Improving outcomes for high-risk chronically ill patients

Two healthcare systems provide medication therapy management to patients in home care or as they transition to home
Through comprehensive medication reviews, patient and caregiver education and pre- and post-discharge counseling, pharmacists increase medication adherence, eliminate barriers and reduce adverse drug events. According to the *American Journal of Health System Pharmacists*, at least 20 studies have reported positive outcomes from these pharmacists’ interventions.

With funding support from the Cardinal Health Foundation’s E3 Grant Program, two healthcare systems added pharmacists specifically to provide medication therapy management for chronically ill patients either in home care or transitioning from hospital to home. The results: Improved quality of life for patients and significantly reduced hospital admissions.
Continuity of Care Pharmacist for Patients in Home Care

For chronically ill patients taking nine or more medications per month, a pharmacist provides medication therapy management and customized interventions.

Overview of organization

Trinity Medical Center is one of four full-service hospitals in Rock Island and Moline, IL and Bettendorf and Muscatine, IA under the UnityPoint Health–Trinity umbrella. It includes an extensive home care service for patients in Rock Island and surrounding communities.

“Over the course of a year as a Continuity of Care Pharmacist, I cared for more than 400 home care patients in their homes or telephonically, and provided at least one pharmaceutical intervention for every single one of the them.”

Virginia Fedorchak, PharmD, BCPS
Project Summary

With funding in part from the Cardinal Health Foundation, Trinity Medical Center added a Continuity of Care Pharmacist (CCP) service for the organization’s high-risk home care patients. The goal was to ensure early interventions, including medication education, reconciliation, recommending therapy modifications to providers and removing barriers to medication access, in order to reduce acute-care hospitalizations.

Each patient receiving the Continuity of Care Pharmacist service was taking at least nine medications per month for such chronic conditions as COPD, congestive heart failure, diabetes, myocardial infarction, hypertension or depression.

The Continuity of Care Pharmacist educated patients about their medications’ purpose and how to take them, taught them how to use their prescribed inhalers or blood glucose monitors, helped them set up medication dosage reminders and provided education to patients’ caregivers. The pharmacist communicated all interventions to the patient’s care team.
**E3 GRANT CASE STUDY**

**Project objectives**

- Improve clinical quality to ensure best possible outcomes for patients
- Provide three interventions per patient
- Reduce acute care hospitalizations, from the baseline 19.8 percent to 18.9 percent
- Improve patients’ ability to manage their own medications, from the baseline of 47.7 percent to 60 percent
- Reduce hospital readmission rate by 50 percent
- Save 84.3 hospital days

**Results (for 439 participants measured over 12 months)**

| Improved patients’ ability to manage their medications from baseline of 47% to 58% | Provided an average of 4.8 interventions per patient | Reduced acute care hospitalizations from baseline of 19% to 15%  
(Admissions due to adverse medication events were reduced from 3.8% to 0.65%) |
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<td>Hospital days saved: 155</td>
<td>Dollars saved: $426,526 (minus the program's cost of $138,331)</td>
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The summary results are estimates that have been separately prepared and provided by each individual grantee and were based on one year periods unless otherwise noted.
**Project continuation**

Through the pilot program, Trinity Medical Center identified some significant barriers to medication interventions for home health patients, including the lack of an integrated electronic medical administration record system and a consistent system of referrals.

The Continuity of Care Pharmacist is working with leadership to establish a systemwide program that will ensure that home care patients receive the expertise from a pharmacist to reach their goals and improve their outcomes. She is part of the Medication Therapy Management group that works with interdisciplinary teams to identify and resolve medication problems for UnityPoint Health and the patients in the Quad Cities community.

Continuity of Care Pharmacists help high-risk home care patients avoid acute-care hospitalizations.
Medication REACH
Trinitas Regional Medical Center
Elizabeth, NJ

Pharmacists provide follow-up care for a particularly vulnerable population of chronically ill patients as they transition to home.

Overview of organization
Trinitas Regional Medical Center is a major center for comprehensive health services for people who live and work in Central New Jersey. It is a teaching hospital and one of only three acute care hospitals serving Union County, which has a population of over half a million. Trinitas is also one of New Jersey’s foremost safety net hospitals: Nearly 80 percent of the hospital’s patients are uninsured or on Medicare, Medicaid or Charity Care.

“Medication counseling is absolutely critical in reducing readmission rates, particularly for chronically ill patients of safety net hospitals. These patients face formidable barriers to medication compliance.”

Gary S. Horan,
President and CEO
E3 GRANT CASE STUDY

Project summary

With grant dollars from the Cardinal Health Foundation combined with funding from another grantor, Trinitas Regional Medical Center created Medication REACH, a multi-pronged approach for helping ensure that chronically ill seniors transition safely from hospital to home. Through Medication REACH, Trinitas hired a dedicated pharmacist to consult with a transition team of health coaches, nurses and an advanced practice nurse (APN) and to provide direct medication compliance counseling to high-risk patients and their families.

The target population is elderly patients with one or more of the following diagnoses: COPD, congestive heart failure, acute myocardial infarction, diabetes, atrial fibrillation or uncontrolled hypertension. Many of these patients are uninsured or underinsured.

The pharmacist first meets with each patient while still in the hospital. Her second contact with each patient is post-discharge, either in the patient’s home or at the patient’s doctor’s office, within 72 hours of discharge. The pharmacist contacts patients a third time, typically in home, at 30 days post discharge.

The pharmacist provides medication reconciliation and medication counseling with simple-to-follow written instructions. The pharmacist also provides medication access resolution, ensuring that the patient has correct prescriptions, that the prescriptions are covered by insurance and that any barriers are addressed. The pharmacist documents her interventions and shares all information with prescribers, the transition team and patients.
E3 GRANT CASE STUDY

**Project objectives**

- Reduce readmission rates for elderly, chronically ill patients
- Provide medication reconciliation and medication counseling in hospital and post discharge
- Ensure medication access, both at transition from hospital to home and ongoing
- Enhance care coordination

**Results**

| Reduced 30-day readmission rate from 18% to 14% | Improved mortality by 1.19% |
| Days saved: 74 | Dollars saved: $811,998 |

The summary results are estimates that have been separately prepared and provided by each individual grantee and were based on one year periods unless otherwise noted.
Project continuation

Medication REACH is an ongoing program, providing pharmacist interventions as part of Trinitas’ broader efforts at reducing readmissions among chronically ill patients.

Since its inception, the Trinitas Transitional Care team has worked closely with the University of Pennsylvania’s New Courtland Center for Transitions and Health. This center is under the direction of Mary Naylor, PhD, FAAN, RN, a national leader in the field of healthcare transitions. That working relationship led to Trinitas’ participation in Project ACHIEVE, a multi-state study emanating from the Patient-Centered Outcomes Research Institute (PCORI). The purpose of this study is to develop recommendations on best practices for patient centered care transitions and guidance for spreading these recommendations across the United States.

Trinitas was one of just 22 sites across the country selected to participate.

A dedicated pharmacist consults with a transition team and provides direct medication compliance counseling to high-risk patients and their families.
E3 GRANT CASE STUDY

About the E3 Grant Program
Since 2008, through its E3 Grant Program, the Cardinal Health Foundation has invested in hundreds of healthcare organizations across the country.

We support a wide array of patient safety work with a focus on accelerating the rate of change with two goals:
• Improved patient outcomes
• Reduced healthcare costs

Because of the complexities in healthcare and healthcare systems, it takes an average of 17 years for evidence-based practices to be fully implemented into healthcare practices, according to The National Institutes of Health. Within a year or two, some of our grantees are affecting change, eliminating errors and creating lasting improvement. They are reducing readmissions to hospitals, reducing lengths-of-stay and, most importantly, saving lives.

For more information, visit cardinalhealth.com/patientsafetygrants.

About the Cardinal Health Foundation
The Cardinal Health Foundation supports local, national and international programs that improve healthcare efficiency, effectiveness and excellence and the overall wellness of the communities where the Cardinal Health (NYSE:CAH) nearly 37,000 employees live and work.

The Cardinal Health Foundation also offers grants to encourage community service among its employees and works through international agencies to donate much-needed medical supplies and funding to those who need them in times of disaster. Cardinal Health is #AllInForGood.

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