



# TRANSITIONS OF CARE

CASE EXAMPLES RESOURCE

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## PREFACE

These *Transitions of Care Case Examples* were designed as a resource for pharmacists and student pharmacists to improve transitions of care (TOC) services across a multitude of health care settings. The document addresses pharmacists', student pharmacists', and pharmacy technicians' roles in transitions of care services within a community hospital, an outpatient health system pharmacy, an ambulatory care clinic, a long-term care facility, and a community pharmacy.

The following information is included for each practice setting herein: description of the setting, pharmacist involvement in TOC, technician and/or student involvement in TOC, coordination with other practice settings, reimbursement, success and barriers to the program, and technician or student pharmacist experiences.

This resource was created by the American Pharmacists Association Transitions of Care (TOC) Special Interest Group (SIG). The resource is intended to be used as a reference only. The examples in this document should not be interpreted as guidelines or best practices.

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## Common Themes Identified Among TOC Programs

### Description of Pharmacist Involvement in TOC

- Pharmacists are completing medication reconciliations across all practice settings. Most programs have a follow-up scheduled anywhere from 48 hours to 14 days after discharge.
- Collaboration between pharmacists and physicians or other health care providers occurs frequently in each TOC program described.

### Description of Technician and/or Student Involvement in TOC

- Technicians and students play an instrumental role in gathering medication histories, delivering medications to patients, obtaining medical documentation, and performing patient counseling under direct supervision of a pharmacist.

### Description of Coordination With Other Practice Settings During TOC

- Outpatient settings seem to have increased coordination with insurance companies; whereas, inpatient and long-term care facilities seem to have increased coordination throughout specialties in their individual systems.

### Description of Reimbursement

- The majority of reimbursement is in the form of cost savings from decreased hospital readmissions and decreased drug spend.
- Outpatient facilities are able to utilize Medicare Part D platforms, such as OutcomesMTM or Mirixa, to bill for their medication management services.

### Successes to the Program

- Major successes are improved communication between providers and increased interdisciplinary care.
- Patient education and understanding are also increased through face-to-face or telehealth services.

### Barriers to the Program

- Time is a major barrier. The time commitment required to gather the necessary documents to provide quality recommendations or care is cumbersome, especially when communication outside of the institution is required.
- Face-to-face patient follow-up after discharge is difficult, as patients are not always back to their baseline upon discharge.

## TERTIARY COMMUNITY HOSPITAL DISCHARGE UNIT HOLLYWOOD, FLORIDA

**Description of Practice Setting:** Patients with high-risk medical conditions (e.g. acute myocardial infarction, chronic obstructive pulmonary disease [COPD], heart failure, and pneumonia) are identified by means of automatically generated system lists in the electronic medical record (EMR). Transitions of care (TOC) pharmacists are stationed in a discharge unit staffed by nurses and medical assistants. From the discharge unit, pharmacists identify patients on the system list who may require TOC interventions.

**Description of Pharmacist Involvement in TOC:** Pharmacists visit the aforementioned patients in their hospital rooms, ideally within 48 hours of admission. The pharmacist introduces himself or herself and explains the purpose of the TOC session. Admission medication reconciliation is performed and documented in the EMR (e.g. Epic Systems or Cerner). Relevant findings and discussions are documented as pharmacist-authored progress notes in the patient's chart. Pharmacists continue to monitor patients throughout the admission to review medication appropriateness and assist with discharge planning. When appropriate, eligible patients are discharged to the discharge unit. The TOC pharmacist provides patient-specific education, arranges follow-up appointments, and performs discharge medication reconciliation. Within 48 to 72 hours following discharge, the TOC pharmacist places a telephone call to the patient or their caregiver to ensure appropriate TOC. Findings from the conversation are documented in progress notes following a standardized script.

**Description of Technician and/or Student Involvement in TOC:** Pharmacy technicians independently collect patient medication histories. Patients presenting from skilled nursing homes or assisted living facilities have their medication lists scanned into the EMR. Similar to pharmacy technicians, student pharmacists collect patient medication histories, but often under the

supervision of a pharmacist preceptor.

**Description of Reimbursement (if applicable):** There is no reimbursement at this time.

**Successes to the Program:** Anecdotally, patients have reported increased satisfaction with the level of care they have received. Many of them have not previously interacted with pharmacists in this capacity. Patients reported feeling safer when a pharmacist reviews their inpatient medications, discharge medication list, and medication tolerability following discharge. All patients discharged through this program receive a discharge medication reconciliation. Medication discrepancies are subsequently updated in the EMR, and findings from discharge telephone calls are documented in pharmacist-authored progress notes. Data from the program suggest that although all patients receive admission and discharge medication reconciliation, approximately 25% have a discordance in their medication list, which requires adjustment following discharge.

**Barriers to the Program:** Not all eligible high-risk patients are sent to the discharge unit. This unit and process were created by an interprofessional team of stakeholders, but are primarily pharmacy-driven. Education and encouragement are continually provided to case management, clinical effectiveness, and nursing team members to incentivize them to discharge patients to the unit.

**From the Eyes of a Technician and/or Student Champion:** "I was involved in every step of the process. I honed in on high-risk patients on the floors and addressed concerns upon each transition: admission, floor-to-floor transitions, and prior to discharge. I provided my findings to the health care team and set specific goals, such as medication adjustments and outcomes expected prior to discharge. I successfully prepared patients for discharge by addressing these gaps that are easily looked over throughout their admission."

“When the patient arrived to the discharge unit and checked in with the nurse, I had just finished preparing a medication plan template and educational brochures. It was my responsibility to make sure that the patient understood how and why they ended up in the hospital. Then, most importantly, I took the time to explain each medication in their medication plan template: What is the name of the medication? What is it for? When to take it, how to take it, and the frequency. This creates the perfect opportunity to answer any questions the patient may have about medications, follow-up appointments, and even transportation. The TOC service achieves a main goal of improving quality of life and safety of patients during transitions across care settings. It is a team effort

between health care providers, the caregiver, and the patient.”

“Students physically visited patients on the floor to introduce themselves as the student pharmacist who would be watching over their medications during their stay in the hospital and also arranged an appropriate time postdischarge for a follow-up call. In addition to following patients admitted to the floor, students also took the time to complete discharge medication counseling in the discharge lounge alongside discharge nurses. During this time, there were opportunities for interventions as well. This experience taught me the significance of the pharmacist’s role in the TOC process, as well as how fulfilling the role is.”

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## Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** Schnipper JL, Kirwin JL, Cotugno MC, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. *Arch Intern Med.* 2006;166(5):565-571.

This study is a randomized controlled trial designed to evaluate the impact of discharge pharmacist services on the development of drug-related problems following discharge. Pharmacists were responsible for providing discharge medication reconciliation, adherence assessments, drug interaction screening, and medication education. Telephone calls were made by pharmacists 3 to 5 days following discharge. Results from this study demonstrated that pharmacists significantly reduced the incidence of preventable adverse drug events. Authors concluded that the significant reduction in adverse events was due to pharmacists’ discoveries of discrepancies and discordances in patients’ medication lists following discharge.

**CITATION:** Shah M, Norwood CA, Farias S, et al. Diabetes transitional care from inpatient to outpatient setting: pharmacist discharge counseling. *J Pharm Pract.* 2012;26(2):120-124.

This study evaluated the impact of discharge pharmacist education on patients’ self-management of diabetes. Pharmacists were responsible for

providing comprehensive medication education regarding antidiabetic medications, dysglycemia symptoms, eating habits, and exercise routines. Education occurred for 30 to 45 minutes once prior to discharge. Results showed that patients who received the pharmacist intervention had significantly improved adherence to their medications compared with a cohort of patients who did not receive pharmacist interventions.

**CITATION:** Sanchez GM, Douglass MA, Mancuso MA. Revisiting project re-engineered discharge (RED): the impact of a pharmacist telephone intervention on hospital readmission rates. *Pharmacotherapy.* 2015;35(9):805-812.

This study described the continued improvements, specifically reductions in readmission rates, made to Boston Medical Center’s Project Re-Engineered Discharge (RED). Within the program, high-risk patients receive a telephone call from a pharmacist within 2 to 4 days following discharge. Pharmacists are responsible for reinforcing discharge planning, reviewing medications, and evaluating potential medication-related issues. Results showed that there was a 16.2% absolute reduction in readmission rates for those patients who received pharmacist-driven discharge telemanagement.

## LONG-TERM CARE/POSTACUTE CARE FACILITY LONDON, KENTUCKY

**Description of Practice Setting:** The campus consists of a 179-bed skilled nursing facility (SNF), which admits both long-term care patients and postacute care patients for rehabilitation back to home. Last year, 60% of those admitted were long-term care and 40% were postacute care. There are also 2 retirement/assisted living facilities (ALFs), which, in Kentucky, are under a social model, not a medical model. These buildings have no medical personnel on staff, but may provide assistance with all activities of daily living. For medication management, the pharmacy staff fill weekly medication minders and deliver them each week to the residents who desire assistance. Many residents in the ALF require hospitalization and, due to disability, will be admitted to the Continuing Care Retirement Community unit for rehabilitation back to their apartments.

**Description of Pharmacist Involvement in TOC:** The pharmacist reviews and makes recommendations on all potential admissions, actual admissions, readmissions, and discharges. By being proactive when reviewing potential admissions, the pharmacist can identify medication problems and issues not being treated. The pharmacist can also provide solutions to the physician if the patient is admitted. The pharmacist performs a medication reconciliation and reviews the medical record from the hospital, information from the patient's primary care provider's office, and all medications found in the patient's home. (The family is asked to bring the home medications to the facility.) For readmissions, the pharmacist reviews the medication reconciliation and medical record from the hospital along with the patient's Medication Administration Record. If the patient is from an ALF, the pharmacist will review the patient's medication list to identify changes based on the hospital's normal therapeutic substitutions versus the actual need for therapeutic changes. These needs are implemented if written by the patient's primary care provider or communicated

to the primary care provider to see if the provider would like to implement them or make changes to them.

**Description of Technician and/or Student Involvement in TOC:** Pharmacy technicians strongly support all pharmacy operations. They assist the pharmacist with all changes to resident medications for both SNFs and ALFs. Student pharmacists assist with compiling the medication lists and are asked for recommendations to send to the primary care physician.

**Description of Coordination With Other Practice Settings During TOC:** Pharmacists, nurses, and laboratory technicians collaborate as patients move through the admission/readmission process. Pharmacists and physician staff in the community also provide assistance and are informed and made aware of how important their presence is to the development of the pharmacy's plan of care. Inside the SNF, coordinated care is available to help the residents achieve their highest level of functioning with physical therapists, occupational therapists, speech therapists, respiratory therapists, and registered dietitians. At discharge for short-stay residents, the current medication list is given to the resident (or caregiver) and sent to their primary care provider and pharmacist for coordination of care. The medication list is also given to at-home care providers, such as a home health agency. This medication list includes any immunizations administered and/or adverse medication events and identifies changes made for actual therapeutic reasons versus therapeutic substitution. If a substitution has been made, the pharmacist can identify Medicare Part D plan coverage at home, and if not, the primary care provider is informed to change to a formulary approved medication.

**Description of Reimbursement (if applicable):** The pharmacy receives reimbursement from Medicare Part D plans for medication therapy management

activities, most often through the Mirixa platform. The true value is cost avoidance by choosing the most appropriate and least expensive therapeutic entities under Medicare Part A and using therapeutic substitution to a covered medication under Medicare Part D.

**Successes to the Program:** If the pharmacy team were not successful at providing medication management services through TOC, the SNF would not be successful in returning the short-stay rehabilitation patients to their homes or ALF apartments. For those residents who have chosen to return to their home, the pharmacy team makes this possible. Although residents are not always back to their baseline, they are ready to return home, often with care providers in their home.

**Barriers to the Program:** The time required to gather this information and time required to ensure the information gets to the appropriate people at discharge are two potential barriers.

**From the Eyes of a Technician and/or Student Champion:** Pharmacy technicians are staunch supporters of the TOC model. They know that pharmacy services make a difference in the residents' lives and understand the importance of their role in the process. Student pharmacists are quite excited about the process as well. They are encouraged to take notes and adapt what they learn to their future practice setting. TOC happen everywhere, every day.

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## Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** American Medical Directors Association. Transitions of Care in the Long-term Care Continuum Clinical Practice Guideline. Columbia, MD: AMDA 2010.

The American Medical Directors Association (AMDA) created a practice guideline for TOC in the long-term continuum. The guideline was developed by interdisciplinary workgroups using a process that combined evidence and consensus-based approaches. Because scientific research in the long-term care population is limited, many recommendations are based on the expert opinion of practitioners in the field. The AMDA guideline emphasizes key care processes and is organized for ready incorporation into facility-specific policies and procedures to guide staff and practitioner practices and performance. The guideline is intended for members of the interdisciplinary team in long-term care facilities, including the medical director, director of nursing, practitioners, nursing staff, consultant pharmacist, and other professionals such as therapists, social workers, dietitians, and nursing assistants. The guideline includes an "Implementation of a Care Transition Program" with steps to help aid in a TOC program.

**CITATION:** Samal L, Dykes PC, Greenberg JO, et al. Care coordination gaps due to lack of interoperability in the United States: a qualitative study and literature review. *BMC Health Serv Res.* 2016;16:143.

This study provides a comprehensive literature review of health information technology (HIT) and other TOC communications and identifies that there are still gaps that need to be addressed.

TOC between long-term care facilities and acute care can have many gaps if care is not coordinated properly. As a result of these gaps, studies and literature reviews have been performed in an effort to reduce issues and smooth TOC. HIT might improve care coordination by providing clinicians with remote access to information, allowing for better communication.

HIT is used to monitor patients, align systems, and transfer information; however, due to lack of interoperability, there are still gaps, which need to be addressed and fixed. HIT should be redesigned for better use across the United States for improved care coordination.

Other communications can be utilized such as telephone calls and faxed records. However, often the information transferred is not all-inclusive and the gaps in care still exist.

**CITATION:** [https://www.nhqualitycampaign.org/files/Transitions\\_of\\_Care\\_in\\_LTC.pdf](https://www.nhqualitycampaign.org/files/Transitions_of_Care_in_LTC.pdf)

AMDA seeks to develop and revise guidelines that focus on specific concerns and common problems in the long-term care setting. Although the Agency for Healthcare Research and Quality (AHRQ) and other agencies, organizations, and associations have developed guidelines for conditions that occur in elderly and chronically ill individuals, many of these limit or omit considerations that are unique to the long-term care population. AMDA guidelines emphasize key care processes and are organized for ready incorporation into facility-specific policies and procedures to guide staff and practitioner practices and performance. They are meant to be used in a manner appropriate to the population and practice of a particular facility. Guideline implementation will be affected by resources available in the facility, including staffing, and will require the involvement of all those in the facility who have a role in patient care.

**CITATION:** <http://www.ntocc.org/Portals/0/PDF/Resources/PolicyPaper.pdf>

Patients face significant challenges when moving from one health care setting to another. As currently structured, the United States' health and long-term care system fails to meet the needs of most patients during transitions between health care settings. This paper outlines the vision of the National Transitions of Care Coalition (NTOCC) to improve TOC, increasing quality of care and patient safety while controlling costs. Specifically, NTOCC suggests the following steps: improve communication during transitions between providers, patients, and caregivers; implement an electronic medical record (EMR) that includes standardized medication reconciliation elements; establish points of accountability for sending and receiving care, particularly for hospitalists, "SNFists"

(physicians practicing in skilled nursing facilities), primary care physicians, and specialists; increase the use of case management and professional care coordination; expand the role of the pharmacist in TOC; implement payment systems that align incentives; and develop performance measures to encourage better TOC.

**CITATION:** [https://www.nhqualitycampaign.org/files/Transition\\_of\\_Care\\_Reference.pdf](https://www.nhqualitycampaign.org/files/Transition_of_Care_Reference.pdf)

The primary focus of this white paper is to: recognize and emphasize the importance of efficient processes for transferring patients from the acute-care hospital (ACH) to skilled nursing facility/nursing facility (SNF/NF) and from SNF/NF to ACH, including the emergency department (ED); highlight key elements in the care transition process; and specify key features of a successful care transition process.

**CITATION:** [http://epadgec.jefferson.edu/pdfs/Transition\\_Discharge\\_Planning\\_Toolkit.pdf](http://epadgec.jefferson.edu/pdfs/Transition_Discharge_Planning_Toolkit.pdf)

The EPaD GEC Interprofessional Geriatric Transitions of Care and Discharge Planning Toolkit contains various resources for providers, clinicians, consumers, and caregivers. It is designed to assist in accessing current information as well as recommended tools, resources, and identified best practices of care specific to the processes of TOC and discharge planning. The toolkit is divided into sections and addresses the areas outlined in our curriculum, with information on assessment tools, specific models of transition and discharge planning, and an array of additional resources. These include but are not limited to: hospice, advance directives, clinical services, state-specific agencies, and networks. The Toolkit provides comprehensive information regarding the multiple systems and areas involved in successful transitions and discharge planning.

**CITATION:** [http://healthcentricadvisors.org/wp-content/uploads/2015/05/NursingHome-SafeTransBPs\\_050515.pdf](http://healthcentricadvisors.org/wp-content/uploads/2015/05/NursingHome-SafeTransBPs_050515.pdf)

The best practice measures are intended to improve provider-to-provider communication and patient activation during patient transitions between any 2 settings. Nursing homes can use these measures to evaluate performance and implement targeted improvement to: (1) improve partnerships with inpatient and outpatient providers, (2) improve patient experience, and/or (3) reduce unplanned utilization. Some of these processes are adapted from interventions proven to improve care transitions outcomes, such as hospital readmission, in the medical literature. Others are based on national campaigns and standards.

**CITATION:** [https://www.healthit.gov/sites/default/files/nlc\\_ltpac\\_carecoordinationtool.pdf](https://www.healthit.gov/sites/default/files/nlc_ltpac_carecoordinationtool.pdf)

The National Learning Consortium (NLC) represents the collective electronic health record (EHR) implementation experiences and knowledge gained directly from the field of the

HHS Office of the National Coordinator for Health Information Technology (ONC) outreach programs (REC, Beacon, State HIE) and through the Health Information Technology Research Center (HITRC) Communities of Practice (CoPs). The resource can be used in the field today by “boots-on-the-ground” professionals, to support eligible professionals (EPs) and eligible hospitals (EHs) in care coordination for patients transitioning to long-term and postacute care (LTPAC) settings.

**CITATION:** [https://www.jointcommission.org/assets/1/18/Hot\\_Topics\\_Transitions\\_of\\_Care.pdf](https://www.jointcommission.org/assets/1/18/Hot_Topics_Transitions_of_Care.pdf)

This paper is the first of many planned communications that will report on new developments from The Joint Commission enterprise about work underway to address the problems related to TOC. It defines the problem and highlights the elements of some current evidence-based TOC models being researched by the enterprise.

## HEALTH SYSTEM OUTPATIENT PHARMACY BALTIMORE, MARYLAND

**Description of Practice Setting:** Outpatient pharmacy within an academic medical center

**Description of Pharmacist Involvement in TOC:** Outpatient pharmacists receive referrals for home-based medication management from discharging health care providers (prescribers, inpatient pharmacists, social workers, case managers) for patients at high risk for medication-related readmission. Referral criteria include a complex medication regimen, significant adherence issues identified during admission, multiple (>3) changes to medication regimen, or additional medication education needs that would best be addressed by a home visit. Pharmacists perform a full medication reconciliation and comprehensive medication review in the patient's home postdischarge to ensure safe and effective transition from the hospital to home.

Outpatient pharmacists also provide discharge counseling for specific patient populations, such as those who completed a solid organ transplant and international patients. The pharmacists review indications, adverse effects, administration techniques, and adherence.

**Description of Technician and/or Student Involvement in TOC:** The outpatient pharmacy within the hospital also facilitates adjudications and dispensing of discharge medications to the patient's bedside. Pharmacy technicians based on the unit work with the interdisciplinary care team to provide insurance coverage information to ensure that the regimen the health care team develops is affordable and sustainable postdischarge. The technicians assist with resolving insurance issues and completing prior authorizations. Once the outpatient pharmacy has completed the fill of the prescription, the technician delivers the medication back to the patient's unit.

Technicians are involved in pharmacist home visits as the initial point of contact with the patient to

explain the service and schedule the postdischarge home visit. Students are involved with the home visits by attending with pharmacist oversight. For safety reasons, it is recommended that 2 individuals be present within the patient's home so students serve as a partner for the pharmacist while participating in a valuable learning experience.

**Description of Coordination With Other Practice Settings During TOC:** The outpatient pharmacy collaborates with the prescriber and inpatient pharmacist to determine appropriate medication selection because oftentimes the insurance coverage aspect is unknown to the inpatient team. Once the best regimen is selected, the pharmacy team collaborates with social workers and case managers to determine the patient's ability to afford their medication. The teams work together to provide additional support with patient assistance programs if needed.

The outpatient pharmacists document the home visit encounter within the electronic health record (EHR) so that it is available to other health care professionals involved with the patient's care.

**Description of Reimbursement (if applicable):** The outpatient pharmacy is reimbursed via the pharmacy benefits manager for the prescription fill. Although there is no direct reimbursement for the service itself, the health system benefits financially from cost savings via the avoidance of hospital readmissions.

**Successes to the Program:** As a result of implementing this program, a rapport is built between the technicians and the care team to assist with procuring discharge prescriptions. Additionally, the program promotes an interdisciplinary approach to discharge, including prescription processing.

**Barriers to the Program:** Poor recruitment and retention of high-level pharmacy technicians can create a barrier to the program. Additionally, follow-

up can be difficult with patients postdischarge, especially if they do not see primary care providers within the same institution, leading to missing information from the EHR. From a payment perspective, pharmacists who provide home visits are not reimbursed for the service.

#### **From the Eyes of a Technician and/or Student**

**Champion:** Student pharmacists are key players in community TOC. They build relationships with health care professionals at an academic medical center and work in an interdisciplinary team,

which in turn enables the community pharmacy to follow patients' care postdischarge. Most patients have burdensome diseases and are on expensive complex medication regimens. It is the job of student pharmacists to help patients make a smooth transition from hospital to home and to provide safe optimal care. These relationships with the health care team help increase referrals to the community pharmacy, which in turn builds stronger relationships with the pharmacy's patients.

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### Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** Schnipper JL, Kirwin JL, Cotugno MC, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. *Arch Intern Med.* 2006;166(5):565-571.

Randomized controlled trial at Brigham and Women's Hospital: Patients were randomized to usual care of pharmacist interventions. Pharmacist interventions included discharge medication reconciliation, education, and a follow-up telephone call. (n = 178; 92 assigned to intervention, 84 assigned to usual care, P = .01 for detected preventable adverse drug events for intervention vs usual care group).

**CITATION:** Christy S, Sin B, Gim S. Impact of an integrated pharmacy transitions of care pilot program in an urban hospital. *J Pharm Pract.* 2016;29(5):490-494.

A pharmacy TOC pilot program was implemented at an urban tertiary teaching hospital. The program included a pharmacy review of discharge medication, bedside delivery of discharge prescriptions, comprehensive medication education, and follow-up phone calls 7 days' postdischarge to monitor medication therapy. Pharmacy residents and advanced pharmacy practice experience students, supervised by a clinical pharmacy

specialist, provided the program. (Pilot: n = 70, 5.7% readmitted; comparator: n = 725, 13.8% readmitted, NS)

**CITATION:** Kalista T, Lemay V, Cohen L. Postdischarge community pharmacist-provided home services for patients after hospitalization for heart failure. *J Am Pharm Assoc.* 2015;55(4):438-442. Patients who are admitted to the visiting nurse association received a pharmacist home visit and 2 follow-up phone calls at 1 and 4 weeks after the visit. The home visit consisted of medication reconciliation, adherence assessment, disease state management education, and identification of medication-related problems. Adherence was reassessed during the phone calls. Ten patients enrolled and all patients had improvement in their adherence scores.

**CITATION:** Pherson EC, Shermock KM, Efirid LE, et al. Development and implementation of a postdischarge home-based medication management service. *Am J Health Syst Pharm.* 2014;71(18):1576-1583.

This is a case study outlining the development and implementation of the home visits mentioned above.

## AMBULATORY CARE CLINIC

### ANN ARBOR, MICHIGAN

**Description of Practice Setting:** Geriatric patient-centered medical home

**Description of Pharmacist Involvement in TOC:**

A multidisciplinary team comprising nurse navigators, clinical pharmacists, board certified geriatric medicine physicians, and nurse practitioners works together to assist patients recently discharged home from the hospital or subacute rehabilitation. Nurse navigators complete a structured phone call within 2 business days of discharge, followed by a phone call from a clinical pharmacist. The telephonic clinical pharmacist visit is 30 minutes in length and the following components are covered: medical triage, medication history, medication reconciliation, and a comprehensive medication review. The clinical pharmacist has access to the electronic health record (EHR; internal) and any documents the nurse navigator obtained from outside facilities. The pharmacist writes a structured note in the EHR for each patient that includes subjective/objective information and an assessment/plan. The assessment/plan is divided into recommendations related to the hospitalization and those unrelated to the hospitalization. The clinical pharmacist is scheduled to see 12 patients per day and most appointment slots are filled each day of clinic (approximately 2 days per week for TOC services). The patient will then see the physician or nurse practitioner within 7 to 14 days of hospital discharge.

**Description of Technician and/or Student**

**Involvement in TOC:** Final-year student pharmacists provide TOC services under the direction of the clinical pharmacist. All phone calls are directly observed by a clinical pharmacist.

**Description of Coordination With Other Practice Settings During TOC:**

Information is obtained from the EHR for patients who received care at the associated health system. For patients who received care outside the health system, the facility is contacted to obtain discharge information. The nurse navigators also work to ensure the patient has any type of home-based services that are needed (e.g. palliative care, physical therapy). Referrals are made to the social work team.

**Description of Reimbursement (if applicable):**

TOC payments are bundled.

**Successes to the Program:** The pharmacist has been welcomed by those already on the interdisciplinary team. The team acknowledges that pharmacist contributions are unique and valuable with regard to the medication reconciliation and comprehensive medication review (CMR). Additionally, medical provider satisfaction with the pharmacist and nurse navigator is high. Results of the program show a reduction in readmission rate among patients who have completed the TOC service. Other successes of the program include use of enhanced billing codes, dissemination/adaptation of the model for other high-risk patient groups within the health system, and establishment of a training site for PGY-1 community pharmacy residents and PGY-2 ambulatory care residents.

**Barriers to the Program:** Barriers to the program include low patient understanding of the role of the pharmacist in general (more specifically, the TOC service itself) and a fluctuating workload. Interprofessional communication can also be more difficult in this setting when compared with practice models in which all clinicians work side by side.

## Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** Stranges PM, Marshall VD, Walker PC, Hall KE, Griffith DK, Remington T. A multidisciplinary intervention for reducing readmissions among older adults in a patient-centered medical home. *Am J Manag Care*. 2015;21(2):106-113.

The purpose of this study was to evaluate the effectiveness of a multidisciplinary practice model consisting of medical providers, clinical pharmacists, and social workers on reducing 30-day all-cause readmissions. Adults 60 years or older discharged from a large academic medical center were included in this retrospective study. Patients were grouped as either receiving the primary care-based transitional care program (intervention group) or usual care (control group) after an index hospitalization. Only 1 index hospitalization was included per patient. All-cause 30-day readmission rates between propensity score-matched study groups were analyzed by intention-to-treat, per protocol, and as-treated methods. Secondary outcomes included time to readmission, subgroup analysis, process measures, and cost avoidance influence of covariates on chance of readmission measured by logistic regression. Over 27 months, 19,169 unique patients had 18,668 index hospitalizations and 572 interventions scheduled after discharge. Among matched subjects, 30-day readmission rates were not significantly different between those scheduled for the intervention and those never scheduled (21% vs 17.3%, respectively;  $P = .133$ ). However, when those completing the intervention ( $n = 217$ ) were examined, readmission rates were significantly reduced (11.7% vs 17.3%, respectively;  $P < .001$ ). Likewise, time to readmission was significantly

longer among those receiving the intervention ( $18 \pm 9$  days compared with  $12 \pm 9$  days with usual care;  $P = .015$ ) and potential cost avoidance was observed only when the intervention was completed. The authors concluded that a community-based multidisciplinary transitional care program may reduce hospital readmissions among older adults.

**CITATION:** Otsuka SH, Sen S, Melody KT, Ganetsky VS. A practical guide for pharmacists to establish a transitions of care program in an outpatient setting. *J Am Pharm Assoc* (2003). 2015;55(5):527-33.

The purpose of this study was to evaluate the effect of TOC follow-up and counseling performed by a pharmacist, within a physician's practice, on 30-day hospital readmissions among Medicare patients compared with the current standard of care. A pharmacist contacted patients over the phone who were  $\geq 65$  years with Medicare insurance following hospital discharge to perform medication reconciliation, review discharge instructions, and schedule a follow-up appointment ( $n = 34$ ). At this follow-up appointment, the pharmacist reviewed the patient's electronic medical record (EMR) and communicated recommendations to the physician. The current standard of care (which does not involve a pharmacist) at a similar local physician practice was used as a comparative group ( $n = 45$ ). There was not a statistically significant difference in 30-day readmission rates; however, there was a trend toward decreased readmission between the control (26.7%) and intervention (14.7%) groups and nearly a statistically significant decrease in readmission rates when comparing face-to-face versus telephone interactions with a pharmacist ( $P = .05$ ).

## COMMUNITY PHARMACY

### MARION, OHIO & CINCINNATI, OHIO

**Description of Practice Setting:** Supermarket chain pharmacy

**Description of Pharmacist Involvement in TOC:** Community pharmacists partner with hospitals and/or insurers to identify eligible patients for discharge medication therapy management (MTM) services. Upon identification of eligible patients, pharmacists schedule an appointment for a face-to-face MTM session at the pharmacy. Ideally, the appointment occurs as soon as possible after discharge to allow the pharmacist to determine and resolve any medication-related problems. During the MTM session, the pharmacist reviews and reconciles the patient's medications and provides counseling on medications and the patient's health conditions. The pharmacist can also provide counseling on "red flags" or warning signs that the patient's condition is deteriorating, indicating they may need to seek follow-up care. The pharmacist provides each patient with an updated medication list and a medication action plan consistent with other MTM services. A follow-up phone call occurs 7 to 14 days after the initial intervention.

**Description of Technician and/or Student Involvement in TOC:** Technicians and student pharmacists are used to identify patients in the hospital at discharge and refer them to the pharmacy for the MTM service. Additionally, student pharmacists and technicians facilitate the transfer of patient records or other pertinent discharge information necessary for the pharmacist to perform a comprehensive medication review.

**Description of Coordination With Other Practice Settings During TOC:** Since community pharmacists are notified when patients are discharged, coordination with other practices is imperative. Pharmacists can coordinate with the hospital directly or with insurance programs, such as managed Medicaid insurance programs, for patient identification. To appropriately facilitate TOC and proper handoff, the pharmacist needs to coordinate

and communicate with the patient's primary care physician or other specialists as necessary.

**Description of Reimbursement (if applicable):** There are multiple ways pharmacists can be compensated for the MTM services provided at discharge. One method is through direct compensation from the insurance company through comprehensive medication review (CMR) and MTM codes through MTM platforms. Additionally, the pharmacy can partner with hospitals to receive compensation through a shared savings program and a reduction in readmissions.

**Successes to the Program:** The community pharmacy is able to establish partnerships and meaningful relationships with local hospitals and/or insurance companies. The pharmacy can also determine which patient population is most in need of these services and tailor the program to meet the needs of the hospitals or geographic location. The face-to-face nature of the program's intervention and ability of the pharmacist to perform interventions and ensure patient understanding, especially in areas with low health literacy, ensure patients receive the most effective care. Because patients frequently visit the pharmacy, especially in grocery stores, patients can coordinate their appointments with other errands. This can be a huge asset in increasing the success rate of patients presenting to the appointment. In the program that partnered with a managed Medicare insurer, approximately 63% of patients presented for their appointment.

**Barriers to the Program:** Patients may still feel ill shortly after discharge and thus may not want to come to the pharmacy. This limits the ability to reach 100% of the patients who need services. In particular, patients insured through Medicaid may have limited access to reliable transportation, especially in rural communities. Contacting patients to schedule an appointment at the pharmacy can be challenging, especially if patients do not

have reliable phone numbers. It can be difficult to determine which patients may benefit most from the services as well. Number of medications was not associated with medication-related needs (i.e. some patients with few medications needed significant help and vice versa). Obtaining discharge information and information related to the patient's hospital stay can be difficult but is important to providing the highest quality of care to the patient. It can also be difficult to track which

recommendations were acted upon by primary care physicians, as follow-up information is not typically provided by the primary care physician and patients may receive care at multiple pharmacies. Some patients require significant education and/or interventions after discharge, which can make appointments lengthy. It is possible to work this service into the dispensing workflow but extra time may need to be allotted for the pharmacist.

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## Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** Kelling SE, Bright D, Ulbrich TR, Sullivan DL, Gartner J. Development and implementation of a community pharmacy medication therapy management-based transition of care program in the managed Medicaid population. *Innovations in Pharmacy*. 2013;4(4): Article 137.

The goal of this study was to develop, implement, and evaluate a community pharmacy-based TOC program in collaboration with a managed Medicaid insurer. The insurer used health-systems claims data to identify patients recently discharged from a health care facility. Eligible patients included those 18 years and older who resided in the county in which the supermarket chain pharmacy was located, were insured by the managed Medicaid plan, and were hospitalized within the past 14 days. Potential participants were eligible regardless of where they typically obtained prescription medications. Contact information and prescription claims records for those individuals meeting the inclusion criteria were sent to an Internet-based MTM platform and loaded into a database unique to this project. Study pharmacists contacted eligible patients to invite them to participate in a face-to-face comprehensive medication review with telephone follow-up. Pharmacists attempted to contact patients via phone until they scheduled an appointment, refused the service, or were documented as being unable to be reached on at least 3 different dates and times. Patients could be seen at 1 of 2 pharmacies located in the county or at a local Federally Qualified Health Center (FQHC) if the patients received primary care at that facility. Pharmacists completed a CMR including

medication reconciliation whenever possible. Recommendations were made to the patient and/or prescriber via phone or fax or electronic health record (EHR; for patients of the FQHC) as appropriate. Patients were mailed a copy of their personal medication record and medication-related action plan. Telephone follow-up typically occurred within 10 to 14 days after the encounter.

**CITATION:** Luder HR, Frede SM, Kirby JA, et al. TransitionRx: Impact of community pharmacy postdischarge medication therapy management on hospital readmission rate. *J Am Pharm Assoc* (2003). 2015;55(3):246-254.

The goal of this study was to develop, implement, and evaluate a community pharmacy-based TOC program called TransitionRx. Patients >18 years of age and discharged home from 2 local hospitals with a diagnosis of heart failure, chronic obstructive pulmonary disease (COPD), or pneumonia were included. Patients were recruited from 2 local hospitals and referred to the large grocery store community pharmacy chain for MTM services with the pharmacist within 1 week of discharge. In the usual care group, 20% of patients were readmitted within 30 days, whereas only 7% of patients in the intervention group were readmitted. Controlling for whether the patient saw a nurse and other statistically significant univariate differences at baseline such as sex, insurance, and number of chronic diseases, the pharmacist intervention significantly reduced hospital readmissions (odds ratio [OR] 0.072 95% confidence interval [CI] 0.008-0.628; P = .017)

## INPATIENT ACADEMIC MEDICAL CENTER COLUMBIA, SOUTH CAROLINA

**Description of Practice Setting:** TOC services are provided at a Level 1C teaching hospital. The hospital offers a full range of patient care services leveraging state-of-the-art technology, education, and research. Comprehensive health care is provided through primary care, tertiary care, and long-term care in areas of medicine, surgery, psychiatry, physical medicine and rehabilitation, cardiology, neurology, oncology, dentistry, geriatrics, and extended care. This inpatient academic medical center has 204 skilled nursing beds and includes acute medical, surgical, psychiatric, and long-term care. The hospital provides primary, secondary, and some tertiary care. This academic medical center also provides outpatient care at the main facility and through 7 community-based outpatient clinics.

### **Description of Pharmacist Involvement in TOC:**

The TOC pharmacist is primarily responsible for education on chronic disease states prior to discharge, the patient disease-specific plan of care, and arranging outpatient primary care appointments postdischarge. Upon consultation, the TOC pharmacist educates the patient and identifies orders that need to be clarified and supplies to be dispensed. The TOC pharmacist communicates this pertinent information to the discharge pharmacists who perform medication reconciliation at discharge. Patients who are deemed to have limited health literacy or other barriers to education/self-care are identified by the TOC pharmacist. These patients require a call to a family member who handles their medication or supervises medication administration. The TOC pharmacist communicates with outpatient providers regarding patient needs related to ambulatory care sensitive hospitalizations, which are hospitalizations for conditions that could be prevented by interventions in primary care. The TOC pharmacist also recommends various consults to be placed based upon patient needs related to chronic conditions (e.g. home-based primary care, diabetes

center of excellence, primary care, care coordination of home telehealth, subspecialty clinic).

During patient education, the pharmacist assesses medication adherence and patients' barriers to learning and/or diminished capacity to consistently adhere to self-care behaviors. The pharmacist also identifies psychosocial issues, such as lack of self-management skills, unmet functional needs, lack of social support, and living alone, which have all been associated with adverse outcomes, including readmission and mortality. Lastly, the TOC pharmacist follows up with the patient short-term via telephone or clinic visits to manage pharmacotherapy for ambulatory care sensitive conditions postdischarge until the posthospitalization visit is completed by primary care. Use of the discharge summary to communicate the needs of the patient to the outpatient provider is encouraged.

Education also includes discussing the treatment plan with multidisciplinary teams. These teams include attending physicians, resident physicians, clinical pharmacy specialists, pharmacy students, and pharmacy residents. The TOC pharmacist is also responsible for updating disease-specific discharge instruction templates as requested by medicine service and educating medical staff regarding formulary management, approved clinical guidelines, and cost-effective use of drugs.

### **Description of Technician and/or Student Involvement in TOC:**

Technician involvement includes retrieval of medications from the main outpatient pharmacy dispensed at discharge and "home medications" that were stored in the pharmacy on admission, creation of home medication list at discharge, and informing the patient how to obtain refills, how many medication changes were made during hospitalization, and how to contact the pharmacy/provider with questions. Technicians may also update nonfacility

medications within the electronic medical record (EMR), mail bulk items not returned to patients upon discharge, calls patients' caregivers if further education is necessary, and review the Provider Discharge Medication Reconciliation note to compare inpatient and outpatient medication lists. The technician notifies the discharge pharmacist of discrepancies that need to be addressed with the provider and ensures that all items are labeled appropriately prior to being given to the patient. Additional technician responsibilities include coordinating with procurement and/or kitchen staff when supply items or formula are needed for discharge. The technician notifies the patient's nurse when the discharge process is completed.

Student involvement in TOC includes completing an admission medication reconciliation note to be cosigned by a clinical pharmacy specialist, assisting with discharge medication reconciliation by delivering medications and pharmacy home medication list to the patient, and completing discharge counseling/education under the supervision of a clinical pharmacy specialist or pharmacy resident.

**Description of Coordination With Other Practice Settings During TOC:** The TOC pharmacist coordinates with the outpatient pharmacy supervisor to ensure the pharmacy has an adequate stock of medications commonly prescribed at discharge, alerts outpatient physician/physician extender of discharge summary and recommended timeframe for follow-up in the outpatient setting, coordinates with other outpatient resources to determine criteria for enrollment (e.g. care coordination of home telehealth, home health aide, home-based primary care, community diabetes self-management education programs), and communicates to outpatient provider any medication changes/insulin titration/self-care behavior modifications made from discharge to posthospitalization primary care visit.

**Description of Reimbursement (if applicable):** There is no reimbursement at this time.

**Successes to the Program:** The program provides multiple resources to patients (e.g. when to call their outpatient provider postdischarge, frequent follow-up provided via phone or face-to-face with TOC pharmacist, integrated medical records system for improved communication between inpatient and outpatient providers, increased accountability for health care providers, improved communication between providers, and improved patient education regarding chronic disease state management and navigation of the health care system).

**Barriers to the Program:** Appointments must be scheduled prior to discharge to improve appointment keeping behaviors for patients. Additionally, assignment of patients to primary care teams varies and may be altered, and primary care providers outside of the health care system are not contacted postdischarge.

**From the Eyes of a Technician and/or Student Champion:** "As a student pharmacist, the services I provide to patients who are transitioning from inpatient to outpatient settings can help improve treatment, adherence, and overall outcomes. Under the supervision of a pharmacist, I am able to practice patient interviewing along with proper utilization of a patient's profile in order to compile the most accurate list of medications the patient is currently taking. I can then use this list to discuss with the patient their medications and address any barriers to medication adherence they may have. This not only allows me to examine possible drug interactions with new or over-the-counter medications, but also gives me the opportunity to propose and/or implement strategies for improving patient compliance. In addition to medication reconciliation, I can counsel patients on any new medications they may receive at discharge. Through counseling services, I can provide essential education regarding adherence and how to differentiate between common side effects versus more adverse side effects."

"Overall, TOC services that student pharmacists provide not only contribute to the well-being of

the patient, but also yield excellent experience in patient interviewing, counseling, interdisciplinary

collaboration, and pharmacotherapeutic recommendations.”

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## Literature Review of Novel Programs/Best Practices in TOC in Similar Settings

**CITATION:** Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease hospitalization: a randomized trial. *Ann Intern Med.* 2009;150(3):178-187.

This study aimed to test the effects of an intervention designed to minimize hospital utilization after discharge in 749 English-speaking hospitalized adults. The intervention included a nurse discharge advocate working with patients during their hospitalization to arrange follow-up appointments, confirm medication reconciliation, and conduct patient education. Nurses provided individualized booklets to each patient, which were subsequently sent to the primary care physician. A clinical pharmacist then followed up with patients 2 to 4 days after discharge to reinforce the discharge plan and discuss medications. The study found that participants in the intervention group had a lower rate of hospital utilization than those receiving usual care.

**CITATION:** Coleman EA, Parry C, Chalmers S, Min SJ. The Care Transitions Intervention: results of a randomized trial. *Arch Intern Med.* 2006;166(17):1822-1828.

Seven hundred and fifty patients from a large integrated delivery system in Colorado were studied to determine the effects of care transition interventions. Between September 1, 2002, and August 31, 2003, patients aged 65 years or older who were admitted to the hospital with 1 of 11 prespecified conditions were randomized to receive usual care or a care transition intervention. This intervention involved tools to promote cross-site communication, encouragement to take a more active role in their care, and guidance from a “transition coach.” The study found that the intervention group had lower rates of rehospitalization at 30 days and 90 days.

**CITATION:** Walker P, Bernstein S, Jones J, et al. Impact of a pharmacist-facilitated hospital discharge program: a quasi-experimental study. *Arch Intern Med.* 2009;169(21):2003-2010.

The objectives of this study were to characterize medication discrepancies at hospital discharge and test the effects of a pharmacist intervention on health care utilization following discharge. A total of 724 patients, all at high risk for medication-related problems following discharge, were divided into intervention and control groups. The intervention group received a medication therapy assessment, medication reconciliation, screening for adherence concerns, patient counseling and education, and postdischarge telephone follow-up. Medication discrepancies at discharge were identified in 33.5% of the intervention group and 59.6% of control patients. Readmission rates did not differ significantly between groups at 14 days and 30 days, nor did emergency department visits within 72 hours.

**CITATION:** Constantino ME, Frey B, Hall B, Painter P. The influence of a postdischarge intervention on reducing hospital readmission in a Medicare population. *Popul Health Manag.* 2013;16(5):310-316. Hospital readmissions in the Medicare population are expected to increase with the projected growth in Medicare enrollment. The authors examined whether a postdischarge telephonic intervention with patients reduced 30-day hospital readmissions compared with a matched-control population. A total of 48,538 Medicare members received the intervention. Of these patients, 4504 (9.3%) were readmitted to the hospital within 30 days while 5598 (11.5%,  $P < .0001$ ) patients were readmitted from the control group. Of note, although emergency department visits decreased in the intervention group, physician office visits increased. The authors estimated a cost savings of \$499,458 for members

who received the intervention with \$13,964,773 in savings for the health care plan.

**CITATION:** Shah M, Norwood CA, Farias S, Ibrahim S, Chong PH, Fogelfeld L. Diabetes transitional care from inpatient to outpatient setting: pharmacist discharge counseling. *J Pharm Pract.* 2013;26(2):120-124.

The authors aimed to evaluate the effect of inpatient pharmacist discharge counseling on outpatient diabetes medication adherence. Pharmacist counseling prior to usual care with emphasis on diabetes medication dosing, side effects, clinical benefits, refills, and the importance of adherence was provided to the intervention group. Authors found that patients in the intervention group had greater diabetes medication adherence rates at 150 days' postdischarge as compared with the usual care group. The intervention group also had higher rates of follow-up visits and larger reductions in HbA1c.

**CITATION:** Peter D, Robinson P, Jordan M, Lawrence S, Casey K, Salas-Lopez D. Reducing readmissions using teach-back: enhancing patient and family education. *J Nurs Adm.* 2015;45(1):35-42.

The authors focused on the association between inadequate care transitions in patients with heart failure and subsequent costly readmissions. Nurses at a 951-bed tertiary care facility employed the teach-back method to patients hospitalized with heart failure. Patients were asked a series of open-ended questions over the course of 3 days regarding their heart failure treatment. Patients in the intervention group were found to have a 12% lower readmission rate than those receiving usual care. A reduced length of stay for the second hospitalization was also found, possibly attributable to patients' more complete understanding of their disease and treatment.

**CITATION:** Anderson SL, Marrs JC, Vande Griend JP, Hanratty R. Implementation of a clinical pharmacy specialist-managed telephonic hospital discharge follow-up program in a patient centered medical home. *Popul Health Manag.* 2013;16(4):235-241.

Authors aimed to examine the feasibility and characteristics that define successful implementation of a Clinical Pharmacy Specialist (CPS) telephonic hospital discharge follow-up quality improvement initiative. CPSs attempted to contact adult patients who were recently discharged from a safety-net hospital between July 1, 2010, and June 30, 2011. Patients who received the intervention were more likely to attend a hospital discharge follow-up appointment (66.2% vs 44.5%,  $P < .01$ ) and had lower rates of readmission at 30 days (22 vs. 52,  $P < .01$ ).

**CITATION:** Kind AJ, Jensen L, Barczy S, et al. Low-cost transitional care with nurse managers making mostly phone contact with patients cut rehospitalization at a VA hospital. *Health Aff (Millwood).* 2012;31(12):2659-2668.

In order to improve care coordination among veterans with high-risk conditions, the Coordinated-Transitional Care (C-TraC) Program was designed. Authors aimed to determine the rate of rehospitalizations in patients enrolled in the C-TraC program compared with a control group. Patients enrolled in the program worked with nurse care managers to complete medication reconciliation before and after discharge. A scheduled phone call was completed within 48 to 72 hours of discharge, and the nurse ensured that an active plan for posthospital medical follow-up was in place. The nurse case manager gave the veteran a brightly colored half-page handout documenting the veteran's red flags, dates and times for the follow-up call and posthospital medical follow-up appointment, and contact information for herself and the VA triage service with instructions to call if red flags or other concerns arose. Authors found that patients in the C-TraC program experienced one-third fewer rehospitalizations for a net savings of \$1225 per patient of programmatic costs.

**CITATION:** Hansen LO, Greenwald JL, Budnitz T, et al. Project BOOST: effectiveness of a multihospital effort to reduce hospitalization. *J Hosp Med.* 2013;8(8):421-427.

Authors aimed to determine the effect of Project BOOST (Better Outcomes for Older adults through

Safe Transitions) on rehospitalization rates and length of stay. Pre- and post-readmission rates and length of stay data at 11 hospitals utilizing Project BOOST tools were examined. The average rate of 30-day rehospitalization in BOOST units was 14.7% prior to implementation and 12.7% 12 months later. This correlated to an absolute reduction of 2% and a relative reduction of 13.6%. Matched control units were 14.0% in the preintervention period and 14.1% in the postintervention period, demonstrating that participation in Project BOOST is associated with a decrease in readmission rates.

**CITATION:** McCoy KA, Bear-Pfaffendof K, Foreman JK, et al. Reducing avoidable hospital readmissions effectively: a statewide campaign. *Jt Comm J Qual Patient Saf.* 2014;40(5):198-204.

The Reducing Avoidable Readmissions Effectively (RARE) Campaign was designed and implemented among various providers in Minnesota to prevent avoidable hospital readmissions within 30 days of discharge. Each hospital had the option of participating in 1 of 3 learning collaboratives, Care Transitions Intervention, Project RED (ReEngineered Discharge), or SAFE Transitions of Care. Authors found that between the 82 hospitals enrolled in the RARE Campaign, over 7000 readmissions were prevented and patients avoided over 28,000 nights in a hospital.

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