Med SAFE

Safe by Standard: Transforming Medication Management in PACU

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Background/Introduction

Medication errors pose a critical risk to patient safety, particularly in the PACU where rapid medication turnover occurs. On Walter Tower 3, 18 incidents of unsecured narcotics and 6 TAP reports involving wrong-patient administration were identified from August 2024 to February 2025. These issues revealed inconsistent medication storage and lack of reinforcement in narcotic waste practices. Current processes differ from Houston Methodist policies PCPS092 and PCPS076, which require secure, standardized controlled-substance handling. Research supports structured interventions—**Nguyen (2025)** found standardized storage reduced unsecured narcotics by 18.2%, and **Dadak & Koc (2024)** demonstrated that education improved compliance and safety behaviors. Globally, the WHO's *Medication Without Harm* initiative (2022) urges reduction of medication-related harm by 50%, aligning local improvement with international safety goals.

Purpose/Objectives/Hypothesis

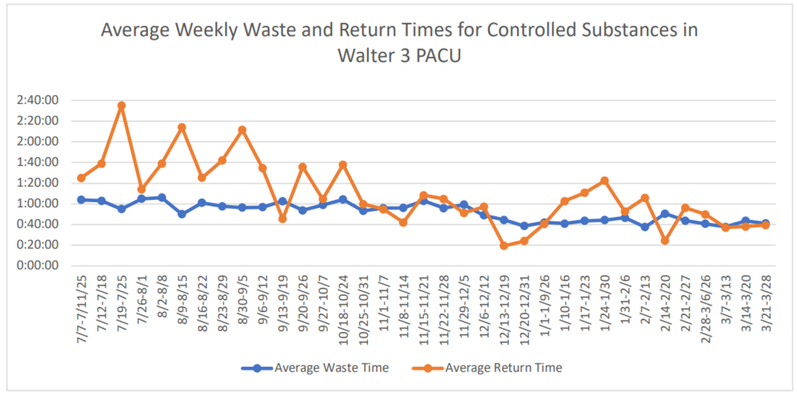
To determine whether implementing **standardized narcotic medication storage** and **targeted education** on proper wasting and documentation improves nurse adherence and reduces narcotic-related medication errors in the Walter Tower 3 PACU over six months.

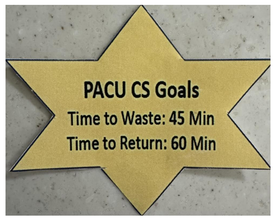
Methods

A two-part intervention was implemented

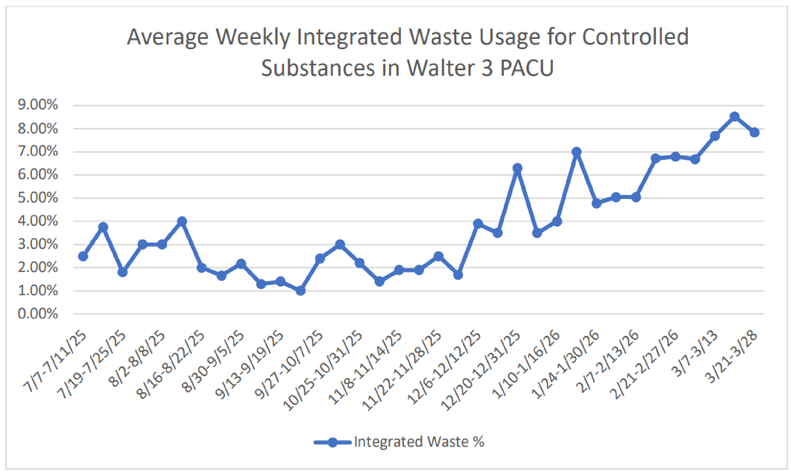
- **Standardized Storage:** All WOWs were equipped with designated top-drawer narcotic bins labeled with bold color-coded signage.
- **Targeted Education:** Nurses received structured training and post-tests covering proper narcotic waste, co-signing, and documentation standards. Data were collected through audits, quizzes, incident reports, and nurse surveys. Analysis included descriptive statistics and inferential tests.

Result





Laminated reminders (shown above) placed on every PACU WOW.
CS= controlled substance



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Results/Implications

Preliminary results indicate

Compliance: 92% of WOWs followed standardized bin setup by week 8 (goal: 100%). In 12 out of the last 14 weeks, goal met for narcotic wasting, and in 10 out of the last 14 weeks, goal met for narcotic returning. Average integrated waste averaged 2.3% for the first 3 months, which improved to 6.15% in last 3 months.

Knowledge Improvement: Average post-test scores increased by 25%. Integrated waste utilization gradually increasing with education.

Error Reduction: Narcotic-related medication errors decreased by 21% within the first three months.

Satisfaction: 87% of nurses reported increased confidence and satisfaction with the new system.

Results / Implications
The combination of standardized storage and staff education effectively improved policy compliance for waste and return requirements for controlled substances. Enhanced consistency in narcotic handling supports hospital safety goals and aligns with national standards for diversion prevention and patient safety.

Future Actions

- Integrate standardized storage and waste education into **annual PACU competency check-offs** to ensure continued staff adherence.
- Maintain **monthly narcotic storage audits** and share compliance data during staff meetings to promote accountability and transparency.
- Continue **weekly monitoring of waste time, return time, and integrated waste** to track sustained progress and identify trends.
- Continue **routine emails to charge RNs notifying of any outstanding CS wastes/returns** that remain undocumented at the end of each shift
- **Additional Pyxis machine** has been ordered to place in open air of main PACU pod (as opposed to in a med room) to aid in ability to continuously monitor patients while wasting. This is projected to have positive impact on night shift when only two RNs are present
- Provide **targeted education** on a need-to-know basis for staff requiring additional reinforcement or retraining.

Acknowledgments

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References

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