Reduce Medication Road Trips
Improve Patient Care

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Project 1 Overview
The Nursing staff of a Community Living Center believed that the addition of an Automated Dispensing Cabinet (ADC) would provide significant reduction in time spent administering PRN meds.

Method
A series of measurements were taken of the distance from the patient rooms to the existing and proposed ADC locations. Retrospective data from the ADC was used to determine the number of trips made from each room. An Excel spreadsheet was used to calculate the distance traveled and time expended in travel.

Data / Observations
With ONE ADC:
- Average distance: over 200 feet
- Average time per trip: 50 seconds
- Total time spent in transit: 32.5 hours
- Total distance traveled: 90 miles

With TWO ADC's:
- Average distance: under 70 feet
- Average time per trip: 17 seconds
- Total time spent in transit: 10.5 hours
- 67% reduction
- Total distance traveled: 28 miles
- 69% reduction

Project 2 Overview
The Nursing staff of an acute care Medical/Surgical unit were seeking ways to decrease the number of trips made to the ADC that were being required by Pharmacy policies (RN return to ADC before each patient to obtain meds).

Method
A workflow analysis was conducted to assess the As-Is state of medication administration and propose a To-Be state that would result in decreased travel time and energy to and from ADCs. This analysis also studied interuptions in the medication administration process.

Step 1 Needs Assessment
- Direct observations of med passes in a 12 hour shift
- One RN/5-6 patients
- Average meds per patient = 9
- Formal interviews with RNs
- Informal discussions with RNs and Nurse Managers

Step 2 As-Is Workflow
- Average distance from med room to patient room = 45 ft. each way
- Multiple trips to med room/ADC
- 1350-1620 feet per 12 hour shift
- Average # interruptions per med pass = 6
- Average med pass time = 75-90 minutes

Step 3 To-Be Workflow
- Single trip to med room/ADC each med pass
- Obtain meds for all patients at one time
- RN travels from one patient room to the next

Step 4 Outcomes
- 525-700 feet per 12 hour shift (650-1095 feet per shift less)
- Increased RN satisfaction
- Average # interruptions per med pass = 3
- Average med pass time = 45-60 minutes
- Time saving per RN per shift = 90-135 minutes

Conclusions
- PROJECT 1
  - In addition to reducing unintended consequences, performing this analysis allowed a financial analysis to be done to evaluate payback time for an additional ADC
  - The additional ADC was purchased

- PROJECT 2
  - The To-Be medication administration workflow eliminates multiple trips to the ADC, decreases nurses' physical workload, decreases med pass times, decreases interruptions, and improves patient safety
  - The To-Be workflow was approved by facility leadership and implemented

Works Cited