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EXPERIENCE

Experience with technology-supported transitions of care to improve medication use

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ABSTRACT

Objective: To describe an innovative community pharmacy–based pilot program using technology to support transitions of care for patients living in rural areas.
Setting: This service occurred through a partnership between 1 independent community pharmacy organization with 5 locations in Ohio and Indiana and one 92-bed general medical and surgical county hospital during May 2014 to May 2015.
Practice description and innovation: Community pharmacists worked with patients immediately following discharge to reconcile their medications and make recommendations to optimize therapy. The pharmacy packaged their new medication regimen in clear, individual dose adherence packaging. Medications were delivered by a staff driver to the patient's home within 72 hours of discharge. Patients consulted with the pharmacist by videoconference using a computer tablet device. Patients received telephone follow-up shortly before their medication supply was to run out, and additionally as needed on an individual basis.
Evaluation: Self-reported hospital readmissions were collected at 30 and 180 days after enrollment. Patient satisfaction data were also collected at 30 and 180 days using a tool modified from the 5-item Transition Measure (15-item Care Transitions Measure).
Results: Eighteen patients participated in the evaluation of the pilot. Three patients were readmitted within 30 days (17%), and 2 additional patients were readmitted within 180 days (11%). Patient satisfaction results were positive overall. Lessons learned relate to establishing partnerships, logistics, and patient engagement. These lessons will assist future community pharmacies in implementing a transition of care service.
Conclusion: This pharmacist care model may offer a solution to increase access to pharmacy services for patients in rural areas during a critical transition in care.

Transitions of care can be challenging for patients, particularly when moving from a health care facility to their home, where they will manage their own health. Frequently, errors during transitions are due to issues with medication use.[1] Approximately 60% of all medication errors occur during transitions of care.[2]

Inpatient pharmacist involvement in transitions of care has received a great deal of attention in recent years by demonstrating an ability to reduce medication errors and preventable adverse drug effects after discharge.[3,4] However, inpatient pharmacists have indicated that attempting medication reconciliation before discharge can be challenging because of patients being too tired or ill to speak with the pharmacist, being unavailable because of receiving other types of care (i.e., respiratory or physical therapy), being out of their hospital room, and being eager to leave the hospital quickly at discharge and less attentive during pharmacist intervention.[5] Finally, inpatient pharmacists have expressed concerns that patients have difficulty with filling their new prescriptions after discharge.[5] Recently, community pharmacy–based

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Key Points

Background:

- Transitions of care create challenges for patient safety and continuity of care, particularly related to medication use.
- Inpatient pharmacists have made significant contributions to medication reconciliation, but literature regarding community pharmacist involvement in transitions of care is more limited.
- Follow-up with patients after discharge can be challenging in rural areas where patients are geographically removed from health services.

Findings:

- This work adds an example of a blended community pharmacy and telehealth model that provides care to patients in the home, and closes the gap of providing access to medications quickly after a hospitalization.

transitions of care services have demonstrated evidence of significant improvement in readmission rates among patients who met with a community pharmacist for medication therapy management services following discharge.[6,7]

Filling new prescriptions following hospital discharge is often delayed by patients after discharge because of transportation issues, pharmacy wait times, and financial barriers.[8] Particularly in rural areas, patients frequently face transportation problems with longer distances between themselves and health care facilities, greater financial barriers owing to income disparities, and fewer health care professionals being available to provide effective follow-up care.[9] Once home, patients are frequently uncertain whether preadmission medications should be continued, and they often have a limited understanding of their new medication regimen.[10] Having both old and new medication vials in the home can be overwhelming and frequently leads to administration errors and, sometimes, duplications in therapy. Pillboxes or similar organizational tools have been suggested as ways to improve self-management of home medications after discharge.[9]

Reduced access to care in rural areas, suboptimal inpatient medication reconciliation, limited discharge prescription fulfillment, and poor self-management of postdischarge medication regimens all increase the risk of medication errors during transitions of care. In light of these challenges, community pharmacists are well positioned to provide an alternative approach to improving medication use following a transition in care. One independent pharmacy organization partnered with a county hospital to conduct a pilot program to address this challenge in rural communities.

Objectives

To describe an innovative community pharmacy–based program using technology to support transitions of care for patients, particularly those residing in rural areas.

Setting

The transition of care service occurred through a partnership between 1 independent community pharmacy organization with 5 locations in Ohio and Indiana and one 92-bed general medical and surgical county hospital. The pharmacy organization serves a large area that includes the border of Ohio and Indiana, with delivery service up to 100 miles from the pharmacy. The participating hospital and pharmacy site are located approximately 25 miles from each other.

Practice description and innovation

Any interested patient being discharged from the hospital and taking 1 or more long-term medications was eligible to enroll in this service. Although not exclusive to patients in rural areas, this service was developed in part to support patients who are geographically remote and have difficulty following up with primary care or accessing pharmacy services soon after discharge. Nurses and social workers managing discharge or marketing representatives from the community pharmacy organization offered the service to patients being discharged through written marketing materials or a verbal offer and explanation. No other formal care transitions service or medication reconciliation process was in place at the hospital during this pilot. When a patient chose to enroll, the hospital would send discharge orders and new prescriptions by facsimile to the participating community pharmacy. This would prompt the community pharmacist to review the orders, clarify any issues with the hospital, and contact other community pharmacies and primary care providers as necessary to reconcile medications. As prescriptions were processed through insurance, the patient would be contacted regarding any medications that were too soon to be filled to ensure that they had an adequate supply of maintenance medications in the home.

Typically, a short supply of new medication would be delivered to the patient's home on the day of discharge, and the delivery personnel would remove old medication bottles from the patient's home. The removal of old medication bottles eliminated confusion for the patient and allowed the pharmacist to gain information to perform a complete assessment of the medication regimen. After clarifying discrepancies with old medications, the community pharmacist would package the new medication regimen by day and dosing time in a sealed, clear plastic packet that is perforated to separate doses for a 30-day supply. A letter was sent to the primary care provider providing a transition record of any changes and discrepancies identified by the pharmacist. Pharmacy staff would then contact the patient to coordinate a time for delivery. Packaged medications and an updated medication list were delivered to the patient's home by a driver, typically within 72 hours of discharge.

During home delivery, the delivery driver would bring a pharmacy-owned computer tablet device inside and connect the patient to the community pharmacist. Tablets from 2 different data networks were used. The delivery driver would select the tablet with the most reliable data network for the delivery area. The driver would set up the videoconference, and the pharmacist would review the medications with the patient, educate the patient on the new medication regimen,