

MISSION IMPOSSIBLE: MEDICATION RETURNS IN A HEAVY DE-CENTRALIZED PHARMACY DEPARTMENT

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Rational

The University of Kansas Health System inpatient pharmacy uses a heavy de-centralized medication distribution model, with ~82% of dispenses coming from the Automated Dispensing Cabinets (ADCs) located on the nursing units. This model has many pros, including optimizing inventory based on unit specific usage and faster turnaround time from verification to administration. There are downfalls though, including managing medication returns, particularly when medications are not returned to the ADC but instead to the central pharmacy.

At the University of Kansas Health System Main Campus (Bell Hospital, Heart Center and Cambridge), approximately 30,000 units of medication are dispensed from ADCs and not administered to patients or documented as wasted. At baseline, ~11% of those doses were being returned to the cabinet with the remaining being placed in the "return to pharmacy" bin and sent back to the central pharmacy where they are sorted and returned to central pharmacy automation by pharmacy technicians.

The process of returning a large quantity of medications to the central pharmacy leads to increased carrying cost due to overordering, increase in medications expiring before use, non-value-added time spent by technicians processing returns, and an increase in stock outs.

Objectives

To collaborate with nursing to ensure that all non-controlled medications pulled from an ADC are either administered, wasted, or returned directly to the ADC pocket.

To increase the return rate of medications dispensed from an ADC and not administered or wasted from 11% to 50%.

Methods

We partnered with nursing coordinating and practice council to determine an approach for increasing the return rate. Four pilots were completed with various approaches to re-educate nurses on where to return or dispose of medication. The return rate was tracked over one month and the approach was selected that saw the greatest improvement. This approach was then expanded to all units which included partnering with nurse managers and unit educators to distribute various education tools including signs, videos, and a power point presentation.

The return rate, number of returns transactions and quantity of medications dispensed from ADCs but not administered/wasted was calculated and tracked weekly through the combination of EMR and Automation reports.

Post go-live support entailed pharmacy and nurse manager weekly communication, data tracking through a unit specific dashboard and gemba to understand and address barriers for future optimization.

Results

Data was tracked for 1-month post go-live and the return rate was seen to increase to 36%. This increase was mainly driven by an increase return transaction while the number of dispenses without administration/waste did not change significantly.

Future initiatives include interventions that focus on decreasing the amount of medications pulled and not administered through developing a nursing policy for standardize medication pass procedures, targeting

PRN medications that are rarely administered, and encouraging pharmacist MAR cleaning strategies. Additionally, we are working with Omnicell to implement improvements to cabinet restocking which will make the process faster.