

Planning and Implementation of a Multimodal Medication Error Tracking, Reporting and Prevention Program

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ABSTRACT

Purpose

Lincoln Community Health Center (LCHC) is a primary health care facility that served a total of 35,168 patients in 2003: 87% minorities, 82% below the poverty level. Based upon recommendations from the Institute of Medicine report "To Err is Human," pharmacy administration began to examine systems and processes in order to prevent medication errors.

Methods

During 2001, a performance improvement goal was initiated. The activities were: 1) Plan – identified pharmacy resources for the project and identified medication error data; 2) Do – mapped prescription workflow, collected data and categorized as to type, severity and point of detection; 3) Study – analyzed data to determine performance gaps/improvement opportunities and conducted a root cause analysis; 4) Act – implemented education sessions, initiated staff competency training, installed robotic dispensing system [SP 200 Robotic Prescription Dispensing System and SP Central Workflow Management System], and conducted a failure mode analysis.

Results

There were 8 level 1 medication errors in 36, 931 prescriptions filled (0.02%) in 4Q 2001 and 2/42,151 medication errors (0.005%) in 4Q 2002 that reached the patient. Pharmacy staff processed 6.2% more prescriptions in 2002 compared to 2001 and 25.6% more prescriptions in 2003 compared to 2002. During this time, there was no increase in pharmacist headcount and an increase of 1.5 FTE in technician headcount. Pharmacy staff increased their efficiency by 20% over the years 2001 to 2003.

Conclusions

Medication errors decreased and pharmacy staff efficiency improved to a meaningful and measurable degree following implementation of performance improvement initiatives. These results suggest that pharmacy led, team-based medication error improvement programs can be successfully planned and implemented in health care facilities similar to LCHC. Robotic automation, educational programs and proactive Failure Mode Analysis were tools successfully utilized in our multimodal program.