



ANALYSIS OF INCIDENT REPORTING IN PATIENT CARE: A STUDY OF A MULTISPECIALTY HOSPITAL

Presentation by:

Dr. Anjali

Roll No.-1068

MBA (Health Management)

2020-22

Under the guidance of:

Dr. Seema Mehta

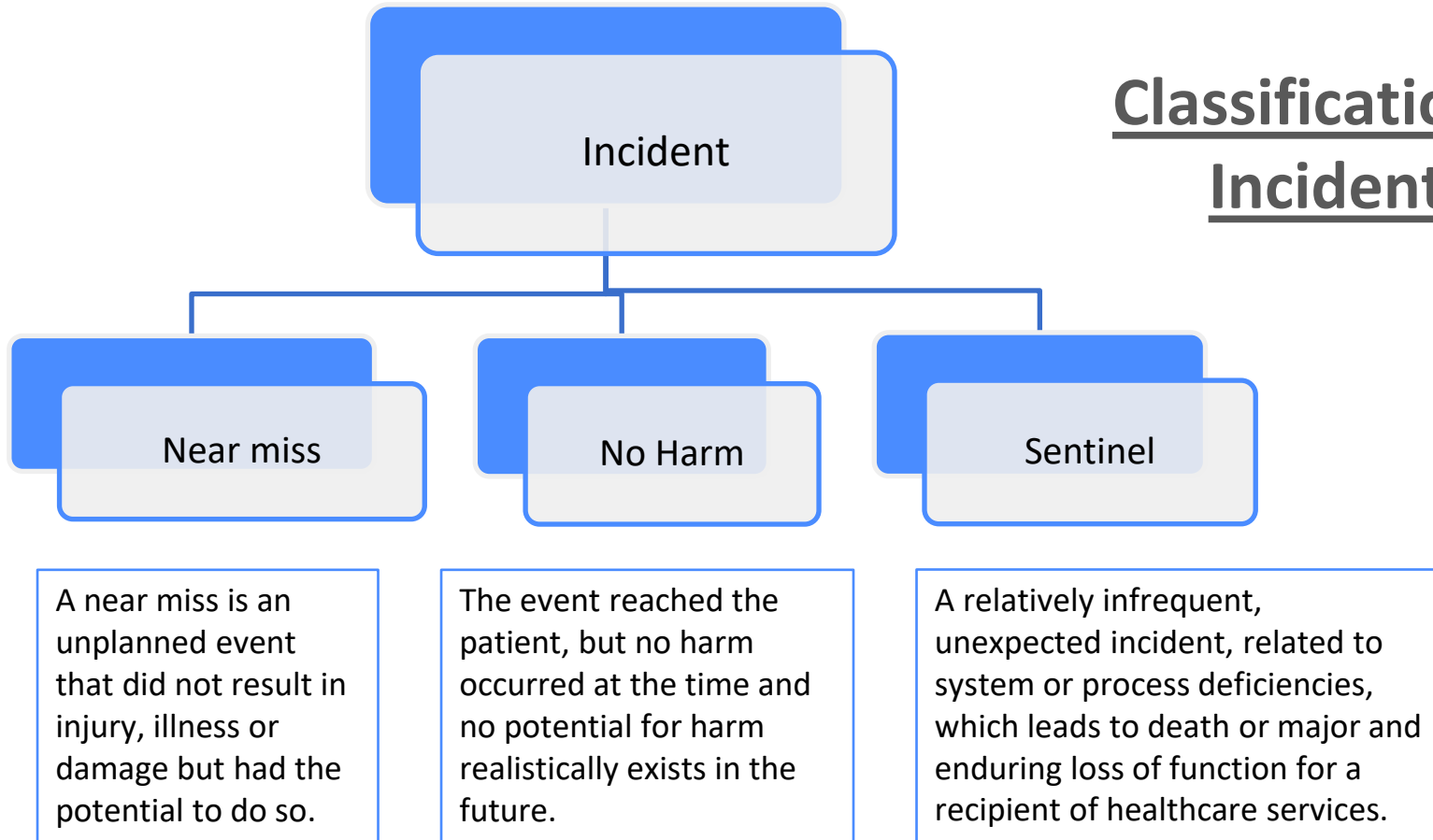
INTRODUCTION

Incident Report- According to NABH, it is defined as written or verbal reporting of any event in the process of patient care, that is inconsistent with the deserved patient outcome or routine operations of the healthcare facility.

Example of Incidents that can be reported: -

- Adverse Outcomes
- Unexpected death or disability
- Inpatient falls or mishaps
- Institutionally acquired burns
- Institutionally-acquired pressure sores
- Errors or unexpected complications related to the administration of drugs or transfusion
- Significant delays in diagnosis or diagnostic testing

Classification of Incidents



Categories

Minimum		Minor	Moderate	Major	
Circumstances or Events that have the capacity to cause error		An error that did not reach the individual	An error that reached the individual but did not cause harm/ reached the individual and required monitoring /intervention to confirm it resulted in no harm	Harm to the Individual(lasting less then 2 weeks)	
Category -A		Category -B	Category -C and D	Category E	
Water spill and not cleaned for 2 hrs; Without any action		Stepped on spilled water without fall	Only fall with any injury	Only bruises	
Sentinel Events	Categories F,G,H,I	Category F: Harm to the individual (lasting more than 2 weeks)Fracture	Category G: permanent harm to the individual.Deformity	Category H: Intervention required to sustain life. Head injury	Category I: Death of the Individual.

Research Question

1. How are incidents reported in a hospital?
2. What are the most common risks identified through Incident Reporting System (IRS) and how can they be minimised?

Research Objectives

1

To understand the process of incident reporting in a multispecialty hospital

2

To develop a Risk Register according to the risks identified through incident report analysis

3

To do RCA and create an Failure Mode and Effect Analysis (FMEA) on the highest reported incident/error

METHODOLOGY

Study Design: Retrospective Descriptive Study

Setting: Study is conducted in Jaypee Hospital, Noida

Duration of Study: Over the period of 3 months

Sampling Technique: Convenience Sampling

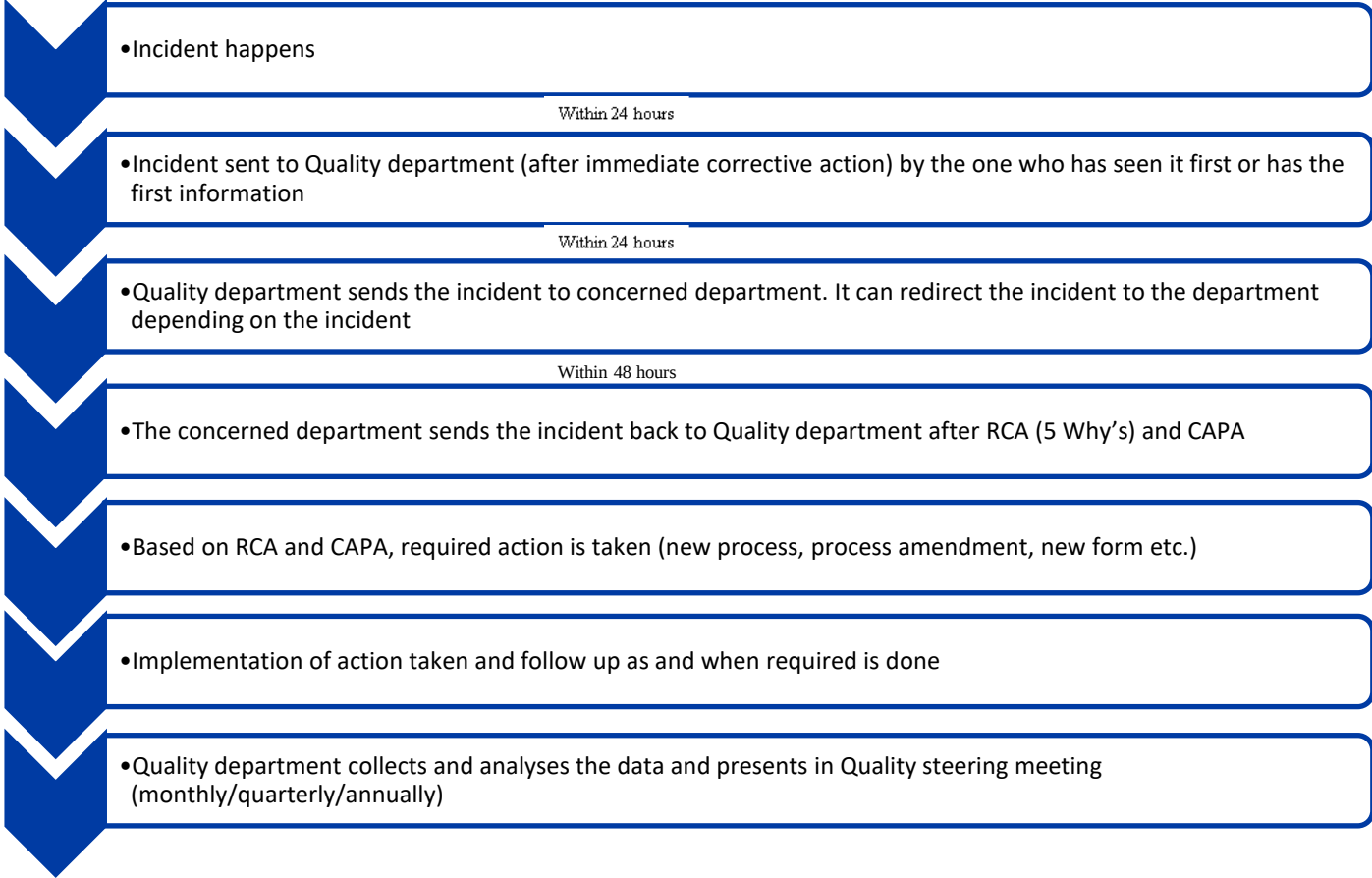
Data Collection and Analysis: The Incident Management database of the Hospital was retrospectively reviewed. Details of all incidents recorded between May 2021 and April 2022 including RCA and CAPA were reviewed and analysed through MS Excel.

Inclusion Criteria: All the incidents irrespective of the type and severity reported between May 2021 and April 2022 are included

Exclusion Criteria: The incidents that are not reported in the Incident database are not included



Incident Reporting



- Incident happens

Within 24 hours

- Incident sent to Quality department (after immediate corrective action) by the one who has seen it first or has the first information

Within 24 hours

- Quality department sends the incident to concerned department. It can redirect the incident to the department depending on the incident

Within 48 hours

- The concerned department sends the incident back to Quality department after RCA (5 Why's) and CAPA

- Based on RCA and CAPA, required action is taken (new process, process amendment, new form etc.)

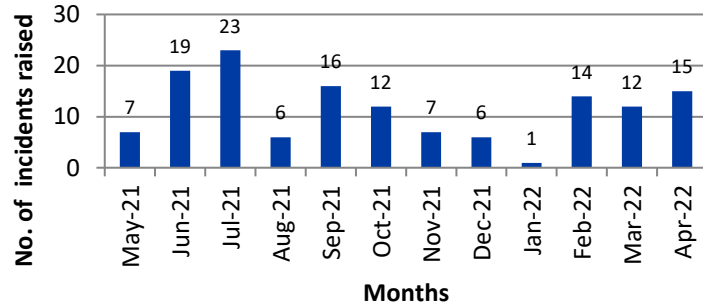
- Implementation of action taken and follow up as and when required is done

- Quality department collects and analyses the data and presents in Quality steering meeting (monthly/quarterly/annually)

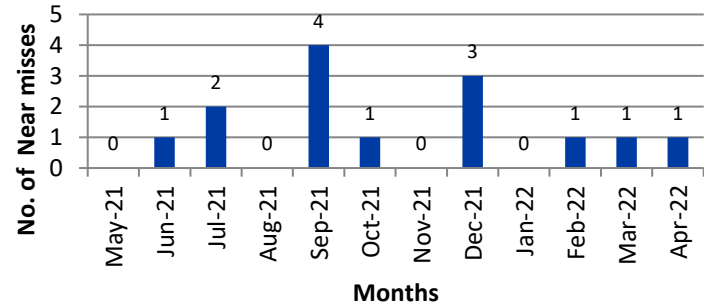
Process of Incident Reporting

RESULTS

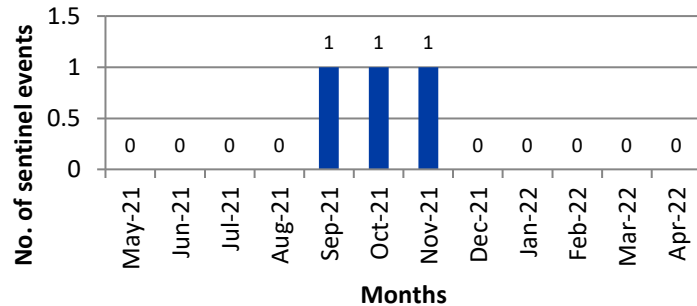
Total Number of Incidents Raised



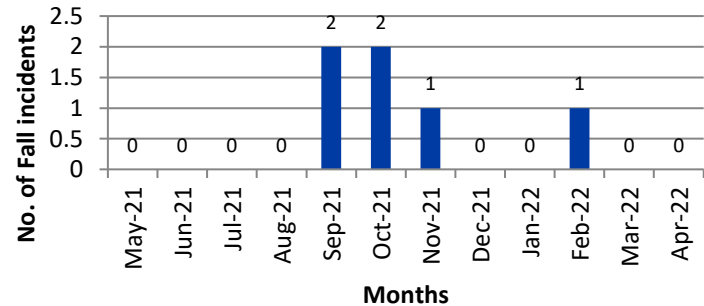
Near Miss



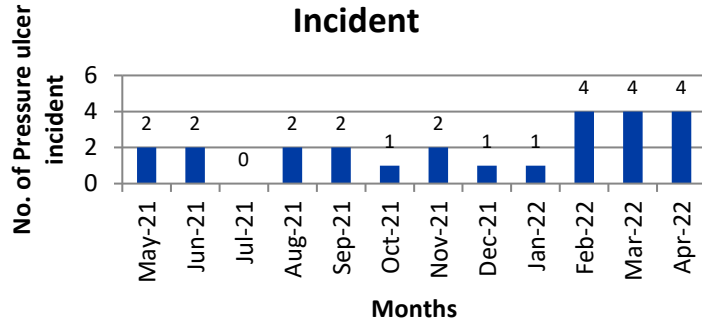
Total Number of Sentinel Event



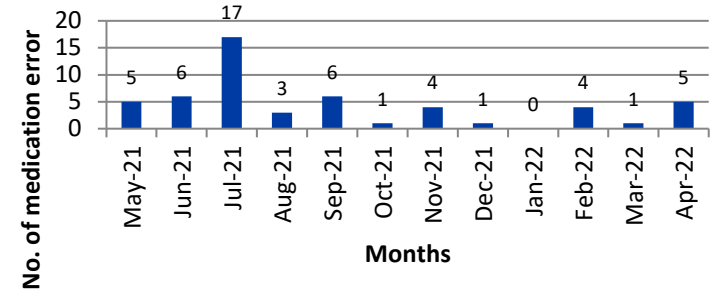
Total Number of Fall Incidents



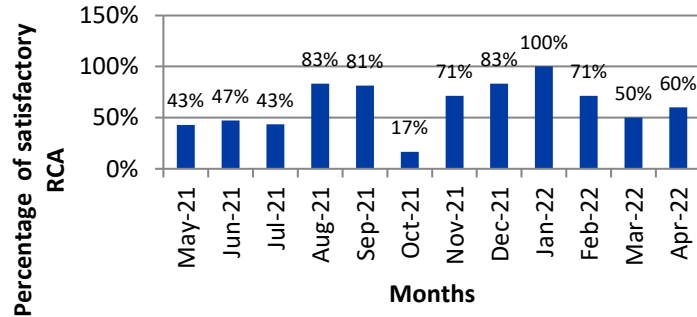
Total Number of Pressure ulcer Incident



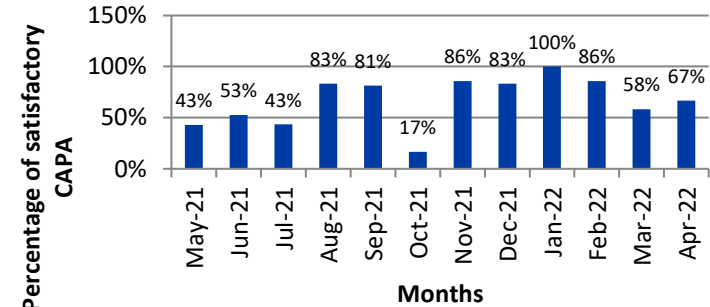
Total Number of Medication Error Incidents



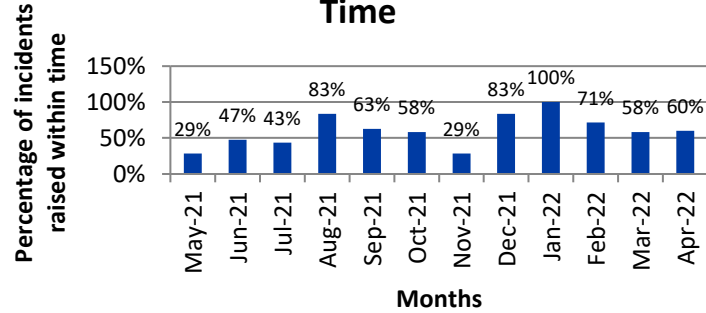
Percentage of Satisfactory RCA



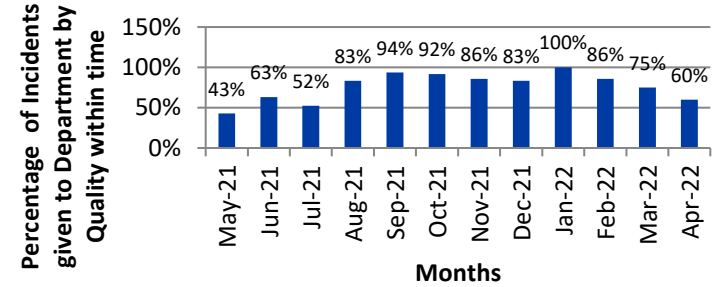
Percentage of Satisfactory CAPA



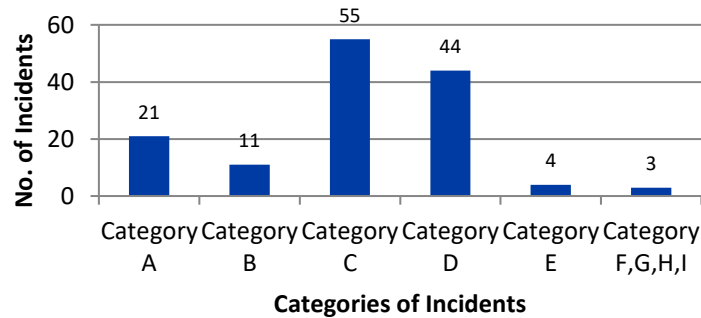
Percentage of Incidents Raised within Time



Percentage of Incidents given to Department by Quality within Time



Category of Incident





Risk Register

Risk	Risk Description	Probability	Impact	Risk Score	Risk Severity	Responsible person	Response Plan
Pressure ulcer	Patient on ventilator	4	4	16	High	Nursing Head	Training the personnel in the following: -Turning and repositioning every two hours -Soft, padded beds to relieve pressure -Good skin care by keeping the skin clean and dry -Good nourishment
	Poor skin integrity						
	Debilitated patient						
	Stool incontinence						
	Bedridden patient						
Patient fall	No staff attendant with patient	4	4	16	High	Nursing Head	-Educating patients and families about fall prevention; -Training staff members in fall risk assessment; -Providing fall risk assessment training to the staff -Monitoring high-risk patients -Teaching patients and families fall prevention techniques -Ensuring a staff attendant is on duty anytime assistance is needed -Counselling patients on neurological drugs -Acquainting the patient with his/her hospital bed and surroundings
	Patient on neurological medications						
	Nurse call bell not working						
Device associated pressure injury	Allevyn dressing not applied before giving BiPAP mask	4	4	16	High	Nursing Head	Training the staff on- -Applying dressings to cushion and protect the skin in high-risk regions (such as the nasal bridge and device rim) -Removing or moving devices to check the skin at least once a day -Teaching staff the proper way to use devices and how to prevent skin breakdown
Patient injury	Patient with CA Thyroid and skeleton metastasis attended without proper care	4	4	16	High	Nursing Head	-Training staff on patient initial assessment and patient safety
	Tourniquet not removed after taking blood sample						-Training the staff on safe blood sampling -Proper bedside assessment to be followed

Continued..

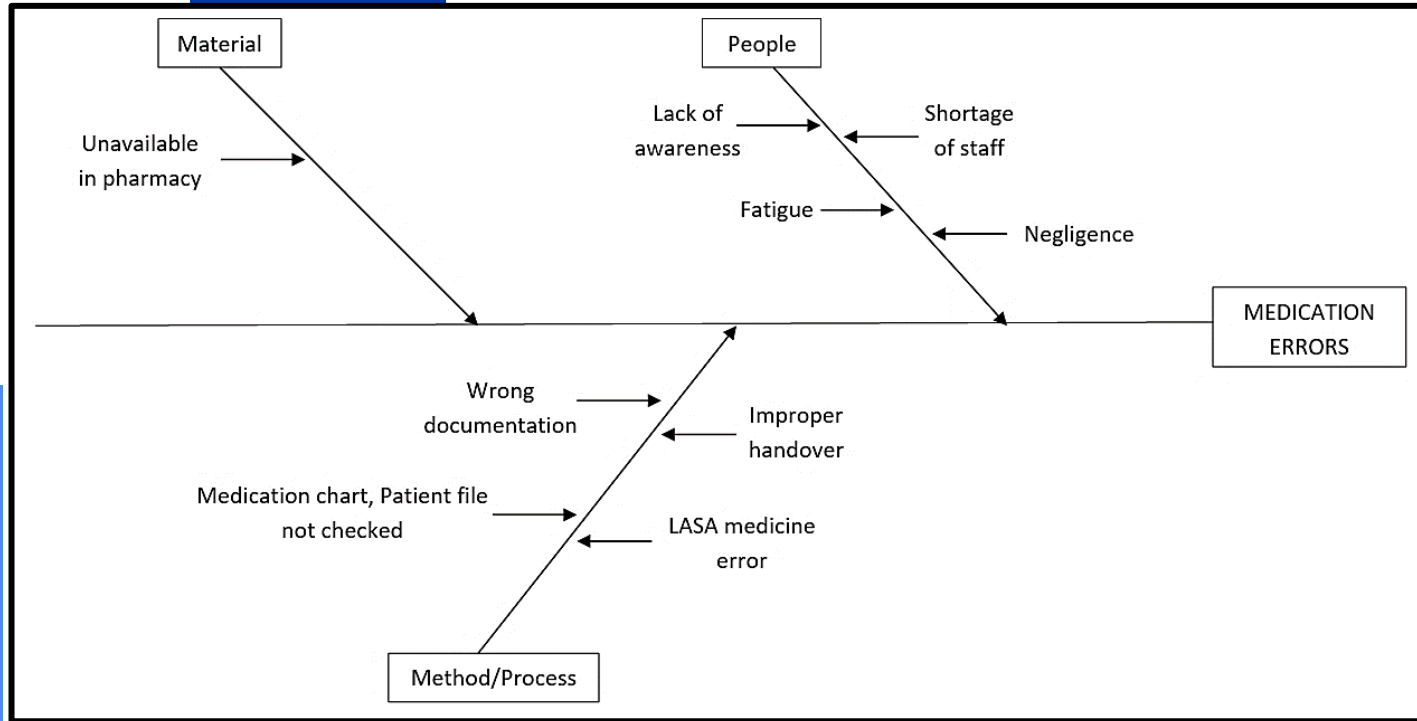
Patient identification error	No identity wrist band on patient	3	3	9	Medium	Nursing Head	--Introducing training on how to properly verify a patient's identity as well as advice for the workforce on the significance and relevance of accurate identification -All inpatients must wear an ID band at all times while they are hospitalised -Before delivering any medication or performing any intervention or operation, the personnel must verify the patient's ID -To confirm the patient's ID, at least two identifiers must be utilised, such as the patient's complete name and ID number.
	Patient identification not done before generating barcode of sample collection						-If it is discovered that the patient does not have an ID band, no treatment should be given and no operation or intervention should be carried out
	CT order placed in the name of other patient by the nurse						-It is the staff's duty to see that the patient's ID band is replaced right away if it has been damaged, rubbed off, or removed for any other reason
	Barcode of another patient attached on sample collection vial						
Code Red	Electrical cable not plugged in properly in the machine	1	4	4	Low	HR	-Training the staff on proper handling of machines
Code Violet	Room allotted without informing about the condition of the patient next to them	2	2	4	Low	IPD Operations Head & Front Office Head	-Proper communication to be followed between nurses and PCA staff
	Mistakes made by the billing staff in the registration form repeatedly						

Continued..

Delayed discharge	Unplanned discharge of TPA patient	2	2	4	Low	MS	-Discharge summary to be prepared a day prior to discharge -Information of discharge to be sent to all stakeholders
	Improper documentation in discharge summary					Clinicians	-Proper documentation to be followed
Equipment failure	Improper handling and inadequate maintenance of machine	1	2	2	Low	Biomedical Engineering Head	-Teaching the personnel how to handle machinery properly -Increase the amount of time spent physically inspecting and monitoring -Ensuring that the technology utilised adheres to the highest quality and safety standards
Patient dissatisfaction due to delay in allotment of room in IPD	Communication gap between nursing staff of different departments	2	1	2	Low	IPD Operations Head	-Proper bed management training -To improve communication skills, regular training and seminars to be held for in-service nurses.



FMEA of Medication Errors



Root Cause Analysis of Medication Errors

Potential Failure Mode	Potential Causes	Potential Effects	Severity	Probability	Detection	RPN	Actions to Reduce Failure Mode
Wrong frequency	- Improper handover - Medication chart not checked - Knowledge deficit - Incorrect documentation	Patient harm	6	7	6	252	- Supervision by senior staff for newly joined staff - Training the nursing staff about rights of medication
Wrong Dose	- Lack of awareness - Knowledge deficit - Incorrectly mentioned in medication chart	Overdose or under dose Adverse drug reaction	6	6	6	216	- Training on 10 R's - Correct documentation to be followed - Frequent audit by clinical pharmacologist - Supervision by senior staff for newly joined staff - More frequent patient safety audits by nurse-Quality
Missed Dose	- Improper handover - Medication chart not checked - Unavailable in pharmacy - Negligence	Patient harm	6	5	6	180	- Training the nursing staff wrt administration of medication - Instructing nursing staff wrt handover of MAR sheet - Handover audits by quality nurse - Communication between pharmacy, nursing and doctor should be clear in case of non-availability of drug - Sound inventory control practices
Wrong medication	- Failure of double checking - Look-alike sound-alike drug - Incorrectly transcribed	Patient harm	6	4	5	120	- Training staff on administration of medication - High-risk drug including LASA and different concentrations of same medication to be stored physically apart - Training the nursing staff to check the Name of medication properly before administering - Nursing staff to be instructed to not do the transcription of medicine in the drug chart
Wrong Patient	- Similar patient name - Negligence - Patient file not checked - Fatigue	Patient harm	9	2	2	36	- Training on 10 R's - Training extended to all staff in department to be more vigilant while administering medication to patient

DISCUSSION

Incident Reporting

- Out of the total incidents reported, nearly three-fourth of the incidents were closed and less than half of them were closed within the stipulated time.
- Nearly half of the incident reports were reverted with satisfactory RCA and with satisfactory CAPA.
- Almost half of the incidents were raised within time and nearly three-fourth of them were given by Quality to department within time. This was a gap in incident reporting where incidents were not reported and sent within time which causes a delay in the process and endangers patient safety.
- Most of the incidents belonged to category C, followed by category D. This shows that most of the errors reached the individual whether it resulted in no harm or required monitoring/intervention.
- 10% near miss events, 62% no harm incidents and 2% sentinel events were reported.

Risk Register

- This study determined that Patient falls, Pressure ulcers, Device associated pressure injury and other patient injuries were the risks with the highest risk scores
- Debilitated patients, patients on neurological medications and ventilator, bedridden patients, older age are some of the risk factors associated with hospital acquired injuries.
- Other risks identified were defective machine, patient dissatisfaction due to delay in allotment of room in IPD, delayed discharge, code red and code violet alarm which had low risk but still needed to be monitored.

FMEA of Medication Errors

- Wrong dose, Wrong patient, Missed dose, Wrong medication and Wrong frequency were identified as the potential failure modes.
- The most severe failure mode, choosing the incorrect patient, must always be taken care of.
- Negligence, knowledge deficit, lack of awareness, improper handover, LASA drug identification error, fatigue, shortage of staff, incorrect documentation were significant contributing factors that led to medication errors in this study.

CONCLUSION AND RECOMMENDATIONS

Incident Reporting System provide an important tool for comprehending and addressing hidden and contributory factors in a group of patient safety incidents.

To encourage incident reporting, following steps can be taken up:-

- ✓ Manuals and posters detailing the events to be reported put up in clinical areas.
- ✓ Separate training sessions on the significance of incident reporting for doctors
- ✓ The results of the incident report used on a regular basis for feedback
- ✓ Training of personnel on incident reporting, RCA and CAPA
- ✓ Instead of punishing people responsible for the errors, the error incidence must motivate them

Medication errors-

- Training the nursing staff on rights of medication administration
- Enforcing double and triple check
- Correct documentation
- Providing alerts when a rate or dose is out of the normal range
- Sound inventory control practices should be followed
- More frequent patient safety audits by quality nurse
- Supervision by senior staff for newly joined staff
- Frequent audit by clinical pharmacologist
- High-risk drug including LASA and different concentrations of same medication to be stored physically apart

Pressure ulcers-

- Training the staff on turning and repositioning every 2 hours
- Providing soft padding beds to reduce pressure
- Providing good skin care by keeping the skin clean and dry
- Providing good nutrition

Patient falls-

- Training the staff on fall risk assessment
- Identify high-risk patients
- Providing safety companions to aid patients with risk of falling
- Setting bed alarms for close monitoring of at-risk patients
- Doing frequent safety rounds on all high-risk patients
- Educate patient and family on fall prevention
- Counselling of patients on neurological medication

Device associated pressure injuries-

- Selection of device done carefully
- Training the staff on cushioning and protecting the skin with dressings in high-risk areas (nasal bridge, rim of device)
- Removing or moving devices to assess skin at least daily
- Educating staff about the correct use of devices and skin breakdown prevention

Patient identification errors-

- Training on procedures to correctly verify a patient's identity
- Ensuring that all inpatients must wear an ID band at all times during the stay in the hospital.
- The patient's ID must be confirmed by the staff before administering any medication or carrying out any intervention or procedure.
- At least two identifiers (e.g., patient's full name and ID number) must be used
- If the patient is found to have no ID band, no procedure or intervention be performed.
- In cases in which patient's ID band is torn or rubbed or has been removed, for any reason, it should be replaced.

Equipment failure-

- Standardize equipment, such as infusion pumps and monitors
- Increasing frequency of physically checking
- Making sure that the technology used meets quality and safety standards

REFERENCES

1. Mulac A, Taxis K, Hagesaether E, Granas AG. Severe and fatal medication errors in hospitals: findings from the Norwegian Incident Reporting System. *European Journal of Hospital Pharmacy*. 2021 Nov 1;28(e1):e56-61.
2. Nuckols TK, Bell DS, Liu H, Paddock SM, Hilborne LH. Rates and types of events reported to established incident reporting systems in two US hospitals. *BMJ Quality & Safety*. 2007 Jun 1;16(3):164-8.
3. Zanetti AC, Dias BM, Bernardes A, Capucho HC, Balsanelli AP, Moura AA, Soato R, Gabriel CS. Incidence and preventability of adverse events in adult patients admitted to a Brazilian teaching hospital. *Plos one*. 2021 Apr 15;16(4):e0249531.
4. Gillespie BM, Chaboyer W, Boorman RJ, Sladdin I, Withers T, de Wet C. Characterising the nature of clinical incidents reported across a tertiary health service: a retrospective audit. *Australian Health Review*. 2021 Mar 9;45(4):447-54.
5. Shin S, Won M. Trend Analysis of Patient Safety Incidents and Their Associated Factors in Korea Using National Patient Safety Report Data (2017~ 2019). *International Journal of Environmental Research and Public Health*. 2021 Aug 11;18(16):8482.
6. Padula WV, Delarmente BA. The national cost of hospital-acquired pressure injuries in the United States. *International wound journal*. 2019 Jun;16(3):634-40.
7. Anjalee JL, Rutter V, Samaranayake NR. Application of failure mode and effects analysis (FMEA) to improve medication safety in the dispensing process—a study at a teaching hospital, Sri Lanka. *BMC Public Health*. 2021 Dec;21(1):1-3.

Thankyou



An incident is just the tip of the iceberg, a sign of a much larger problem lies below the surface

-Don Brown