Assessment of medication safety and risk of fall using National Patient Safety Goals 3 and 9

DISSERTATION AT BHAKRA BEAS MANAGEMENT BOARD (B.B.M.B) CANAL HOSPITAL, NANGAL TOWNSHIP

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National Patient Safety Goals: Introduction

- Established in 2002
- By Joint Commission International
- Latest Amendment in January 2013
- Total = 15
- NPSG 1,2,3,7,9,14 and 15 are applicable for hospitals.
- NPSG 3- Improve the safety of using medications
- NPSG 9- Reduce the risk of patient harm resulting from falls

Rationale

- In 2007, National Patient Safety Agency (NPSA) statistics shows that 59.3% of medication errors occur during the administration stage. The rate of falls ranges from 1.7 to 25 falls per 1000 patient days
- Despite widespread recognition of the hazards that medication use poses to patients, no widely accepted or standardized methods to measure the safety of medication use.
- Medication error can increase the cost, prolong hospital stay and increase the risk of death.
- Falls are associated with increased length of stay, higher rates of discharge to nursing homes, and greater health care utilization .

NPSG: An Overview

NPSG	Description in brief
1	Improve the accuracy of patient identification
2	Improve the effectiveness of communication among caregivers
3	Improve safety of using medications
4	Eliminate wrong -site, wrong patient, wrong procedure
5	Improve the safety of using infusion pumps
6	Improve the safety of clinical alarm systems
7	Reduce the risk of health care associated infections

Contd…

NPSG	Description in brief
8	Accurately and completely reconcile medications across the continuum of care
9	Reduce the risk of patient harm resulting from fall
10	Reduce the risk of influenza and pneumococcal disease in institutionalised older adults
11	Reduce the risk of surgical fires
12	Implementation of applicable National Patient Safety Goals and associated requirements
13	Encourage patients' active involvement in their own care as a patient safety strategy
14	Prevent health care associated pressure ulcers
15	Identify patient safety risks inherent in its patient population

Research Question

- Is the hospital able to fulfil the requirements of the National Patient Safety Goals (NPSG) – (3 and 9)?

Objectives

- To review the National Patient Safety Goals 3 and 9
- To compare the existing situation of patient safety in the hospital with National Patient Safety Goals (NPSG) 3 and 9 using checklists and observation.
- To calculate the compliance percentage of different departments on the basis of standards of NPSG 3 and 9
- To suggest ways of improvement (if required) to fulfill the requirement of the NPSG 3 and 9.

Methodology

- Study design and methods:
- Type of study: Observational study.
- Location of study: Carried out at Bhakra Beas Management Board Canal Hospital, a 100 bedded hospital located at Nangal Township.
- Study Respondents: IPD Patients (who access the services at the hospital) and staff of the hospital
- Sample size: 240 (120 for each goal)

Contd…

- Data collected: UHID No., date, patient name, diagnosis, and treatment provided, compliance with the standards and requirements of NPSG 3 and 9.
- Methods and Tools of data collection:
- Interviews with the patients (who are observed under the study) and the staff of the hospital (nursing in-charge)
- Observation
- Checklists for NPSG 3 and NPSG 9.

NPSG 3 : Indicators

DEPARTMENT WISE DATA COLLECTION	PATIENT WISE DATA COLLECTION
Labelling of containers of medications and solutions	**High alert medications**
Product name	High alert medications used for patient entered in record book
Batch number	Not stored in bed side
Expiry date of solution/ medication	Dilution rate is mentioned
Storage instructions	Infusion rate is mentioned
Strength	Patient medication information and communication
Name of active ingredients	**Patient medication information and communication**
Dose Form	Instructions written in patient file
Barcode	Instructions given at time of discharge
Quantity	Dilution rate written
Diluents used	Infusion rate written

Contd..

DEPARTMENT WISE DATA COLLECTION
Sound alike look alike drugs
List prepared
Printed and sent to departments
List pasted at place of storage
Drugs available at the hospital
Printed list is with the departments
Staff is communicated about available drugs
List is pasted
At the place of storage
High alert medications
In lock
List of drugs displayed
Record book
Staff awareness

NPSG 9: Indicators

Patient wise data collection
Fall risk assessment
Mental status
History of falls
Vision status
Gait and balance
Medication prescribed
Predisposing diseases
Observation
Round the clock observation
Attendant at night
Assisted during washroom visit
Shifted under observation

Contd..

Patient wise data collection
Footwear
Provided
Appropriate size
Clean
Sole not worn out
Elastic at hind end
No trailing laces
Belts and brakes usage
Bed belts present
Tied
Tied correctly
Bed brakes present

Contd..

Patient wise data collection
Bed brakes used
Wheelchair belts present
Tied
Tied correctly
Wheelchair brakes are present
Used
Other parameters
Call bells present
In working condition
Mopping under supervision
Supervisor ensures quality
Furniture stable

Contd…

Patient wise data collection
No hanging tubes or cables
No damaged flooring
Night lamp present
Working condition
Washroom has holds

RESULTS

COMPLIANCE PERCENTAGE FOR NPSG 3 OF DIFFERENT DEPARTMENTS						
Parameters	Departments					Overall Compliance percentage
	Female Ward	Male Ward	Operation Theatre	Medical Store	Emergency	
Labelling of containers of medications and solutions	83.6%	81.8%	92.2%	79.6%	84.1%	84.3%
Sound alike look alike drugs	68.6%	54.5%	78.3%	54.5%	78.3%	68.8%
Drugs available at the hospital	47.9%	78.8%	75.7%	85.7%	83.8%	76.1%
High alert medication	59.4%	59.1%	61.8%	16.2%	60%	56.7%

Patient wise data collection

COMPLIANCE PERCENTAGE FOR NPSG 3		COMPLIANCE PERCENTAGE FOR NPSG 9	
Parameters	Compliance Percentage	Parameters	Compliance Percentage
High alert medications	73.8%	Fall risk assessment	62.9%
		Observation	84.7%
Patient medication information and communication	70.6%	Footwear	41%
		Belts and brakes usage	63.6%
		Other parameters	56%

Conclusion

- Operation theatre shows the best performance.
- Female Ward shows the worst performance.
- The worst performance is seen for the indicator of high alert medications.
- Analysis of patient wise data collection shows the worst performance for indicator-footwear.

Recommendations

- Maintenance of implemented plans.
- Awareness of meaning and importance of high alert medications required.
- Importance of documenting dilution and infusion rate in a legible handwriting in patient files to be understood by staff.
- Footwear of appropriate size, clean with elastic hind end for every patient is suggested.
- Wheelchairs with belts and brakes need to be used.
- Call bells need to be put for every patient, especially of private rooms.
- Furniture needs to be repaired of replaced.

Limitations of the study

- Approval from the higher authorities required.
- Resistance to change in the staff members.
- Time span of study.

THANKYOU