No Dose Left Behind: Reducing Medication Waste in Hospital at Home

Bailey Gregory, PharmD[1], Grace Hogan, PharmD[1], Chloe Gernhard PharmD BCPS, CPh[1], Elizabeth Tem, PharmD[1], Troy Coffman, DNP, RN[2], Tigist Mesfin, RN[2], Amy Haney, DMSc, P.A.-C.[3], Michelle Molenaar, FNP-BC[3], Leah Webster PharmD, BCPS[1]

[1]Department of Pharmacy, [2]Department of Nursing, [3]Department of Internal Medicine, Site: Florida

THE PROBLEM

Medication cost is incurred at dispense but reimbursed only at administration, so every unused dose is a net loss.

AIM: reduce HaH medication waste cost by 15% with a Pareto-informed pharmacist stewardship bundle.

WHAT WE FOUND

- 680 baseline medications contributed to waste
- The top 10 drove nearly half of all waste cost
- Naloxone nasal spray alone: 10.2% of total waste cost
- Oral solid dosage forms carried the largest waste burden
- **Root cause**: high-cost dispenses delivered but not given

WHAT WE DID

1. **Dispense alert:** dispenses > $100 flagged for pharmacist quantity review and adjustment
2. **Prospective audit and feedback** by pharmacy on new orders and nursing refill requests
3. **Outpatient pharmacists** joined daily hospital interdisciplinary rounds, virtually

- Naloxone excluded to preserve emergency access
- Launched March 1, 2026 using existing staff & technology

HOW WE MEASURED

- Baseline Jan – March 2025; Post : April 2026
- 9,605 dispense records with 22,813 administrations
- Waste = acquisition cost of units dispensed minus units administered
- All values indexed to pre = 100; dollar amounts withheld per institutional data governance policy
- Informaticist reports linked dispense, administration, and charge records for analysis

-38.1%
Waste per dollar spent

-30.3%
Waste per administration

-36.4%
Waste per dispense

-51%
Dispenses over $100

FIGURE 1: BASELINE WASTE COST BY MEDICATION (PARETO): TOP 10

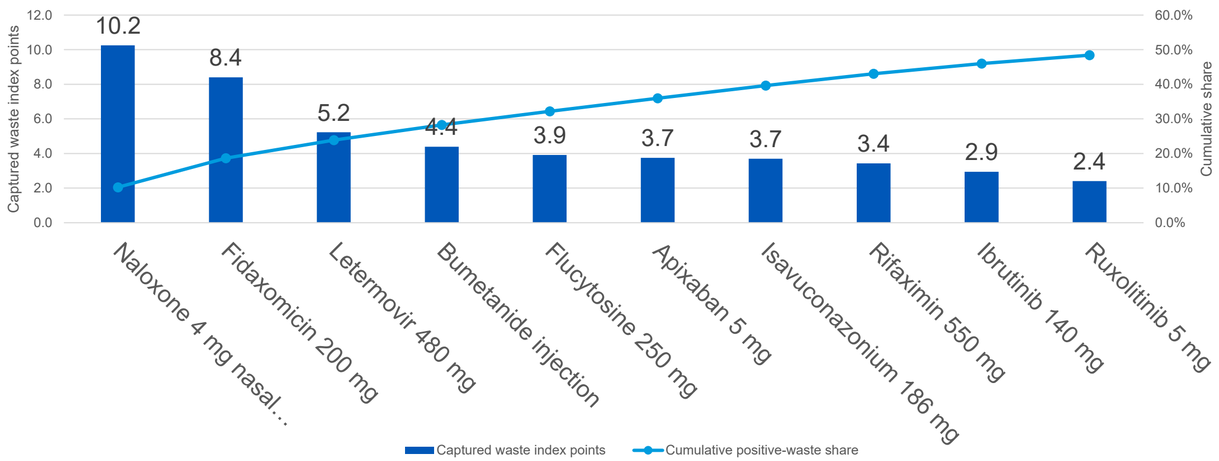
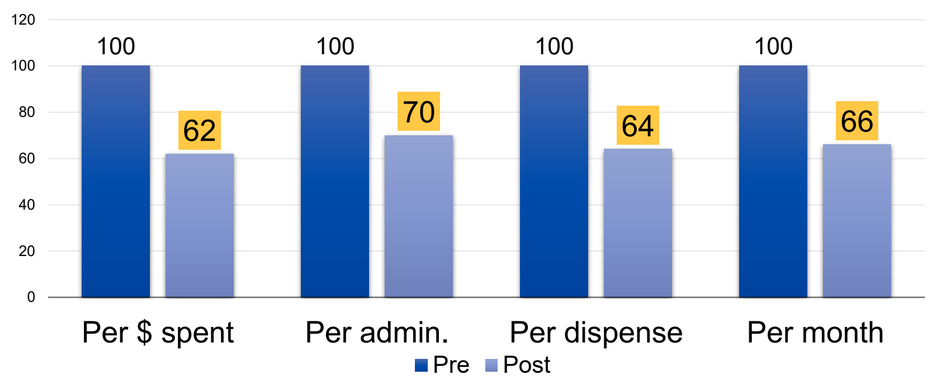


FIGURE 2: INDEXED WASTE OUTCOMES, PRE VS POST (PRE = 100)



Bottom line: waste fell across every indexed measure while dispensing volume held steady, driven by fewer high-cost dispense events.

Uncontrolled pre/post analysis - findings represent association, not causation. Future work should add balancing measures for safety and access. References available upon request.

Manuscript in progress