made without confirmation.

### ***Risk reduction strategies***

#### Communication

- a) To "speak up" when uncertainty of correct count occurs.
- b) To seek confirmation whenever there is doubt over the procedures.

#### Documentation

- c) To clearly document the "in and out" of used gauze / abdominal pads and the record should be traceable.
- d) To clearly document the number of gauze / abdominal pads used for packing throughout OT and other clinical units.

#### Equipment

- e) To use different raytec gauze for OT and other clinical units. One example is using double Raytec for hospital areas outside OT.

#### Rules and Procedures

- f) To start the counting procedures again from the beginning after having been disturbed or interrupted.
- g) To allow adequate time to carry out the gauze counting procedures.
- h) To follow the rules of placing the used gauze/ abdominal pads in designated place.
- i) To undertake a final wound exploration before closure.

## **RETAINED COATING OF LAPAROSCOPIC INSTRUMENT**

A segment (2cm x 0.4cm) of plastic insulated sheath of a laparoscopic instrument, used in a gynaecological laparoscopic surgery, was found retained inside a patient. During specimen retrieval, the surgeon transferred the specimen held by the instrument at the left side 5mm port, to a grasper forceps at the 10mm umbilical port. Difficulties were encountered during this manipulation. It was suspected that this manipulation caused a peeling off of the instrument coating by the 10 mm umbilical port trocar. The instrument integrity was not thoroughly checked before the end of operation. The peeling was noticed during cleansing of the instrument.

### ***Key contributing factors***

- a) Difficult specimen retrieval in laparoscopic operation contributed to the peeling off of a piece of instrument coating.
- b) Failure to check the integrity of instruments before wound closure resulted in the retention of coating in the patient.

### ***Key recommendations***

- a) To consider using instrument with non-insulated metal outer tube for specimen retrieval.
- b) To enforce the checking of instrument integrity before closure of laparoscopic wound(s).



**Category 6: Death of an inpatient from suicide (including suicide committed during home leave)**

Twelve sentinel events on patient suicide were reported.

One patient committed suicide in hospital, another found missing and committed suicide outside hospital while 10 committed suicide during home leave. Half of these patients suffered from psychiatric illnesses while the other patients were suffering from malignancies, chronic illnesses or permanent disability.

***Key contributing factors***

Root Cause Analysis was conducted for all these cases but it was difficult to ascertain definite contributory factors. While the underlying conditions were certainly predisposing factors for depressive moods and negative feelings, none of these patients had shown any suicidal thoughts during their hospital stay or before home leave. On the other hand, it was quite possible that unpredictable changes had happened during their home leave periods.

***Key recommendations***

Home leave is important in preparing our patients for integration back into the society and beneficial for their psychosocial well being. This practice should be supported. To further enhance the safety of our patients, review could be made and improvement measures implemented regarding patient assessment, communication amongst staff members and with patients' families, as well as assessment of the ward environment for suicide risk.

**During hospitalization**

- a) To enhance the tools for assessing psychological and emotional status of oncology / chronically ill patients.
- b) To enhance communication among multidisciplinary teams.

**Before home leave / trial discharge**

- c) To assess and document suicidal risk of patient before home leave.
- d) To enhance communication between patients' relatives and hospital staff on care and management of patients during home leave / trial discharge.

**Category 7: Maternal death or serious morbidity associated with labour or delivery**

One rare event of maternal death associated with delivery was reported.

A patient presented with drop in blood pressure, uterine atony and bleeding half an hour after delivery. An emergency operation was immediately arranged in view of the uncontrolled bleeding. The patient was transferred to the ICU for post-operative management. She remained stable with no significant continual bleeding. A few days later, the patient presented with a sudden drop of blood pressure and succumbed despite active resuscitation.

The hospital had set up an investigation panel to look into the case. It was concluded that this was a very rare and unexpected situation and the cause was uncertain. The case was referred to the Coroners for investigation of the cause of death.

### **Category 8: Infant discharged to wrong family or infant abduction**

A 1-year-old baby girl was admitted for suspected child abuse. She was brought to hospital by her grandmother and a detention order was sought. On admission, an identification wristband with security tag was applied to the patient's ankle. Three hours after admission, ward staff found the child missing. Hospital search was conducted but without success. The intact security tag of the patient was found in an empty cot near the ward exit.

Neither the grandmother nor the mother could be reached by phone. The situation was reported to the police. The CCTV recording could not be reviewed because of technical problems. There was no clue to the identity of the abductor. The case medical social worker (MSW) could not be contacted after office hours.

Eighteen hours after the reporting, the child was found in her grandmother's home by the Police. The grandmother subsequently brought the child back to hospital for further assessment, as advised by the Police.

#### ***Key contributing factors***

##### Personal Factor

- a) Grandmother's fear of being blamed for causing the detention order and separating the child from her mother.

##### Equipment/ Environment Factors

- b) The wristband holding the security tag was detachable.
- c) Malfunctioning of the CCTV system caused failure in identifying the abductor.
- d) Ward design did not facilitate access and exit control of visitors.

##### Team Factor

- e) Failure to reach the case MSW urgently after office hours

#### ***Risk reduction strategies***

##### Equipment

- a) To install alarm system in ward area, including the rear exit.
- b) To explore the use of a more advanced security tagging system.
- c) To check the functioning of CCTV systems regularly.

##### Parent education

- d) To remind parents or guardians of the consequences of taking patients away from hospital without permission.

##### Process

- e) To implement preventive measures according to the HA Guidelines on Prevention of and Response to Infant/Child Abduction.

##### Communication

- f) To develop effective communication channels among the Social Welfare Department, the Police and other relevant parties.

**Category 9: Unexpected death or serious disability reasonably believed to be preventable**

A disinfection incident in operating theatre was reported under this category.

Suspected contaminated instruments had been used on several patients in the Operating Theatre (OT) of a public hospital.

CIDEX has long been used to disinfect OT instruments. In order to enhance staff occupational safety, Cidex-OPA was introduced one month prior to the incident in Hospital X. However, the use of Cidex-OPA is contraindicated for bladder malignancy cases. CIDEX would still be used for disinfection of urological instruments.

Cidex-OPA at Hospital X was prepared in the preparation room of individual OT when required. CIDEX was prepared only in the Central Preparation Room of the 4/F in OT. A tray of sterile water was placed next to it for rinsing purpose. Hospital X used the same kind but different shaped trays (marked "CIDEX") as containers for CIDEX, sterile water, and Cidex-OPA. No other labeling was used to differentiate the solution in these trays.

The hospital had provided training on the use of Cidex-OPA for all OT staff. Briefing on the "new practice" of using CIDEX for disinfecting urological instruments and rinsing in a tray of sterile water was only conducted for staff working at the 4/F.

On the day of the incident, nursing staff disinfected the urological instruments from 4 trans-urethral retrograde prostatectomy cases in the Central Preparation Room by placing them firstly in the tray of CIDEX, then in the tray of sterile water placed next to the CIDEX.

In between, a nurse had to sterilize an ultrasound (USG) probe before and after its use for a brain abscess case. She came from the 2/F OT to assist a neurosurgical case at the 4/F OT and had no knowledge of the special disinfection arrangement in the Central Preparation Room. As no Cidex-OPA had been prepared in the preparation room of her theatre on that day, she went to the Central Preparation Room and placed the probe into the tray of transparent liquid next to the tray of CIDEX which she assumed to be Cidex-OPA (which actually was sterile water).

The tray of sterile water was potentially contaminated by the probe. Hence other urological instruments subsequently placed into this tray of "sterile water" might have been contaminated.

***Key contributing factors***

System factors

- a) Inadequate briefing / communication to ensure all staff were aware of the change of practice.
- b) No established system to go through a proper consultation and endorsement procedure before introducing a new practice. Inability to identify the inadequacy before implementation.

Task design

- c) The use of the same type of trays to hold both CIDEX and sterilized water,

without labeling, or written standard procedural guideline.

Human factors

- d) The introduction of Cidex-OPA led the nurse to the assumption that the tray sitting next to the one holding CIDEX solution was Cidex-OPA.
- e) The nurse who immersed the USG probe had no knowledge of the new practice and with a wrong assumption, resulted in the incident.

***Risk reduction strategies***

- a) To clearly label the containers for disinfectants (the content).
- b) To inform all staff concerned of the change in practice before implementation.