



RISK ALERT

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A Risk Management Newsletter for Hospital Authority Healthcare Professionals

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Opening Message

Supporting Our Staff in the Patient Safety Journey

Increasingly over the years, we have developed a culture of identifying, sharing and discussing clinical incidents. These are essential steps for us to learn about what can go wrong, improve and reduce potential risks. As well as being a channel for us to learn from one another, it has served as a valuable medium for us to communicate and connect with the public. As a responsible institution, HA needs to uphold the principles of openness and transparency. We believe the public understands that it is only human to make errors but they are much less forgiving about hiding mistakes.

Four key aspects are considered when prompt public disclosure of clinical incidents is contemplated. They include the severity and impact of the incident, public interest, patient and relatives' views, and views of the caring team. Each clinical incident is carefully considered based on its own set of circumstances, and it is impossible to say which aspect is more important or dominant. It must be emphasized that each case is considered seriously and the decision for prompt public disclosure is never taken lightly.

We are all aware that with any prompt public disclosure, there may be negative effects on our staff. Even if the organization holds the position that the incident is caused by flaws in the system, these caregivers often see this form of public disclosure as a slight on their professionalism. I actually believe that this feeling is born out of our frontline clinicians' innate sense of accountability. We absolutely acknowledge this phenomenon and are genuinely empathetic.

Sir Richard Charles Nicholas Branson – an English business magnate, investor, and philanthropist – who founded the Virgin Group, once said, *"If you take care of your employees, they will take care of your clients. So, put employees first and your customers effectively come first by default... Being disengaged at work has a ripple effect far beyond decreased productivity and customer satisfaction."*

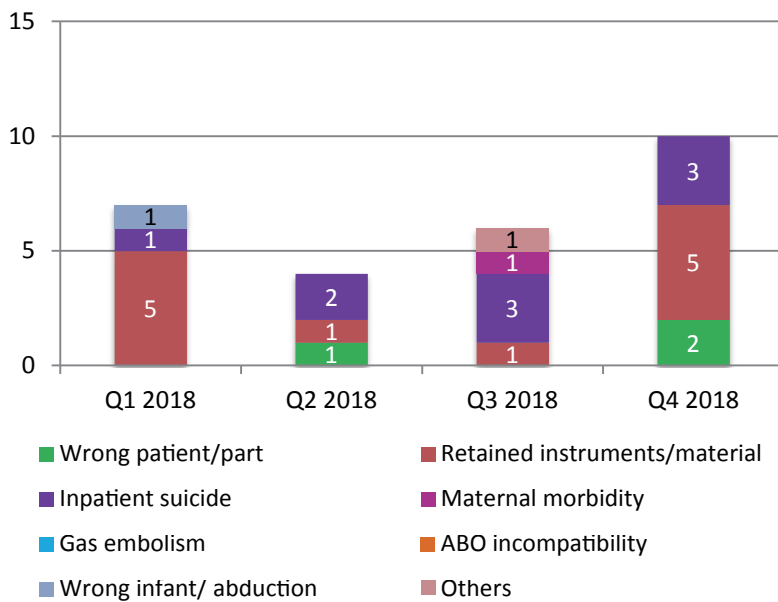
Over the years, HA has put significant effort into separating clinical incidents from fault-finding. We strive to develop a just culture where our staff are actively engaged in resolving issues and improving the health system. At the same time, HA has committed dedicated resources to improve staff wellbeing, including making peer support and psychological and crisis support readily available, provision of legal advice and disciplinary protection insurance for Hospital Authority clinical and non-clinical professionals, developing staff skills on managing clinical incidents, building resilience and mindfulness training.

We understand that while a career in healthcare provides a lot of rewards, occasionally it does serve up its unique set of challenges. HA is committed to standing side-by-side with our staff during these moments.

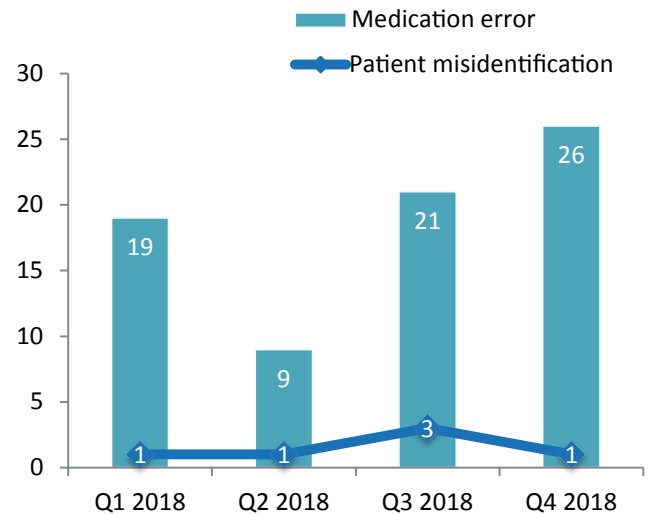


Dr Ngai Chuen SIN, Chief Manager (Patient Safety & Risk Management), HAHO

Distribution of SE in the last four quarters



Distribution of SUE in the last four quarters



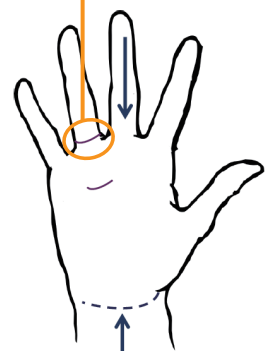
Sentinel Events

Wrong Part

Trigger finger release on wrong finger

- A patient was admitted for endoscopic carpal tunnel release and middle finger trigger finger release of RIGHT hand under local anaesthesia.
- Operative sites were marked with arrows by the surgeon before the operation.
- 'SIGN IN' and 'TIME OUT' were performed.
- RIGHT hand was fully exposed after skin preparation.
- Incision lines for both procedures were marked by the surgeon, but the incision line for middle finger trigger finger release was marked at the ring finger instead.
- After RIGHT carpal tunnel release, the surgeon proceeded to RIGHT trigger finger release.
- The arrow marked at middle finger was not noted.
- After completion of trigger finger release of the ring finger, the error was noted. Trigger finger release of the middle finger was proceeded.

Wrong incision line marking



Key contributing factors

- Wrong marking of incision line on the RIGHT ring finger instead of middle finger.
- Patient underwent two procedures in the same operative field. Recapitulation of surgical site and the second operation was not carried out.

Recommendations

- 'TIME OUT' should be repeated and carried out when there is more than one procedure for different disease condition in the same patient.
- Follow the Surgical and Procedure safety guideline, and perform the 'TIME OUT' procedure just before the skin incision for each procedure.

Wrong side nerve block

- An elderly patient with cognitive impairment was admitted for trochanteric fracture of **LEFT** femur, and underwent an operation for closed reduction and fixation.
- 'SIGN IN' was performed by an anaesthetist and a nurse.
- During the induction of general anaesthesia, a second anaesthetist who was not the original anaesthetist decided to perform a nerve block (**LEFT** fascia iliacus block) for better post-operative pain control. The procedure was not explained to patient and relatives before the operation.
- The second anaesthetist performed **RIGHT** sided nerve block without performing 'TIME OUT'.
- The incident was noted before the operation. **LEFT** sided nerve block was not performed.
- The operation proceeded and the patient recovered after the operation.

Key contributing factor

The nerve block was an unplanned procedure and was performed by the anaesthetist who did not take part in the 'SIGN IN'. 'TIME OUT' was not performed before the nerve block.

Recommendations

1. 'TIME OUT' must be performed before starting any regional nerve block.
2. Informed consent from patient or next-of-kin must be obtained for invasive procedures.

Retained Instruments / Material

Aiming guide

- A patient had a traumatic fracture of the **LEFT** proximal humerus, and was scheduled for an elective operation of open reduction and internal fixation under fluoroscopy guidance.
- During the operation, surgeon A applied an aiming device onto the humeral plate. Fluoroscopy was used to check for the position of the screws.
- After exchanging one of the screws, surgeon A left the operation room and surgeon B took over to screen the length of screws. Surgeon B was not aware of the aiming guide, and started wound closure.
- During counting of the instruments, the circulating nurse reported that the number of gauze was correct. It was not mentioned that the counting of special instruments had not yet started.
- While the second counting was still in progress, the wound was closed. The patient was reversed from general anaesthesia and was transferred to the recovery area.
- Upon counting of the special instruments, it was identified that an aiming device was missing.
- The retained aiming device was located after an urgent X-ray was performed.
- The patient was transferred back to the operating theatre for removal of the aiming guide.



Key contributing factors

1. Nurses involved in counting of instruments were inexperienced and unfamiliar with the operative procedures and the instrument sets.
2. Quantity of instrument sets in this operation was large, and the time required to count all the instruments was much longer than that required to close the wound.
3. Miscommunication among nurses and surgeons on the counting of instruments as the nurses did not specify it was the basic instruments that had been counted but not the special instruments.

Recommendations

1. Review and revise the workflow of counting of instruments used during operative procedures in OT to ensure the counting of all the instruments is completed and correct before the wound closure.
2. Enhance the communication and collaboration among doctors and nurses, in particular regarding the instrument counting.

Drainage catheter

- A patient underwent a RIGHT thigh incision and drainage procedure for RIGHT thigh chronic osteomyelitis. Three drains (2 Redi-vac drains and 1 Exudrain) were inserted intra-operatively and was documented.
- On day 5 post-operation, the case doctor instructed to remove all drains.
- The number of holes of the Redi-vac drains and the length of Exudrain were matched against the Intraoperative Nursing Record.
- A follow-up CT scan on day 12 showed a 15cm long catheter in the RIGHT thigh with both tips in the subcutaneous layer.
- The retained drainage catheter was removed under local anaesthesia.
- It was subsequently found that the retained catheter was part of the Exudrain. The catheter had fractured before or during Exudrain removal.

Key contributing factors

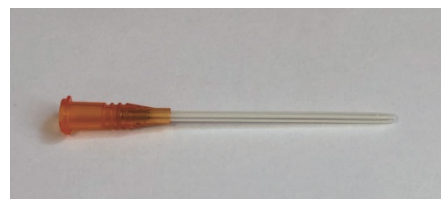
1. Nurses did not recognize that the removed Exudrain was incomplete.
2. Nurses might have mixed up the removed drains upon measurement.

Recommendations

1. Test the fixation of drains during 'SIGN OUT' by orthopaedic surgeon to prevent cutting through the drain.
2. Avoid applying anchoring stitches too tightly on drainage catheters and/or too close to the skin.
3. Standardize catheter measurement, e.g. measure from the end hole to the indicator, rather than counting the number of holes.

Angiocatheter

- A patient underwent chest drain insertion for LEFT pleural effusion.
- In view of the patient's thick chest wall, the doctor used a 14G angiocatheter to access the pleural space for local anaesthetic injection, and to facilitate guide wire insertion by Seldinger technique.
- The doctor sustained needle stick injury during the procedure.
- The guide wire insertion by Seldinger technique was unsuccessful, and the chest drain was inserted by blunt dissection.
- The assisting nurse was not aware of the inserted angiocatheter. The quantity of used needles were checked, but the angiocatheter was not included in the items to be counted.
- Bedside Procedure Safety Checklist was filled in retrospectively.
- After chest drain removal, thoracic computed tomography scan showed a suspected foreign body. Wound exploration was done to retrieve the angiocatheter.



Key contributing factors

1. The angiocatheter was not considered a countable item.
2. The thick chest wall of patient made the procedure difficult. Additional instruments were used and improvised methodology was employed deviating from the original plan.
3. The needle stick injury would have contributed to the event by procedural interruption and distraction.
4. The Post Procedural Sign Out Safety Checklist was not properly completed.

Recommendations

1. Review the current Bedside Procedure Safety Checklist in the Hospital.
2. Define the countable items needed to be checked and documented for chest drain insertion in the department.
3. Reinforce the importance of complying with the Bedside Procedure Safety Policy.

Raytec gauze

- A patient who had an Implantable Cardioverter Defibrillator (ICD) was admitted for extraction of old leads and insertion of transvenous pacemaker in the Cardiac Catheterization Lab (Cath Lab).
- Significant bleeding was noted during the operation and a cardiothoracic surgeon was consulted.
- Haemostasis was achieved and the case was handed over back to the original caring team.
- The initial plan for device implantation was withheld but nurses were not aware of the change of plan and the wound was being closed.
- 7 doctors were involved in the procedure, and a total of 110 Raytec gauzes were used.
- During the first gauze counting, 3 gauzes were thought to be missing which should indeed be 4 gauzes.
- 3 gauzes were later located outside patient's body after searching and fluoroscopy.
- Final count was not performed. The gauze count was documented to be correct.
- A retained gauze was suspected during review of Chest X-ray, and a Raytec gauze was retrieved by wound exploration.

Key contributing factors

1. Final count was not carried out resulting in failure to identify the discrepancy in gauze number. The fluoroscopy screening did not cover the area of packed gauze.
2. Ineffective communication among team members regarding the change of plan, wound closure and number of gauze packed.
3. The different sizes of Raytec gauzes (long and short Raytec) were not counted separately.
4. Lack of suitable device in Cath Lab to facilitate gauze counting and timely identification of missing gauze.

Recommendations

1. Explore equipment / device that can ensure gauze to be in full view of the operating surgeon and nurse to facilitate counting.
2. Ensure the first and final counting was conducted properly.
3. When using fluoroscopy to search for retained instruments, it should cover the whole operative site.
4. Strengthen team communication regarding the change of plan, wound closure and number of gauze packed.

Ribbon gauze

- A patient with giant cell tumor of the sacrum underwent an operation of sacral ostectomy and curettage of bone lesion.
- Due to wound disruption 3 weeks after the operation, daily wound dressing with wound packing was required. Two pieces of ribbon gauzes were packed and documented.
- Daily wound dressing was performed, and the number of gauzes were documented.
- The patient subsequently underwent wound exploration and suturing by the case doctor in the treatment room twice. The procedures were documented in the Operation Record, but the number of gauzes removed and packed during the procedure was not documented.
- In view of persistent wound discharge, the case doctor performed wound exploration and debridement in operating theatre. A piece of ribbon gauze was found retained in the wound.

Key contributing factors

1. Lack of an established practice to count and document removed packing material during wound assessment and management by doctors.
2. Inadequate communication between doctors and nurses during removal of wound packing material.

Recommendation

Refine the wound management system with mandatory counting and documentation of wound packing and removal by all disciplines involved.

Inpatient Suicides

In Q4 2018, three patients (males aged between 58 and 61) with malignancies or chronic illnesses had committed suicide: one by strangulation in toilet; the other two by jumping from height. There were no root causes following the investigations for the 3 cases, and there were no specific recommendations.

Case 1

- A patient with newly diagnosed sigmoid cancer was admitted for laparoscopic sigmoidectomy.
- Suicidal risk screening on admission was negative.
- The patient was stable post-operatively and symptoms were well controlled. The patient was observed to be friendly to staff and co-patients, and started mobilization in the ward.
- The patient did not express worry about surgery and prognosis, and did not reveal any social or financial concerns.
- At midnight on day 6 post operation, the patient was found missing. Shortly afterwards, ward staff was informed by Police that patient had jumped from height at a nearby industrial building.

Case 2

- A patient was admitted for lower back pain, neck pain and dizziness.
- The patient had a past history of nasopharyngeal cancer, adjustment disorder and suicidal attempt with regular psychiatric follow-up.
- Suicidal risk screening on admission was negative.
- The patient had no pain or dizziness the next day and requested to be discharged. Due to electrolytes imbalance, he required intravenous infusion and medical consultation, and was not discharged.
- The patient went to the hospital lobby without notifying staff later that afternoon and was brought back by the security staff.
- Later in the evening, the patient requested to leave the ward to buy a coffee but did not return.
- The patient and the family could not be reached by phone. Hospital search was conducted but in vain.
- The patient was reported to have committed suicide by jumping from height at a nearby building.

Case 3

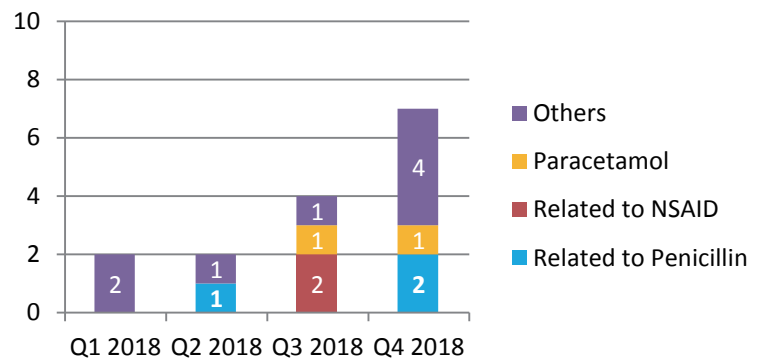
- A patient with a history of atypical mycobacterial infection was admitted for severe pneumonia, respiratory failure and septic shock.
- Suicidal risk screening on admission was negative.
- The patient had intermittent abdominal pain during hospitalization. Abdominal and pelvic Computed Tomography scan was normal.
- The patient was noted to have visual and auditory hallucination. Psychiatrist or psychologist consultation was suggested by on-call clinicians. Psychiatric consultation was yet to be referred.
- In view of the patient's risk of further deterioration, Do-Not-Attempt Cardiopulmonary Resuscitation (DNACPR) was discussed with the patient. The patient was emotionally calm, and expressed a wish for comfort care if his condition deteriorated.
- In the evening, the patient was found lying in the toilet with a shower hose around his neck. The patient was certified dead.



Serious Untoward Events

Of the 27 SUE cases reported in Q4 2018, 26 were due to medication errors and 1 was due to patient misidentification. The medication error cases involved giving known drug allergens (KDA) to patients (7), dangerous drugs (5), anticoagulant (2), insulin (3), chemotherapy (2), concentrated electrolytes (1), immunosuppressant (1), oral hypoglycemic agents (1) and others (4). There were no allergic reactions in the known drug allergen cases.

Known Allergy	Allergen Prescribed
Atrovent	Atrovent
Vancomycin	Vancomycin
Penicillin	Augmentin
Penicillin	Augmentin
Rabeprazole	Pantoprazole
Maxolon	Maxolon
Panadol	Panadol

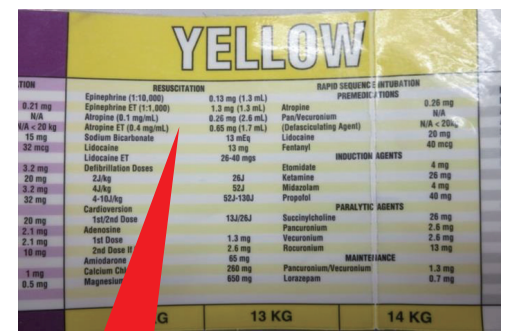


Number of KDA cases in the last four quarters

Medication Error

Wrong dose of intravenous atropine was given to a baby

- A baby with a known history of second degree atrioventricular (AV) block attended AED for cough and respiratory distress.
- The patient's condition deteriorated rapidly with a low heart rate of 50 beats per minute, and atropine was required.
- To determine the correct dose, a Broselow Tape was used to measure the patient's body length, which corresponded to "Atropine 0.26mg (2.6ml)" as shown on the tape.
- Doctor gave a verbal order of "Atropine 2.6ml". The nurses had reconfirmed with the doctor with the verbal order, but was communicated using the volume instead of the dosage of the medication.
- As the atropine concentration was 0.6mg/ml in HA, a dose of 2.6ml (1.56mg) atropine was given, which was 6 times of the intended dosage.
- The incident was noted during preparation of the second dose of atropine for intubation. The patient did not demonstrate adverse effect to the atropine.



Broselow Tape

RESUSCITATION	
Epinephrine (1:10,000)	0.13 mg (1.3 mL)
Epinephrine ET (1:1,000)	1.3 mg (1.3 mL)
Atropine (0.1 mg/mL)	0.26 mg (2.6 mL)
Atropine ET (0.4 mg/mL)	0.65 mg (1.7 mL)
Sodium Bicarbonate	42 mg

Key contributing factors

- Limitation of overseas Broselow Tape which was based on the overseas drug formulation, which led to local users' misconception.
- Recent Broselow Tape versions contained recommended dosage in volume basing on drug formulation available in the United States leading to local users' misconception.
- Ineffective clarification of doubt among the team.
- Atropine was clarified in "volume" instead of "dosage (in mg)".

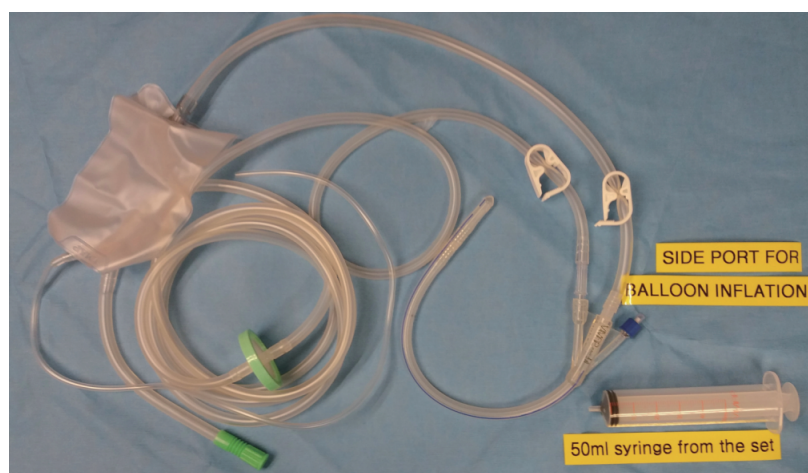
Recommendations

- Establish or adopt a standardized worksheet to calculate paediatric emergency medications based on locally available drug formulation.
- Be aware of the limitation of Broselow Tape.
- Verbal order in terms of drug dosage in weight (e.g. "mg" or "mg/kg").



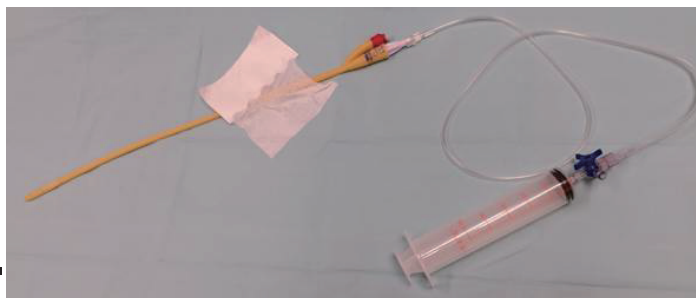
Extreme caution when using commercial products beyond manufacturer's scope of application

- A patient underwent a Computed Tomography virtual colonoscopy. A commercial rectal tube set was used. The automated carbon dioxide insufflator connection was used to manually insufflate the colon by connecting the end of the rectal tube to a syringe. This required an additional connector, of which the port looked like the port for balloon inflation.
- Air was inadvertently insufflated through the balloon inflation port. The balloon burst on manual insufflation and caused a rectal laceration.
- The patient required surgical repair for the rectal laceration.



The colonography administration set for automated CO2 insufflation

The setting for manual insufflation with room air with a catheter



Learning Point

Instructions from the manufacturer and the user manual should be followed for proper use of equipment as far as possible.

There are risks when using commercial products beyond the manufacturer's scope of application.

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Suggestions or feedback are most welcome. Please email us through HA intranet at address: [HO Patient Safety & Risk Management](#)