SEALING THE SAFETY GAP

Title: Impact of Medi-vault Standardization on Medication Safety Practices in ward

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INTRODUCTION

Medication safety is a key priority in patient care. While strict practices are followed in ward & pharmacy storage areas, a **loophole exists** where high-alert medications are often kept at the patient bedside, leading to significant health & safety risks.

AIM

To improve medication safety practices in ward settings by eliminating bedside storage of medication / high-alert medications through the implementation of the Medi Vault system.

PRE - STATUS

What: Patient medications, including high alert drugs, were stored in bedside lockers. (unlocked)

Where: In all inpatient wards at the patient bedside.

When: During routine medication storage and administration across all shift

OBJECTIVES

1. To assess existing practices related to high-alert medication storage in wards.
2. To implement a structured Medi Vault system.
3. To evaluate the effectiveness of the intervention using a medication audit tool.
4. To compare pre- & post-intervention medication safety practices statistically.

INCLUSION & EXCLUSION CRITERIA

INCLUSION CRITERIA	EXCLUSION CRITERIA
All wards	ICU & ER
Nursing staffs working in ward	Nursing staffs in OPD, ER, ICU.

VARIABLES

DEPENDENT VARIABLES	INDEPENDENT VARIABLES
Medication safety practices	Medi Vault system

METHODOLOGY

RESEARCH DESIGN
- Quasi-experimental (one-group pre-test and post-test) design

SETTING
- Ward

POPULATION
- Nursing staffs working in selected ward

SAMPLING TECHNIQUES
- Convenience Sampling (Non-probability sampling)

SAMPLE SIZE
- 20

INTERVETION
- Medi Vault System

STUDY PERIOD
- 1 month

INTERVENTION

- Not organized work place
- No proper place for dilution drugs
- Distraction range is high
- No BMW management bins are there
- High Alert medication not under supervision
- No double check.

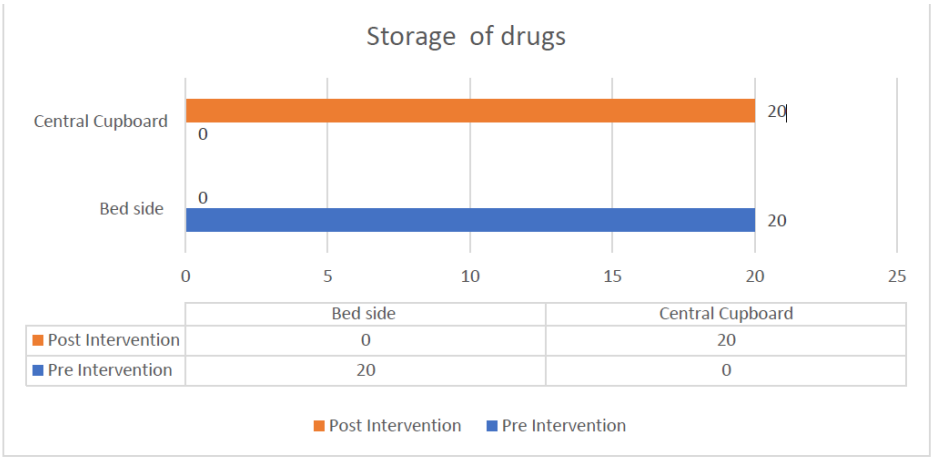
- Organized work place
- Dilution area kept
- BMW management bins are there.
- All medication including High Alert medication under lock with CCTV coverage.
- Double verification done
- Staff confidence and satisfaction will be high.

RESULT

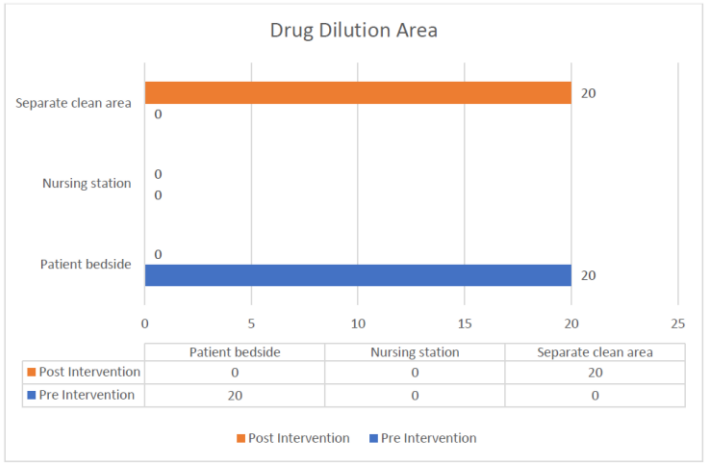
Parameter	Pre (n=20)	Post (n=20)
Storage of drugs (Central cupboard)	0 (0%)	20 (100%)
Storage at bedside	20 (100%)	0 (0%)
Drug searching time < 1 min	14 (70%)	20 (100%)
Drug searching time > 1 min	6 (30%)	0 (0%)
Accessibility to patients/attenders (Yes)	20 (100%)	0 (0%)
Accessibility restricted (No)	0 (0%)	20 (100%)
Dilution at bedside	20 (100%)	0 (0%)
Dilution in clean area	0 (0%)	20 (100%)

INTERVENTION

Graph 1. Storage of Drugs



Graph 2. Drug Dilution Area



STATISTICAL ANALYSIS

1. **Test used:** Paired t Test
2. **Mean Score:** Pre - **7.6**; Post - **16.0**
3. **p Value:** 0.038
4. **r value** : - 0.32 (Greater improvement observed in areas with poor baseline practices)
5. **p < 0.05** → Statistically significant

CONCLUSION

The Medi Vault system proved to be an effective and sustainable intervention for improving high-alert medication safety. By eliminating bedside storage and standardizing practices, it enhanced compliance and reduced risks to patients and healthcare workers. This highlights that simple, cost-effective solutions can significantly improve patient safety.

R E F E R E N C E S

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For this opportunity.,

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