

**THE CARE TRANSITIONS INTERVENTION BUSINESS PLAN**

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## **A) EXECUTIVE SUMMARY**

The Care Transitions Intervention is a patient-centered intervention designed to improve quality and contain costs for patients with complex care needs as they transition across settings. During an episode of illness, patients may receive care in multiple settings, often resulting in fragmented and poorly executed transitions. Because patients and their caregivers are often the only common thread moving across settings, together they comprise an appropriate target for an intervention designed to improve the quality of transitional care.

During the 4-week Care Transitions Intervention, patients with complex care needs receive specialized tools and learn self-management skills for ensuring their needs will be met when their conditions require that they receive care across multiple settings. Patients who have received this intervention experienced improved self-management knowledge and skills, primarily in the areas of medication management, condition/disease management, and greater confidence about what was required of them during the transition and beyond. Greater knowledge and confidence in self-care skills translated into patients (and family caregivers) enhanced ability to ensure that a greater proportion of their needs were being met during this vulnerable time.

Encouraging patients and their caregivers to assert this more active role in their care transitions results in reduced re-hospitalization rates. Based on data from a multi-site randomized control trial, intervention patients had lower re-hospitalization rates at 30 (8.3 vs. 11.9 p=0.048) and 90 days (16.7 vs. 22.5 p=0.043) than patients who did not receive the intervention. Additionally, Intervention patients had lower re-hospitalization rates for the same condition that precipitated the index hospitalization at 90 (5.3 vs. 9.8 p=0.039) and 180 days (8.6 vs. 13.9 p=0.046) than controls. Concurrently, the Care Transitions Intervention reduces hospital costs. 375 older patients who received the intervention were followed for 180 days and their reduction in hospital utilization translated into an annual savings of \$295,594.

To facilitate implementation in both managed care and fee-for-service environments, the Care Transitions Intervention was designed to adapt to the current incentives and pressures operating in these respective systems. To date, 140 leading health care organizations have successfully implemented this model under a variety of different financing structures.

Although national efforts call for greater integration of health care delivery and a more patient-centered focus in care, major changes are not imminent. In the meantime, it is critical that patients, providers, and health care organizations are prepared to collaborate towards a common goal of improving care within the existing constraints of the U.S health care system. The Care Transitions Intervention represents exactly this sort of interim step to bring our health care delivery into alignment with national goals. With its patient centered focus and enhanced continuity across health care settings, the Care Transitions Intervention addresses the serious quality and safety deficiencies that occur during care transitions and may potentially reduce the rate of hospital re-admissions.

## **B) PROGRAM DESCRIPTION**

The Care Transitions Intervention CTI was designed to meet the needs of persons with complex care needs who require care across settings. Listening to patients' experiences through focus groups revealed that they often do not feel prepared for the care they need in subsequent settings. Being prepared included not only knowing what was to occur next, but also understanding their role in the process. They also reported receiving conflicting advice on how to manage their condition, not knowing who to contact with questions, and having to complete tasks that health care providers had left undone.

The overriding goal of the CTI is to improve care transitions by providing patients with the tools and support that promote knowledge and self-management of their condition in order to

better prepare them for their transition as they move from hospital to home. The CTI focuses on four conceptual areas, referred to as pillars, based on the domains that emerged from the focus groups:

1. Medication self-management: Patient is knowledgeable about medications and has a medication management system.
2. Use of a dynamic patient-centered record: Patient understands and utilizes the Personal Health Record (PHR) to facilitate communication and ensure continuity of care plan across providers and settings. The patient or informal caregiver manages the PHR.
3. Primary Care and Specialist Follow-Up: Patient schedules and completes follow-up visit with the primary care physician or specialist physician and is empowered to be an active participant in these interactions.
4. Knowledge of Red Flags: Patient is knowledgeable about indications that their condition is worsening and how to respond.

Table 1. Care Transitions Intervention Activities by Pillar and Stage of Intervention

Four Pillars				
Stage of Intervention	Medication Self-Management	Patient-Centered Record	Follow-Up	Red Flags
Goal	<ul style="list-style-type: none"> <li>● Patient is knowledgeable about medications and has a medication management system.</li> </ul>	<ul style="list-style-type: none"> <li>● Patient understands and utilizes a Personal Health Record (PHR) to facilitate communication and ensure continuity of care plan across providers and settings. The patient manages the PHR.</li> </ul>	<ul style="list-style-type: none"> <li>● Patient schedules and completes follow-up visit with Primary Care Provider/ Specialist and is empowered to be an active participant in these interactions.</li> </ul>	<ul style="list-style-type: none"> <li>● Patient is knowledgeable about indications that condition is worsening and how to respond.</li> </ul>
Hospital Visit	<ul style="list-style-type: none"> <li>● Discuss importance of knowing medications and having a system in place to ensure adherence to the regimen</li> </ul>	<ul style="list-style-type: none"> <li>● Explain PHR.</li> </ul>	<ul style="list-style-type: none"> <li>● Recommend Primary Care Provider follow-up visit.</li> </ul>	<ul style="list-style-type: none"> <li>● Discuss symptoms and drug reactions.</li> </ul>
Home Visit	<ul style="list-style-type: none"> <li>● Reconcile pre- and post-hospitalization medication lists.</li> <li>● Identify and correct any discrepancies.</li> </ul>	<ul style="list-style-type: none"> <li>● Review and update PHR.</li> <li>● Review discharge summary.</li> <li>● Encourage patient to update and share the PHR with Primary Care Provider and/or Specialist at follow-up visits.</li> </ul>	<ul style="list-style-type: none"> <li>● Emphasize importance of the follow-up visit and need to provide Primary Care Provider with recent hospitalization information.</li> <li>● Practice and role-play questions for Primary Care Provider.</li> </ul>	<ul style="list-style-type: none"> <li>● Assess condition.</li> <li>● Discuss symptoms and side effects of medications.</li> </ul>
Follow-Up Calls	<ul style="list-style-type: none"> <li>● Answer any remaining medication questions.</li> </ul>	<ul style="list-style-type: none"> <li>● Remind patient to share PHR with Primary Care Provider/ Specialist.</li> <li>● Discuss outcome of visit with Primary Care Provider or Specialist.</li> </ul>	<ul style="list-style-type: none"> <li>● Provide advocacy in getting appointment, if necessary.</li> </ul>	<ul style="list-style-type: none"> <li>● Reinforce when/if Primary Care Provider should be called.</li> </ul>

The target population includes persons with complex care needs defined as having multiple chronic conditions who are anticipated to require care across multiple settings. The CTI is a 4-week program. During this time, patients with complex care needs receive special tools, are supported by a Transitions Coach, and learn self-management skills that are essential for ensuring their needs are met when care is received across multiple settings. The two main mechanisms of this program are the Personal Health Record (PHR) and the Transition Coach. Both of these are designed to empower and educate patients to meet their health care needs and to ensure continuity of care in the transition(s) following discharge. Table 1 outlines the role of the Transition Coach with respect to each of the four pillars throughout the transition period.

The PHR is a dynamic record book consisting of the elements essential for facilitating productive interdisciplinary and patient-provider contacts during current and future care transitions. These elements include a record of the patient's medical history, medications, and allergies, a list of red flags or warning signs, a structured checklist of critical activities that need to take place prior to discharge (such as instructions and dates of follow-up appointments), and space for the patient to record their questions and concerns. In contrast to hospital or physician-maintained medical records, the PHR is maintained and updated by the patient and, as necessary, by the Transition Coach. The intent behind the design of the PHR was that it needs to be simple and easily integrated into the paper or electronic medical record formats of practice settings.

The Transition Coach functions as a facilitator of interdisciplinary collaboration across the transition, coaching the older patient and caregiver to play a central and active role in the formation and execution of the plan of care. The primary role of the Transition Coach is to encourage self-management and direct communication between the patient/caregiver and primary care provider rather than to function as another health care provider, per se.

Initial contact between the patient and Transition Coach is made in the hospital, and is followed by a home (or SNF) visit shortly after discharge, and three phone calls at approximately 2, 7, and 14 days post-discharge. Ideally, the home visit takes place within 24-48 hours following discharge.

During the hospital visit, the Transition Coach introduces herself and the program to the patient and conducts the initial session aimed at imparting skills for greater self-management. The hospital visit is designed to help patients and their caregivers understand and use the PHR and the Discharge Checklist, and to prepare patients and caregivers for discharge.

The follow-up visits in the home, along with the accompanying phone calls, are designed to provide continuity across the transition in order to empower patients to take a more active and informed role in managing their care. During these interactions, the Transition Coach expands upon the information provided in the initial hospital visit and the patient and Coach rehearse or role-play effective communication strategies to prepare the patient to clearly articulate his or her needs to the primary care physician, specialist, or home care professional. The Transition Coach also reviews with the patient any red flags, warning symptoms, or signs that indicate a condition is worsening. They provide education about the initial steps to take to manage these red flags and when the patient should contact the appropriate health care professional.

Based on data from a multi-site randomized control trial, intervention patients had lower re-hospitalization rates at 30 (8.3 vs. 11.9 p=0.048) and 90 days (16.7 vs. 22.5 p=0.043) than patients who did not receive the intervention. Additionally, Intervention patients had lower re-hospitalization rates for the same condition that precipitated the index hospitalization at 90 (5.3 vs. 9.8 p=0.039) and 180 days (8.6 vs. 13.9 p=0.046) than controls.

Concurrently, the Care Transitions Intervention reduces hospital costs. 375 older patients who received the CTI were followed for 180 days and their reduction in hospital utilization translated into an annual savings of \$295,594<sup>1</sup>.

## **C) MARKET ANALYSIS**

### **1) INDUSTRY DESCRIPTION, SCOPE, AND TRENDS**

As national awareness of medical errors and quality deficiencies that occur within particular care settings continues to rise, an expanding evidence base points to similar problems that occur during care transitions. The Joint Commission on Accreditation of Healthcare Organizations' increased focus on medication reconciliation and discharge planning, and the National Quality Forum's examination of performance measures for post-hospitalization care coordination are examples of efforts to improve the care transitions process. The Institute of Medicine is advocating pay for performance approaches to incentivize improved care coordination across settings. As a result of these and other publicized efforts to improve patient safety during transfers, national attention to transitional care is increasing, and the need for strategies to determine how best to incorporate the patient and family caregiver into efforts to improve quality during care transitions is growing.

### **2) MAJOR CUSTOMER PROFILE**

Under Medicare Advantage payment structure, the financial incentives for reducing hospital readmission are closely aligned with the goals of the intervention. A Medicare Advantage program may choose to implement the intervention based on estimates that the cost savings associated with the reduction in hospital re-admissions exceed the costs associated with conducting the intervention.

Under traditional fee-for-service Medicare, a hospital that operates at high capacity may choose to invest in this intervention to reduce hospital readmissions among complex older patients who would otherwise occupy beds that could be used to support higher revenue patients. In addition, in certain states, advance practice nurse Transition Coaches can bill for the home visits associated with this model, providing another financing mechanism.

Finally, a large ambulatory clinic may choose to re-assign a current registered or advance practice nurse to the Transition Coach role in an attempt to improve overall clinic efficiency (RVUs) for post-hospital follow visits. Clinics that operate under capitation or traditional Fee-for-Service Medicare would benefit from this program as many of the inefficiencies inherent in clinic visits for recently hospitalized patients are poorly reimbursed or not reimbursed at all. Thus greater efficiency could allow the physician to see more patients during a session. Typically, these visits are highly inefficient with practitioners having to spend considerable time attempting to understand what transpired in the hospital, reconciling medications, and helping the patient understand his or her role in self-care. Having a Transition Coach better prepare patients for their ambulatory follow up visits could enhance overall clinic productivity.

### **3) PROBLEMS, OBSTACLES, AND OPPORTUNITIES**

Potential limitations of the CTI must be explored. The primary weakness of the intervention involves attitudinal, organizational, and structural barriers to adoption. Currently, the health care system lacks financial incentives to improve the quality of transitional care, in part because of a lack of understanding of the role poor transitions play in medication errors, re-hospitalization, and overall poor care. Moreover, implementation of the intervention may face resistance from within health care settings if the role of the Transition Coach is perceived to overlap with discharge planning and home health nursing roles.

One of the primary challenges to the success of the proposed intervention involves difficulties related to encouraging acutely ill patients to take charge of their health care needs. In cases where this is not possible, the intervention focuses on the informal caregiver (when available) as the target and primary recipient of the intervention. It is also critical that health care providers be receptive to patients' new and emergent levels of activation and participation in meeting their health care needs and maintaining their own records.

The CTI has a number of strengths and advantages that make it unique and amenable to adoption in a variety of health care systems and settings. First, the design of the intervention is consistent with recommendations provided in the recent IOM Chasm report, which advocates health care models that are patient-centered and collaborative, enhancing inter- and intra-team communication and coordination of care among health care professionals.

Second, the CTI is designed to impart skills that will be ideally sustained beyond the current episode and be applicable to subsequent acute health crises. Further, the cost of implementing the intervention is relatively modest; this intervention was explicitly designed not to create an entirely new layer of care, but rather to build upon the existing elements found in most geographic areas.

Third, the CTI helps reduce costs by redundancy and waste. This includes unnecessary utilization, tests, and use of expensive prescriptions.

Finally, one of the greatest strengths of the CTI is the fact that the intervention design is standardized and replicable, but also flexible enough to allow responsiveness to patient's individual needs. Since the intervention is not disease-specific in its design, the model can easily be applied to patients with a variety of chronic illnesses. This design allows the intervention to be both patient-centered and also replicable, portable, and easily evaluated in numerous patient populations and healthcare settings.

#### **4) MARKET RESEARCH**

Studies have documented that quality and patient safety are compromised during the vulnerable period when patients transition between different settings due to high rates of medication errors, incomplete or inaccurate information transfer, and lack of appropriate follow-up care. These types of problems result in patients' care needs not being met, which increases rates of recidivism to high intensity care settings and ultimately leads to greater health care costs. National 30-day readmission rates among older Medicare beneficiaries range from 15-25 percent.

#### **5) COMPETITION**

The reduced re-hospitalization rates resulting from the CTI are comparable to those in other published programs. However, the CTI is a unique program with several key distinctions from other care management or advance practice nurse led transitional care programs. The first distinction is in the level of intensity. In prior published studies of interventions, the health care professionals assumed a primary role in managing the care plan during the post-hospital transition period. In this program, the Transition Coach assumed a supportive role and did not function as a health care provider, per se. In this less intense [and less costly] role, the Transition Coach could manage a greater number of patients and had less potential for redundancy with existing health care practitioners such as discharge planners, home health care nurses, and case managers. The second distinction concerns the duration of the intervention and its potential to be sustained over time. The CTI was designed not only to improve the immediate transitions that patients and their caregivers faced, but to also provide them with skills and tools that can be applied to future care transitions.

### **D) PRODUCT AND SERVICES**

#### **1) CUSTOMER NEEDS**

During an episode of illness, older patients may receive care in multiple settings putting them at risk for fragmented care and poorly executed care transitions. Because of financial pressures to discharge patients quickly, hospital discharge planners often have limited time to arrange for transfer out of the hospital. Primary care physicians and home health nurses often maintain that they do not receive adequate information about what transpired in the hospital or

skilled nursing facility. Thus, the negative consequences of fragmented care may include the duplication of services, inappropriate or conflicting care recommendations, medication errors, patient and caregiver confusion and distress, and higher costs of care due to rehospitalization and use of the emergency department, all which could be prevented via the facilitation of a smooth transition from hospital to home.

Virtually all stakeholders [patients, family caregivers, clinicians, providers, and payors] see the value in reducing hospital readmissions and reducing medication errors. The CTI accomplishes this while simultaneously promoting more patient-centered care. Patients who participated in the randomized controlled trial were asked to identify a personal goal they wished to achieve in the next 30 days. Results from the trial revealed that patients who received the CTI and identified a goal related to functional status or symptom control were significantly more likely to report that they had achieved their stated goal ( $p < 0.05$ ) than patients who did not receive the intervention.

In order to better understand which of the different components of the model were regarded as most helpful by the patients who experienced the intervention, an adjunctive qualitative descriptive study was conducted. The primary findings of this study suggest that the intervention led to improved self-management knowledge and skills for many patients, primarily in the areas of medication management, condition management and patient confidence about what was required of them during the transition and beyond. The findings suggest that the continuity of the coaching relationship fostered a sense of caring, safety, and predictability about the transition, which contributed to greater patient investment in the program.

## **2) PRESENT STAGE**

The Care Transitions Intervention is ready for immediate use and has been successfully implemented in more than 140 leading healthcare organizations. Support for program implementation is offered via a website, [www.caretransitions.org](http://www.caretransitions.org), where the essential tools for adopting this care model are available free of charge.

The Care Transitions Program has developed several tools to facilitate implementation, including an training manual and accompanying training video [DVD or VHS], and tools for patients [including the Personal Health Record] and tools for Transition Coaches. The Care Transitions Program is available to provide support for organizations who decide to adopt the model.

The Care Transitions Program has also developed and tested a Care Transitions Measure (CTM), and a Medical Discrepancy Tool (MDT). The CTM is used for performance measurement and subsequent public reporting, and has been endorsed for this purpose by the National Quality Forum. The CTM has been shown to demonstrate high internal consistency and reliability and applicability for assessment across multiple sites of care (i.e., hospital to home, hospital to skilled nursing facility, skilled nursing facility to home, etc.). Patient responses to this 3-item measure predict subsequent emergency visit or rehospitalization.

The MDT is a tool for identifying and characterizing medication discrepancies that arise when patients are making the transition between sites of care. Discrepancies can be identified and categorized at either the patient level or the practitioner/health system level. MDT items are designed to be actionable and ideally to recognize problems before patients experience harm.

## **3) COPYRIGHTS**

The Care Transitions Intervention is copyrighted by the Care Transitions Program of Denver, Colorado. The Intervention is available in the public domain with no fees.

## **E) OPERATIONS**

### **1) KEY PERSONNEL**

The Care Transitions Program Team provides support for adoption of the designed and tested Care Transitions Intervention. This team has a national reputation for innovations designed to improve quality and safety throughout the care transitions process.

### **2) TRAINING AND RESOURCES**

Training materials for the Intervention are available via the program's website at [www.caretransitions.org](http://www.caretransitions.org). These materials include an introductory and training video, a protocol manual, performance measures, the CTM, and the MDT. These items are available free of charge. In addition, the website offers resources such as selected publications, examples of transition interventions, and video clips of patient's experiences.

## **F) FINANCIAL**

### **1) SUMMARY**

The annual cost for the Care Transitions Intervention totals \$74,310. This includes the salary for the Transition Coach (\$70,980), reimbursement for travel/mileage (\$2500), cellular phone, voicemail, and pager services (\$650), and reproduction of the Personal Health Record and other supplies (\$180). Because the intervention is administered within existing structures, no administrative re-structuring is required, and additional costs are minimized.

The cost of the Care Transitions Intervention must be interpreted in light of the productivity of the Transition Coach and the potential reduction in re-hospitalization rates and accompanying cost savings. The Transition Coach managed a panel of 24-28 patients at any given time. The 180-day hospital cost data suggest a semi-annual cost savings of approximately \$147,797 ([mean 180-day hospital costs in the control group minus mean 180-day hospital costs in the intervention group] multiplied by the number in the intervention group minus the 180-day costs for the intervention of \$37,155). When these costs are extrapolated to an entire year, the annual cost savings are projected to be \$295,594. However, this comparison is conservative for several reasons. The health delivery system that participated in this trial had already made great progress in reducing hospital readmissions. Thus there would be greater potential for additional reductions in health delivery systems that had not reached this level of achievement. In addition, there may be unmeasured costs of reducing hospitalization that are not accounted for in this calculation.

## 2) INCOME STATEMENT

Net Savings of Hospital Costs Attributable to the Care Transitions Intervention	Usual Care	Care Transitions Intervention (CTI)
Mean 6-month hospital costs	\$2546	\$2058
Difference in mean 6-month hospital costs	$\$2546 - 2058 = \$488$	
Difference in mean 6-month hospital costs multiplied by number of patients	$\$488 \times 379 = \$184,952$	
Subtract 6-month CTI program costs	$\$184,952 - \$37,155 = \$147,797$	
Net Savings of CTI vs. Usual Care at 6-months	<b>\$147,797</b>	
Net Savings of CTI vs. Usual Care at 12-months	<b>\$295,594</b>	