



## COMPLETED GRANT SYNOPSIS

### Community Pharmacist-led Care Transition from Hospital to Home Intervention

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#### Objectives

The objective of this practice-based research study was to test the impact of a community pharmacist-delivered care transition intervention on hospital readmissions, and describe the problems identified and actions taken by the pharmacists.

#### Methods

##### Design

- The setting for this study is a single Midwestern, private hospital that owns a small chain of service-oriented community pharmacies which had access to the hospital's electronic medical record.
- The study pharmacy also worked to recruit other pharmacies in area to deliver the follow up telephone calls for patients that fill their prescriptions at those pharmacies.
- Those pharmacies would have access to the online system for documenting their telephone interventions would receive \$40 for the two follow up telephone calls completed and documented. These pharmacists did not have EMR access.
- This evaluation used a 2-group, non-randomized design.
- Patients admitted to the general medicine unit were evaluated by a nurse using the BOOST criteria, with the highest risk patients being offered the pharmacist-intervention first.
- One community pharmacist would spend approximately 4 hours every weekday meeting with the highest risk patients during their hospital stay.
- The case load for the pharmacist usually was 4 to 6 patients
- The goal of the initial visit is to introduce the program and the role of the pharmacist, review the patient's new medications, follow up on any issues identified by the inpatient hospital pharmacist during the medication reconciliation, discuss how the patient gets his or her medications, takes and manages them at home. The patient is offered to have any new prescriptions delivered to the patient's room, known as the "First Fill" program.
- Following the interaction, the pharmacist documents any drug therapy problems and/or recommendations in the hospital medical record for the inpatient pharmacist to follow up on during subsequent rounding with the medical team. The study was deemed quality improvement by the hospital institutional review board, and therefore formal consent was not required.
- Patients then received two follow up telephone calls at 8 and 25 days following discharge.
- Patients that use a different participating pharmacy are handed off to that pharmacy for telephone follow up. Those pharmacies are contacted by fax with the patient's discharge summary and pharmacist note.
- Community pharmacists at other participating pharmacies followed up with patients about any emerging medication questions or problems since discharge.
- Patients are provided with additional education and problem-solving related to medication access and with the patients follow up visits.
- Topics for the 25-day call focus on any recent medication changes or problems accessing issues. For either call, if the outsourced pharmacy does not complete the call within 2-3 days

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	as evident by a lack of call documented in the online form, a pharmacist at the study pharmacy would complete the call.
Study endpoints	<ul style="list-style-type: none"> <li>• Readmission rates to any hospital for Medicare Advantage patients receiving and not receiving the intervention.</li> <li>• Readmission rates to the study hospital for all patients receiving and not receiving the intervention.</li> <li>• Description of the problems identified by the clinical community pharmacists delivering the in-person, and telephone interventions.</li> <li>• Description of the pharmacist actions documented by the pharmacists delivering the in-person and telephone interventions.</li> </ul>
<b>Results</b>	
<ul style="list-style-type: none"> <li>• The initial intervention was provided to 560 patients who had a mean boost score of 1.89 (SD=1.12) and not provided to 430 patients with lower BOOST scores that averaged 0.68 (SD=0.86) <math>p&lt;0.001</math>.</li> <li>• Problems identified by the pharmacists included side effects, nonadherence, and cost issues which were resolved using patient education, adherence aids, and prescriber consultations.</li> <li>• Thirty day readmissions to any hospital for the patients with Medicare Advantage plans was 10.9% for those receiving the intervention and 15.5% for those not, a non-statistically significant difference favoring the intervention group of 4.6 percentage points.</li> <li>• Same-hospital 30-day readmissions were significantly lower for intervention patients (8.3%) compared to non-intervention patients (21.4%) (<math>p&lt;0.001</math>).</li> </ul>	
<b>Conclusion</b>	
<p>Higher-risk patients receiving the community-pharmacist provided 3-contact care transition intervention had a rate of same-hospital readmission of 8.3% compared to a 21.4% same-hospital readmission rate for lower-risk patients not receiving the intervention. Pharmacist identified problems related to side effects, nonadherence, medication cost and others and addressed these with medication education, adherence aids, referrals to other providers, and recommendations to prescribers for medication changes. One of the unique elements to this intervention was that this community pharmacy had access to the hospital's electronic medical record and dedicated time to visit the hospital to interview the patients face to face and remove themselves from dispensing to make their follow up telephone calls. This allowed the pharmacists when conducting the 8 and 25 day follow up telephone calls to customize their approach based on the patient's medical history. This helped the pharmacist answer questions and offer clarifications based on visit notes, including visits conducted after discharge by physicians in that same system. In addition, clarifications could be provided about other appointments or instructions by other providers where the pharmacist could offer clarifications.</p>	