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Opening Message

From Surviving to Thriving: The Path to the Next Normal

The COVID-19 pandemic has had an unprecedented impact on the delivery of healthcare services around the world. In Hong Kong, the service capacity of public hospitals has been facing big challenges recently, stemmed from sudden surge of patient load, manpower shortage, limitation of physical environment, etc. during the 5th wave of COVID-19 epidemic. To cope with the imminent situation, “think outside the box” from prevailing healthcare service model has accelerated the development of smart hospital to improve efficiency and reduce the risk of human errors caused by stress and fatigue.

While we are moving on with the development of smart care and projects, the projects can at the same time be applied to combat COVID-19 epidemic. For example,

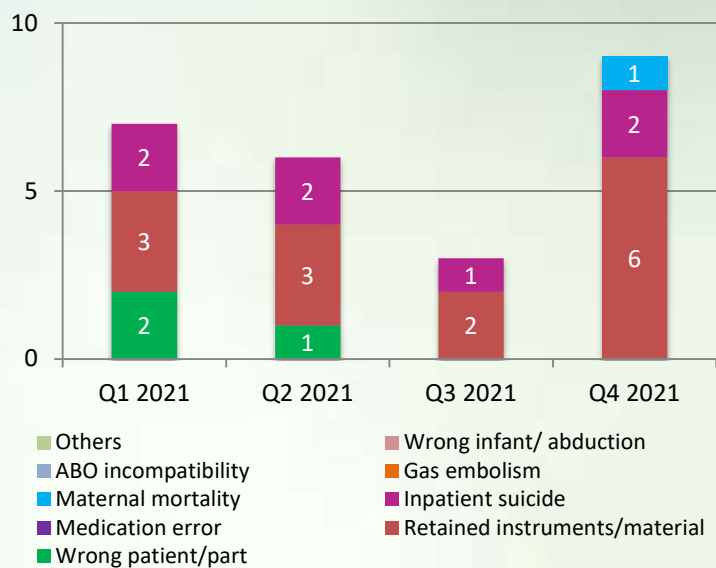
- The rise of tele-care – as an alternate route to face-to-face consultation and reduce patient load inside hospital;
- e-vitals and artificial intelligence in analyzing X-ray films were evolving – to facilitate timely identification of deteriorating patients and diagnosis;
- Automatic unit dose dispensing of medicine and automatic dispatching system were utilized – to increase service capacity while reducing manpower required.

All these examples of healthcare technologies bring in significant level of efficiency in hospital operations while minimizing possible human errors to safeguard patient safety. With no end in sight of the COVID-19 pandemic, there needs to be an ambitious focus on surfacing and scaling innovative technology towards our aim in building safer systems, which is particularly important during pandemic era.

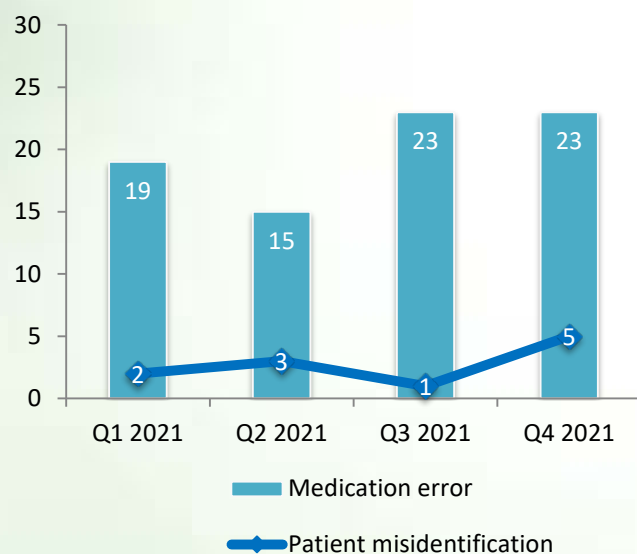


Dr K T TOM
Cluster Chief Executive,
Kowloon East Cluster

Distribution of SE in the last four quarters



Distribution of SUE in the last four quarters



Sentinel Events

Retained Gauze / Material

Suction Catheters

Case 1 A patient who had temporary tracheostomy done around one month ago, was found to have tube dislodged. A suction catheter with its thumb port pre-cut, was used as guidewire during a bedside attempt of tube reinsertion. The attempt failed and ENT was consulted with successful reinsertion performed. Post-insertion endoscopy revealed a tubing in patient's trachea down to right main bronchus. The catheter was removed under general anaesthesia (GA) and patient's condition remained stable afterwards.

How did it happen?

- Suction catheter not recommended as the first-line choice of introducer for tracheostomy tube reinsertion

How to prevent?

1. Enhance staff training on proper tracheostomy tube insertion technique and selection of appropriate introducer
2. Enforce counter-checking by two staff of the integrity of suction catheter after use

Case 2 A bed-bound patient on nasogastric tube feeding stayed in 3 hospitals over a course of two months. Due to underlying condition, oronasal suction by nurses and physiotherapists was required from time to time.

- ❖ During a napkin round, a 7cm long brownish plastic tube was found in the patient's stool. After investigation, the plastic tube was likely part of a suction catheter.

How did it happen?

- Inadequate awareness on checking the integrity of catheter used after procedure
- Inadequate awareness of the risk of catheter breakage during suctioning as patient had intermittent agitation and struggling

How to prevent?

Enhance staff awareness and communication on:

1. Risk of catheter breakage
2. Practice of checking equipment integrity before and after use
3. Patients' fitness for oral suctioning during handover and transition of care

Plain Gauze

- ❖ A post-mastectomy patient was noted to have wound infection. Surgical exploration was performed, followed by daily wound dressing. A week later, a piece of retained plain gauze was retrieved from the wound cavity during wound dressing. Patient was well.



How did it happen?

- Plain gauzes in the dressing set (5cm x 5cm) are small, and have higher risk of unintentional retention in deep wound cavity.

How to prevent?

- Pay special attention when managing wounds of large or deep wound cavities with small-sized dressing materials like plain gauzes or wound applicators to prevent unintentional retention

BIPP* Gauze Fragment

- ❖ A patient underwent septoplasty and turbinate reduction under general anesthesia. Due to persistent intra-operative bleeding, BIPP gauze packing was planned. A paraffin gauze roll was trimmed into 4 pieces from 15cm to 4 cm each and admixed with BIPP. A total of two pieces were packed into patient's nasal cavities.
- ❖ Postoperative day 1, difficulty was encountered during BIPP gauze removal and the two gauzes were removed in pieces.
- ❖ During an out-patient follow up one month later, a piece of gauze fragment (3cm) was retrieved from patient's left nasal cavity.

How did it happen?

- Trimmed paraffin gauze longitudinally is prone to damage the gauze structure, increasing risk of incomplete removal.

How to prevent?



Radio-opaque Fragments

- ❖ Patient A underwent an uneventful cemented right hip hemi-arthroplasty for fractured neck of femur on 2 Sept 2021. During a follow up 3 months later, a 1mm radiopaque shadow inside the femoral canal was detected on X-ray. Upon investigation, a 1-2mm defect with irregular surface was identified on a femoral canal rasp used during OT.
- ❖ Cases who had been operated with same set of instrument since 2 Sept were reviewed. Among them, Patient B was also found to have a less than 1mm radiopaque shadow inside the femoral canal on X-ray.
- ❖ Both patients were well. Removal of the metallic fragments was considered unnecessary.

How did it happen?

- Exact source of the radio-opaque fragment cannot be ascertained despite a thorough and comprehensive investigation. Metal debris from instruments e.g. rasp, and glass fragment from opening of cement bottles could be possible sources.
- Such minute fragment is considered an inherent risk from instruments' wear and tear in orthopedic surgery.

How to prevent?

1. Document any finding of radiopaque foreign body in the intraoperative fluoroscopic view on OT record, if indicated
2. Enhance intraoperative alertness of foreign body and document the surgical decisions as necessary
3. Reinforce staff's awareness on instruments' wear and tear before and after surgical procedure. Staff should report on site promptly if there is any suspicion

Case 1

- ❖ A patient was admitted to a psychiatric ward for depressive symptoms. Upon admission, patient was put on high suicidal observation and anti-depressants were adjusted. After hospitalization of two weeks, the suicidal risk was adjusted from high to intermediate according to patient's condition.
- ❖ Two days later, patient was found hanging in toilet in a morning using patient trousers hooked on the edge of a toilet door. Despite resuscitation, patient succumbed. The case was reported to the Police and Coroner.

Case 2

- ❖ A patient with repeated hospitalization was admitted to a medical ward for shortness of breath and epigastric pain. No suicidal risk was identified during assessment. Patient appeared calm and cooperative. While waiting for COVID-19 test result, he was attended by doctor and nurses in the isolation room for clinical examination, blood sampling and cardiac monitoring.
- ❖ In the same afternoon, when a staff entered the room to serve meal, patient was found sitting on toilet floor with oxygen cannula around the neck. Despite resuscitation, patient succumbed. The case was reported to the Police and Coroner.

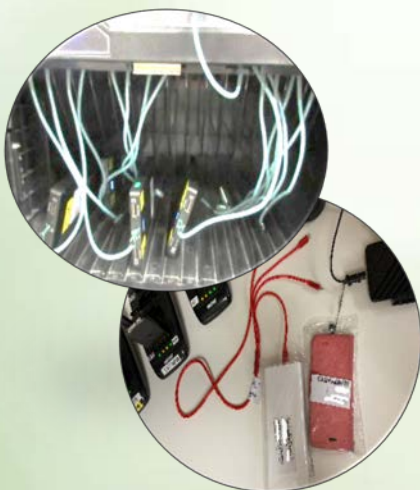
Learning Points

1. Re-design toilet doors to minimize hanging risk
 2. Arrange designated staff to perform ward patrol
 3. Enhance psychiatric observation and intervention for patients with intermediate suicidal risk
 4. Monitor linen distribution during shower round
1. Remove mounting rods with protruding base from isolation rooms and toilets
 2. Enhance staff training on suicidal risk screening and assessment
 3. Facilitate communication with family for deeper understanding of patient's mood and emotion before admission

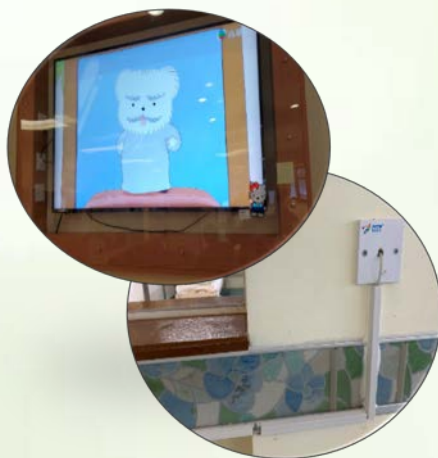


Local Sharing on

Suicidal Risk Mitigation Measures in HA Hospitals



1. Centralized charging area with staff access only
2. Shorter charging cable



3. Cable secured inside TV cabinet or cable tie (in psychiatric ward)



4. Patient education poster and admission leaflet



SMART Solution: AI# Sensor



1

- Preventing in-patient (IP) suicide is one of the important risks identified in KH Risk Register.
- Focused safety rounds revealed a potential hanging point in ward ceiling hoist.
- With KH's concerted efforts to ensure occupational health safety (OHS) as well as patient safety, after studying various risk mitigation measures, a SMART AI solution was developed.

❖ The rails of ceiling hoist run all the way from patient cubicles to toilets and side rooms.



2

- ❖ An AI Sensor was installed near the ceiling hoist, which emits infrared to sense motion.
- ❖ Upon detection of movement e.g. hanging of ropes (blue arrow), siren alarm and flash light would be elicited.



3

- ❖ Mitigating hanging risk using SMART technologies, without compromising the normal function of the ceiling hoist

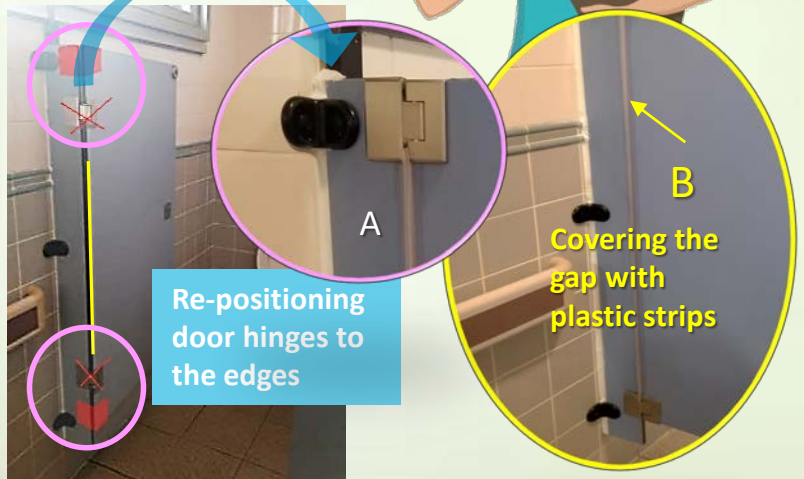
#Artificial Intelligence

Preventing IP suicide in Toilet Facility



Toilet door gap or door edge could be a potential hanging point in psychiatric wards.

To mitigate the potential hanging risk of toilet door, modification was done in KH to minimize the door gap by:



Re-positioning door hinges to the edges

Covering the gap with plastic strips



Maternal Mortality

A lady with unremarkable antenatal history was admitted for show at 41st week of gestation. Leaking was noted and patient was transferred to Delivery Suite. Twenty minutes later, patient suddenly developed tonic seizure followed by cardiac arrest. Two doctors were at patient’s bedside at time of event and cardio-pulmonary resuscitation was immediately started. Senior O&G doctor, Anaesthetist, Pediatrician and ICU doctor were promptly informed for on-site support. Emergency peri-mortem Caesarean section was performed and baby was delivered promptly.

Despite a return to spontaneous circulation with active resuscitative efforts, patient succumbed eventually. The baby survived and was well.

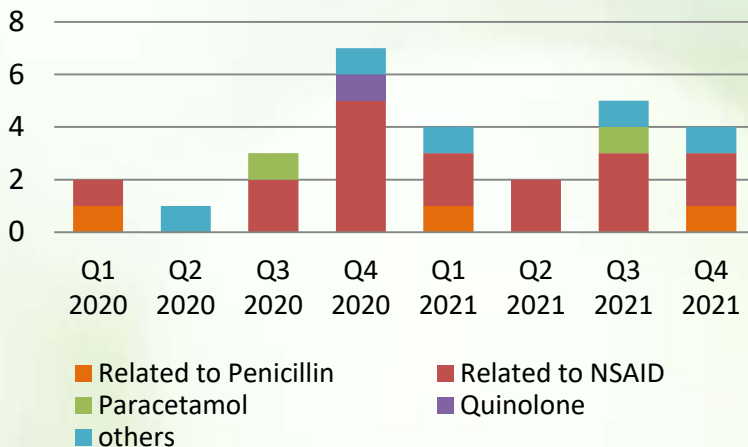
Conclusion

Multi-specialty team performed timely resuscitation of the mother and delivery of the newborn. Obstetric crash call could be introduced to allow even more efficient communication in emergency setting.



Serious Untoward Events

Number of KDA cases in 2020-21



Known Allergy	Allergen prescribed
Zinacef	Augmentin
Aspirin	Ketorolac
NSAID	Aspirin
Fluorets	Fluorescein

Patient Misidentification Incidents

Medication Dispensing and Administration



Case 1 In a pharmacy, patient A’s medication basket (that contained 11 drug items) was stacked with the baskets of other patients.

A bag of diuretic tablets belonging to another patient accidentally dropped into the basket for patient A and issued to patient A.

Case 2 Patient A and B were arranged designated seats in the injection area. However, patient B took the seat of patient A and vice versa. After giving an injection to patient A, the nurse immediately noticed that the injection should be for patient B.

NSTEMI# Treatment



Patient A was admitted for bradycardia with blood analysis of cardiac marker arranged.

Due to an abnormal blood result, continuous cardiac monitoring and NSTEMI treatment were prescribed. However, repeated cardiac marker results were normal. Incorrect patient’s blood sampling was suspected and NSTEMI treatment for patient A was withheld immediately.

#NSTEMI - Non-ST Segment Elevation Myocardial Infarction

Surgical Specimen

During an emergency operation, wound swab for culture and pathology specimen were taken from patient A and sent for laboratory analysis.



After a few days, the case doctor received the pathology report of a specimen that should not belong to patient A. After verification of the involved patients and their operations, the results were rectified. The treatment of both patients was not affected. Investigations revealed that patient A's unused label was incorrectly affixed to B's specimen in the operating theatre.

Knee Tapping

Orthopedics was consulted for knee swelling of Patient A. The orthopedic doctor mistakenly thought that the urgent consultation was for patient B.



After knee tapping was performed on patient B, ward nurse noted that there was no orthopedic consultation request made for patient B. Knee tapping was done for patient A uneventfully on the same day.



Following clinical review and management as clinically indicated, **all patients were well.**

Learning Points

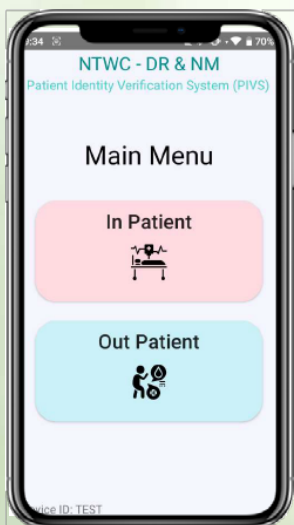
1. Proper handling of unused patient's label
2. Thorough checking of specimen label or consultation form against the patient, ID bracelet or patient's clinical records
3. Compliance with correct specimen labelling during SIGN OUT
4. For medication dispensing and administration, strict compliance with 3 Checks and 5 Rights and independent double checking when appropriate
5. Use of 2D barcode safety checking mechanism



Local Sharing

Patient Identity Verification System

in New Territories West Cluster (NTWC)



To minimize manual input error of patient data, a handheld device with a customized program was introduced in the **Computed Tomography (CT) suite**

Scan barcodes on Generic Clinical Request System (GCRS) form and patient's wristband

A&E and In-patients

The verified HKID would be sent **to CT console via Bluetooth connection** and cross-matched with the selected patient in the worklist before scanning starts.

Outpatients

NTWC - DR & NM
Patient Identity Verification System (PIVS)

Out Patient

OCR Scanning

A123456(3)

NTWC - DR & NM
Patient Identity Verification System (PIVS)

Out Patient

HKID MATCHED

HKID: A123456(3)

Resend to PC 1:56

Scan and read HKID number on ID card with **Optical Character Recognition (OCR)** technology



Incidents have occurred when medications prescribed to patients under PPP were omitted when patients returned to HA for clinical care. This issue shall highlight ways of checking PPP record via the current CMS / ePR system.

There are **two ways** to find the prescription records entered by private doctors under PPP programmes:



門診協作
General Outpatient Clinic
Public-Private
Partnership Programme
(GOPC-PPP)

1

What's New

Note Items

- Clinical Notes
 - A&E
 - IP
 - IP + OP**
 - OP
- Nursing Documentations
- AH Documentations
- Disease Specific Notes
 - Integrated Rehabilitation Platform
 - Hip Fracture Rehabilitation
- Specialty Notes
 - Anaesthesia
 - Family Medicine
 - Psychiatric
- Private Institution Notes
 - GOPC PPP Clinic Notes**

2

Clinical Notes Show: All IP + OP Notes Period: All

Search PDF files in Note/Letter Items/Operations/Endoscopies/Cardiac/Spe Go

Case Institution	Type	Case No.	Creation Date	Reference Document
TMH	IP		18/05/2019 09:38	Discharge Summary
TMH	OP		14/05/2019 21:05	FM Consultation Note
TMH	OP		17/04/2019 15:12	Consultation Note
GP	OP	GPPT	06/04/2019 09:37	Primary Care Consultation Note
TMH	OP		06/03/2019 15:32	Consultation Note

GOPC PPP Clinic Notes Period: All

Search PDF files in Note/Letter Items/Operations/Endoscopies/Cardiac/Special Investigat Go

Case No.	Creation Date	Patient Specialty
GPPF	17/06/2021 18:14	---
GPPF	08/06/2021 13:27	---
GPPF	20/05/2021 19:00	---
GPPF	18/05/2021 17:57	---
GPPF	10/03/2021 19:49	---
GPPF	22/01/2021 18:56	---

General Outpatient Clinic Public-Private Partnership Programme

Primary Care Consultation Note

HKIC No. [redacted]
Name: [redacted]
DOB: [redacted]
Age: 73
Sex: F
Case No. [redacted]
Last Update Date: 06-Apr-2019

General
Date of Attendance: 06-Apr-2019
Reason for attendance: FU chronic illness
Chronic Disease: HT

Health Status
BP: 113/72 mmHg
Pulse: 67/min

Medications
Amlodipine (Besylate) Tablet 5mg 1 tablet(s) oral daily 76 Day(s)

Dietary Compliance:

Exercise:

Diagnosis / Problem List
Hypertension

Clinical Notes

Medications
Amlodipine (Besylate) Tablet 5mg 1 tablet(s) oral daily 76 Day(s)



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