

The Care Transitions Intervention:
A Patient-Centered Approach to Ensuring Effective Transfers Between Sites of
Geriatric Care

Abstract

During an episode of illness, older patients may receive care in multiple settings; often resulting in fragmented care and poorly-executed care transitions. The negative consequences of fragmented care include duplication of services; inappropriate or conflicting care recommendations, medication errors, patient/caregiver distress, and higher costs of care. Despite the critical need to reduce fragmented care in this population, few interventions have been developed to assist older patients and their family members in making smooth transitions. This article introduces a patient-centered interdisciplinary team intervention designed to improve transitions across sites of geriatric care.

Key words:

care transitions, interdisciplinary teams, chronic illness, self-management, patient-centered, care fragmentation, medical errors.

Introduction

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. For instance, in the course of an episode of illness, a patient may interact with nurses, therapists, and physicians in a hospital, skilled nursing facility, in the home in conjunction with a home health agency and finally, in an ambulatory clinic setting. Care from these different sources is frequently not centralized or coordinated, which can result in care that is fragmented. 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 that might have been prevented via the facilitation of a smooth transition from hospital to home.

Because of financial pressures to discharge patients quickly, hospital discharge planners often have limited time to arrange for transfer out of the hospital. Rarely do they receive feedback regarding the execution or outcomes of their proposed plans. 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 that they require to effectively assume care of the patient. Finally, patient interaction with different providers across many settings often results in multiple medication prescribers. The lack of a single, accurate, and up-to-date medication list places the older patient at risk for medication and treatment errors.

Discontinuity is a major weakness in U.S. health care delivery, one that is perpetuated by funding mechanisms that do not align the needs of older frail adults or the interests of health care personnel in various settings (Boling, 1999, p. 656). The current pressures and mis-aligned financial and organizational incentives set the stage for poorly managed transitions, which

ultimately undermine the effectiveness of all involved parties and may result in additional costs for a given episode of care.

Providing cross-site interdisciplinary care has become even more challenging as these older patients receive care in multiple settings and for increasingly shorter lengths of stay. To compensate, interdisciplinary teams must become more dynamic, more complex, and make a greater effort to communicate. Broadly considered, interdisciplinary teams share goals for improving care, however membership and roles are less well defined because they often do not work in the same setting, much less for the same organization. In order to adapt, teams must learn not to be constrained by the rigid boundaries of the location or program in which they work. Greater accountability is also needed for what happens in the interstices between programs or locations of care.

Effective intervention models are needed to improve geriatric interdisciplinary team care across settings. Transitional care is defined as a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location (Author, 2003). Transitional care, which encompasses both the sending and receiving aspects of the transfer, includes logistical arrangements, education of the patient and family, and coordination among health professionals involved in the transition (Author, 2003).

To improve care transitions, a shift must occur from institution-centered team care to patient-centered team care. Because older patients and their caregivers are the only common thread linking different providers and settings, it follows that any attempt to improve care transitions would by necessity, have a patient-centered focus. This article describes an innovative patient-centered interdisciplinary team intervention (The Care Transitions Intervention),

designed to improve transitions across sites of geriatric care by focusing on patient education and empowerment.

The Care Transitions Intervention: Background and Design

To manage the needs of chronically ill older adults within the context of an increasingly complex and decentralized health care system, the authors have developed and implemented an innovative program to improve the efficiency and quality of care during the critical juncture of the transition from hospital to home. The focus of the Care Transitions Intervention was initially informed by the authors' clinical observations of a need for assistance. From this starting point, the design of the intervention was shaped by the literature on interdisciplinary teams and care transitions, and empirical evidence gathered from focus groups with chronically ill older adults and their caregivers.

In the current context of an aging population, an increased prevalence of chronic illness and morbidity, and financial incentives to discharge patients as quickly as possible, older patients are frequently required to make multiple transitions across settings to meet their care needs (Kane et al., 1996; Authors, 2002b; Portner, Muse & Nystrom, 1996). These care needs do not necessarily conform to specific settings, nor do they end after discharge. As such, interdisciplinary team collaboration across sites is necessary to ensure that the plan of care is properly executed.

The majority of previous research on care transitions and interdisciplinary teams has been predominantly descriptive, has addressed only the initial aspects of hospital discharge, and has not focused on or explicitly featured the role of the patient. Existing studies that focus more directly on care transitions have demonstrated the efficacy of intervention models utilizing advanced practice nurses who assume responsibility for overseeing care across health settings

and disciplines to assure older patients' needs are met (Cefalu et al., 1997; Evans et al., 1995; Kane et al., 2001). Studies by Naylor et al. (1999) and Rich et al. (1995) support this finding and demonstrate that provision of comprehensive services in the weeks following discharge can reduce hospital re-admission in populations of older patients in general and those with congestive heart failure in particular, respectively. These studies and others like them suggest that in order to effectively address care continuity for older adults, a shift must be made from institution-centered care to patient-centered care.

The proposed intervention design was directly informed by data gathered in a series of six focus groups. The purpose of the focus groups was to understand the challenges faced by older adults receiving care in multiple settings (i.e. during care transitions). Each focus group was composed of 10-12 patients and their caregivers, all of whom were members of one of six targeted clinics in a large managed care health care organization. The study participants included 49 men and women, aged 65 and older, who had been hospitalized in the past six months and received follow-up care from a skilled nursing facility or home health care agency. Participants represented an array of socioeconomic, educational, and ethnic backgrounds. Detailed information about the conduct and methods used in the focus groups is provided in Author (2002).

The discussions explored patients' perspectives on the transition home, communication between providers, understanding of medications and discharge instructions, and patients' knowledge and ability to elicit answers to their questions from appropriate health care professionals. Participants were asked questions that addressed the extent to which patients' care needs were met after discharge, whether primary care providers were informed about the patients' hospitalization and subsequent care needs, the steps patients had or had not taken to

gather information about self-management of their condition, and the family's level of preparation for the patient's return home.

Analysis of the focus group data revealed four primary domains: 1) information transfer; 2) patient and caregiver preparation; 3) self-management support; and 4) empowerment to assert preferences. The information transfer domain included patient reports of providers functioning independently within and between sites of care and poor inter-professional and inter-institutional communication. Patient comments about patient and caregiver preparation included reports of unrealistic expectations for care provision by family and caregivers. The self-management domain included demonstrations of patient confusion about what questions to ask their providers, and what medications they should take. Participants repeatedly commented on the inaccessibility of providers to answer questions. Finally, the empowerment domain served to stress the importance of patient advocacy and to illustrate patients' experiences of conflict between needing to take greater responsibility for their healthcare, but feeling unprepared and unsupported to do so by their health care providers.

The focus group data, in concert with existing research, provided the basis for the development and refinement of the intervention design presented below, with its emphasis on patient empowerment and fluid transfer of information. The results of the focus groups suggested that the intervention was most likely to be successful if it were patient-centered, individually-tailored, and attentive to the content and process issues highlighted in the four domains. Furthermore, because the patient is the only continuous component in a care transition (i.e. it is the patient who moves through the myriad settings and interacts with different service providers), the patient is an ideal target for the intervention. Just as patients are asked to self-manage their chronic conditions, and need to be prepared to do so, patients can also be

encouraged to self-manage their care needs across settings and with various practitioners, if given appropriate support and education. In addition, a higher level of receptivity to a new care model was anticipated in patient populations, as compared with providers. Moreover, systems-level interventions that require an additional layer of new health care professionals are likely to be viewed as unrealistic and too costly in today's healthcare market. Further, a patient-centered intervention may be more amenable to wide-scale adoption. Finally, the focus group analyses revealed that the ideal intervention would facilitate communication across venues of care by coaching patients (and their informal caregivers) to be their own advocates for ensuring that their needs were met across settings. This finding led to the adoption of model that utilized a Transition Coach with the appropriate combination of clinical and interpersonal skills to foster communication and collaborative problem-solving, while providing support with medications and self-management.

Program Structure

Setting

The Care Transitions Intervention was designed in response to the need for a patient-centered, interdisciplinary intervention that addresses continuity of care across multiple settings and practitioners. The intervention is currently being implemented as part of a randomized controlled trial (n=1400) in two nationally-recognized health care systems that respectively care for approximately 55,000 and 5,000 geriatric patients. The participating organizations were selected to demonstrate that this intervention could be implemented in different health care settings under different financing structures (group model managed care, Independent Practice Associates managed care, and traditional fee-for-service Medicare). Both organizations have a

strong tradition for exploring and implementing new approaches to care for their older members locally and nationally.

Patient Population

The intervention is designed for use with persons with complex care needs who require ongoing management of both acute and chronic conditions. The target population for the current study of the intervention includes patients aged 65 and older hospitalized with or for one or more of the following chronic conditions: congestive heart failure, chronic pulmonary disease, diabetes, stroke, medical and surgical back conditions, hip fracture, peripheral vascular disease, cardiac arrhythmia, pulmonary embolism, or deep vein thrombosis. These conditions were selected because of their prevalence and the complex health care management needs that accompany them, and their association with use of post-acute care services (Gage, 1999, 103-126). Other eligibility criteria include being English-speaking, having a phone, and planned discharge to home or a skilled nursing facility (not to long-term care). Patients' cognitive ability and state are determined using a brief mental status screen. Those patients who fail the cognitive screen or who have a diagnosis of dementia noted in their medical record are eligible for the intervention provided that they have an able and willing caregiver available to act as a proxy.

Structure of the Care Transitions Intervention

The overriding goal of the intervention is to improve care transitions by providing patients with tools and support that promote knowledge and self-management of their condition as they move from hospital to home. The intervention 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 PHR is managed by the patient or informal caregiver.
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.

The four pillars are operationalized through two mechanisms: 1) a Personal Health Record; and 2) a series of structured visits and phone calls with a nurse Transition Coach. Both of these mechanisms are designed to empower and educate older patients to meet their health care needs and ensure continuity of care in the transition(s) following discharge.

The PHR is a dynamic record book consisting of the essential elements 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 questions and concerns.ⁱ 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.

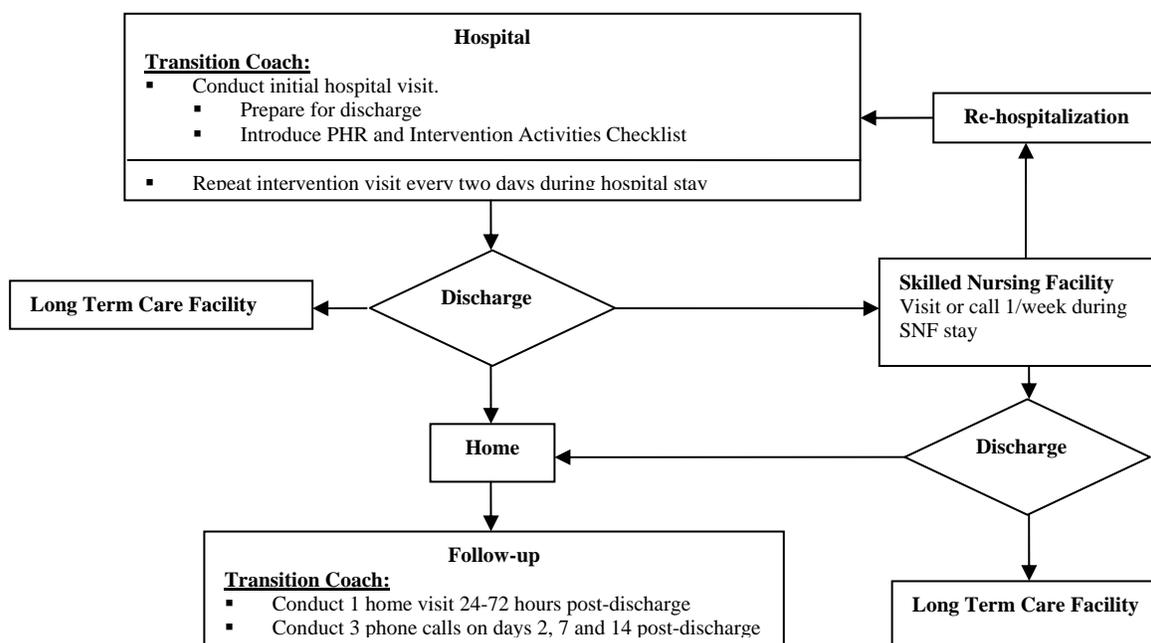
The Transition Coach functions as a facilitator of interdisciplinary collaboration across the transition, coaching the older patient and caregiver to play a central and active role in the formation and execution of the plan of care. Aside from the Transition Coach, no new interdisciplinary team members are introduced: the interdisciplinary teams are already in place in the respective settings (i.e., hospital, skilled nursing facility, home care, and ambulatory care). Rather, the purpose of this model is to focus on the patient's needs during transition, thereby expanding the purview of the traditional team. The older patient, caregiver and Transition Coach work together to maximize the involvement of interdisciplinary expertise, ensuring that the appropriate professionals are involved, critical issues are addressed, treatment goals are understood, and the care plan is executed correctly. 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. However, if necessary, the Transition Coach may make phone calls and facilitate connections when a critical need is present, coordinating communication with home health nurses, care managers, and primary care physicians involved with the patient's care.

In this intervention, the professional background of the Transition Coach included a geriatric nurse practitioner and a RN skilled in education and advocacy with older adults. The Transition Coach first engages with the patient upon admission to the hospital. She works closely with patients and their caregivers to ensure a smooth transition from hospital to home following an acute episode requiring hospitalization. While the Transition Coach may interact with other

service providers, the Transition Coach's role is not that of a service broker or care manager. Rather, the Transition Coach is a source of information and support for the patient, assisting the patient in identifying key questions or concerns and empowering the patient to make contact with health care providers as necessary.

The structure of the intervention is outlined in Figure 1, below. Based on daily hospital census data and medical record review, the Transition Coach determines which patients are eligible for the intervention. 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 2, 7, and 14 days post-discharge. Ideally, the home visit takes place within 24-48 hours. However, the visits may be later in the case of scheduling difficulties or patient preference.

Figure 1: Structure of the Care Transitions Intervention



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 Intervention Activities Checklist, and to prepare patients and caregivers for discharge. The follow-up visits in the skilled nursing facility and/or home, along with the accompanying phone calls, are designed to empower patients to play a more active and informed role in managing their care by expanding upon the information provided in the initial hospital visit and providing continuity across the transition.

While the four conceptual domains, or pillars, are reviewed during each contact, the intervention is tailored to the individual patient's needs, goals, and priorities at each stage of the transition. Thus, while the overall content of the pillars is revisited and reinforced at each contact between the patient and Transition Coach, the specific format and content of the pillars varies by patient and by visit. For example, during the home visit, the Transition Coach may discover that the patient has already scheduled a follow-up appointment and understands the red flags and warning signs that his or her condition is worsening, but may be confused about which medications and dosages to take. In this case, the primary focus of the visit would be medication management. Ultimately, the patient's readiness and ability to invest in the content of the pillars dictates the timing and focus on specific content. An abbreviated list of intervention activities is listed in Table 1.ⁱⁱ

Insert Table 1 here

Beyond the activities listed in Table 1, the intervention addresses patient empowerment and self-management at a broader level by discussing the care plan with patients, reviewing possible transfer-related problems and creating prevention strategies in areas such as pain management, goal-setting, and lifestyle issues. The Transition Coach also assists patients in developing questions and role-playing interactions with providers. By modeling empowerment and providing patients with information, the intervention has the potential to alter the paradigm within which patients interact with the medical system, rendering them more responsible, aware, and savvy managers of their own health.

Strengths and barriers

The Care Transitions Intervention 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 (Institute of Medicine, 2001). Second, the intervention 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. The costs of the program include salary for the Transition Coach, reimbursement for travel/mileage and costs associated with equipment and supplies: cellular phone, voicemail and pager services. Because the intervention is administered within existing structures, no administrative re-structuring is

required, and additional costs are minimized. Finally, one of the greatest strengths of the intervention 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. Although formal analyses are forthcoming, we predict that the intervention may prove effective in reducing rates of re-hospitalization, medication-related errors and improving patient satisfaction.

In addition to the strengths listed above, potential limitations of the intervention 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 empowering of patients who are acutely ill 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. However, if the intervention is to succeed in reaching its objectives, 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.

Next Steps: The Care Transitions Intervention in Practice

As noted previously, the authors are currently collaborating with two nationally recognized health care delivery systems to test the intervention model. Since the inception of the study in May 2002, nearly 600 patients have participated in the intervention. The decision to study the proposed care model in two different delivery systems was governed by the need to directly address the question of external adoption. Demonstrating that an innovative care model improves outcomes of geriatric care is necessary but not sufficient for improving care to older adults. The true measure of success for an intervention is whether the approach is adopted and produces the desired change in a range of patient outcomes, delivery systems and populations. This goal of widespread adoption has guided the conceptualization and design of the intervention and the study. To facilitate implementation in both managed care and fee-for-service environments, the authors have considered the current incentives and pressures operating in these respective systems. The intervention model has been designed for adoption within a variety of payment structures. Furthermore, the role of the Transition Coach could be assumed by an existing health care professional, such as a home health nurse or care manager.

Although national efforts exist that call for greater integration of health care delivery and a more patient-centered focus in care, these changes are not imminent. In the meantime, it is critical that we prepare patients, providers, and other members of health care teams to collaborate more closely, and thus improve care within existing structures. The proposed intervention design represents exactly this sort of interim step to bring our health care delivery into alignment with national goals.

Conclusion

This article introduces a patient-centered, interdisciplinary team intervention designed to improve care transitions and reduce fragmentation across sites of geriatric care. Based on the expressed needs of patients and caregivers with chronic illness, the intervention is designed to encourage patient self-management and enhance communication and collaboration between professionals across sites of care, potentially reducing medical errors, missed appointments, and dissatisfaction with care. Ultimately, improved transitions may lead to better health outcomes and reductions in unnecessary re-hospitalizations and health care costs. The intervention was also designed for ease of replication and implementation within existing structures, making it amenable to adoption in today's competitive health care market. Future research should seek to understand which patients will benefit most from this type of intervention, which components of the intervention are most critical, and how best to facilitate the adoption of programs such as the Care Transitions Intervention in various settings involving a myriad of providers and professionals.

References

Author. (2003).

Authors. (2002).

Authors. (2002).

Boling, PA. (1999). The value of targeted case management during transitional care. *Journal of the American Medical Association*, 281(7), 656-657.

Borok, GM, Reuben, DB, Zendle, LJ, Ershoff, DH, Wolde-Tsadik, G, Rubenstein, LZ, Ambrosini, VL, Fishman, LK, and Beck, JC. (1994). Rationale and design of a multi-center randomized trial of comprehensive geriatric assessment consultation for hospitalized patients in an HMO. *Journal of the American Geriatrics Society*, 42, 536-544.

Cefalu, CA, Colbourne, G, Duffy, M, Johnson, E, Lester, M, and Wright, J. (1997). *Journal of the American Geriatrics Society*, 45, 355-360.

Evans, LK, Yurkow, J, and Siegler, EL. (1995). The CARE program: a nurse-managed collaborative outpatient program to improve function of frail older people. *Journal of the American Geriatrics Society*, 43, 1155-1160.

Gage, B. (1999). Impact of the BBA on post-acute utilization. *Health Care Finance Review*, 20(4), 123-126.

Institute of Medicine. (2001). *Crossing the quality chasm: a new health system of the 21st century*. Committee of Health Care in America. Washington DC, National Academy Press.

- Kane, R, Finch, M, Blewett, L, Chen, Q, Burns, R, and Moskowitz, M. (1996). Use of post-hospital care by Medicare patients. *Journal of the American Geriatrics Society*, 44, 242-250.
- Kane, RL, Flood, S, Keckhafe, G, and Rockwood, T. (2001). How EverCare nurse practitioners spend their time. *Journal of the American Geriatrics Society*, 49, 1530-1534.
- Naylor, ND, Brooten, D, Campbell, R, et al. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. *JAMA* 281: 613-620.
- Portner, G, Muse, D, and Nystrom, S. (1996). An analysis of rehabilitation services “Flow” patterns and payments by provider setting for Medicare beneficiaries. Washington DC, Muse and Associates. Reference Type: Report.
- Rich, M, Beckman, V, Wittenberg, C, Leven, C, Freedland, K, and Carney, R. (1995). A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. *New England Journal of Medicine*, 333, 1190-1195.

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

Pillar	Medication self-management	Dynamic patient-centered record	Follow-up	Red Flags
Goal	Patient is knowledgeable about medications and has a medication management system.	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.	Patient schedules and completes follow-up visit with Primary Care Provider/Specialist and is empowered to be an active participant in these interactions	Patient is knowledgeable about indications that condition is worsening and how to respond.
Hospital Visit	Discuss importance of knowing medications and having a system in place	Explain PHR	Recommend Primary Care Provider follow-up visit	Discuss symptoms and drug reactions
Home Visit	Reconcile pre- and post-hospitalization medication lists Identify and correct any discrepancies	Review and update PHR Review discharge summary Encourage patient to update and share the PHR with Primary Care Provider and/or Specialist at follow-up visits	Emphasize importance of the follow-up visit and need to provide Primary Care Provider with recent hospitalization information Practice and role-	Assess condition Discuss symptoms and side effects of medications

			play questions for Primary Care Provider	
Follow-Up Calls	Answer any remaining medication questions	Remind patient to share PHR with Primary Care Provider/Specialist Discuss outcome of visit with Primary Care Provider or Specialist	Provide advocacy in getting appointment, if necessary	Reinforce when/if Primary Care Provider should be called

ⁱ See Appendix A for a sample version of the Personal Health Record

ⁱⁱ See Appendix B for an Intervention Activities Checklist, provided to patients prior to hospital discharge.