Expand Pharmacy Clinical Services to Ensure Safe, Effective Medication Therapy for All Patients

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Primary Intended Outcome
Expand pharmacy clinical services to ensure safe, effective medication therapy for all patients.

Relevant PPMI Recommendations

B26. Every pharmacy department should:

B26a. Identify drug-therapy management services that should be provided consistently by its pharmacists.

B26b. Develop a plan to reallocate its resources to devote significantly more pharmacist time to drug-therapy management services.

Situation Analysis
Our facility is a 200-bed community hospital staffed 24 hours with one pharmacist on night shift with additional computer support duties, two staff pharmacists on day shift with overlapping shifts, one director, one manager, and one pharmacist on evenings. Clinical services consisted of reviewing targeted patients who were identified on a computer-generated list of those on aminoglycosides, warfarin, and renally eliminated medications. The service was provided approximately three to four hours daily by the second day-shift pharmacist after completing distributional duties in the main pharmacy.

We developed a strategic plan that proposed steps for improving efficiency in distribution through the use of a tech-check-tech program and the use of a phone tree. The plan included a description of the proposed clinical services, an estimate of the cost in labor and other expenses, and an estimate of savings that would be expected through reduced supply cost and cost avoidance.

The strategic plan was presented to the vice president and CEO of the hospital. A total of 3.2 full-time equivalent (FTE) additional staff was approved with a clear expectation of realizing the estimated return on investment.

The next step was to bring the staff together to develop the details of the program. The CEO kicked off the meeting by making clear the need for the change and empowering the staff with determining how change would be accomplished. The meeting resulted in a detailed implementation plan that included a timeline for the project, with excellent buy-in by the staff.
Service Description
We developed three decentralized clinical services: critical care, medical/surgical, and internal medicine. Each would be staffed eight hours per day, Monday through Friday, with one, 10-hour shift covering all services on the weekends. The critical care and internal medicine services included interdisciplinary rounds and the medical/surgical service used profile review. The internal medicine service was staffed by a shared faculty position in partnership with the local school of pharmacy.

We implemented the program over a six-month period in phases, beginning with changes in the distribution process to improve efficiency and free up pharmacist time. We hired additional technical staff and implemented a tech-check-tech program. Critical care services were established first, followed by internal medicine, then medical/surgical. All staff participated in a training and mentorship program. Staff collected baseline and ongoing clinical intervention documentation, supply cost, and labor expense data.

The rate-limiting step consisted of recruiting clinical staff during the height of the pharmacist shortage.

Key Elements for Success
1. Administrative approval of the strategic plan,
2. Staff taking ownership of the implementation plan,
3. An effective clinical coordinator, and
4. Positive measures of success results.

Resource Utilization

Personnel: More than $250,000 per year for salary and benefits for 3.2 FTEs, 1.2 technicians, 2.0 pharmacists (plus an additional 0.5 supplied by the School of pharmacy at no cost). Labor expense increased from below the 25th percentile to above the 50th percentile compared to peer hospitals used for benchmarking.

IT and other infrastructure: $25,000 per year for intervention documentation and clinical decision support tool (portion of corporate system contract).

Supply Expense: $12.89 per case mix adjusted day reduction in supply expense, which extrapolates to $955,651 per year.

Return on Investment: More than $700,000 per year.

Recognized Intangible Benefits
1. Improved recruitment and retention, physician and nursing satisfaction with pharmacy services, and pharmacy employee satisfaction.
2. Recognition and respect by hospital administration.

Outcome Measures
1. Labor expense, supply expense, and total expense benchmarks.
2. Documented interventions: 38% increase from baseline in the first year, 70% in the second year, and 48% in the third year.
Lessons Learned

1. Developing a strategic plan that includes clear expectations about return on investment is a key first step.

2. The administration will support a well-developed proposal.

3. Involving the staff in planning and implementing the process is important.

Other Considerations

1. The pharmacy director must be willing to commit to the results presented in the strategic plan and therefore must fully support and believe in the PPMI.

2. Nursing leadership needs to be involved up front and buy into the idea of improving outcomes.

Suggestions for Other Hospitals/Health Systems

Evaluate opportunities to develop an estimate of savings from implementing an effective practice model. As a general rule, expect to save between 5% and 15% of supply expense. Expect that it will take some time to implement and see results, so phase in resources and savings over several years, with more cost up front and more savings each year.

Helpful References
