

Care Transitions Model



Starting when a patient is scheduled to be discharged from the hospital, the Care Transitions Model helps older patients at high risk for complications or rehospitalization. The Transition Coach, a specially trained nurse, visits with the patient and their caregivers over four weeks—both in the hospital and at home—and helps patients learn to manage multiple prescriptions, follow post-hospital recommendations, and present their other health care providers with the information they need to be effective. Over 100 hospitals and health care systems had adopted the model by 2007.



Improving Transitions Across Sites of Geriatric Care

TO ADDRESS THE PROBLEMS of uncoordinated and fragmented care around the period of hospitalization, the Foundation awarded the University of Colorado Health Sciences Center, Denver, Colorado, a five-year grant of \$1,207,404 in 2000 to develop the Care Transitions Intervention. Dr. Eric Coleman served as principal investigator of this project. Dr. Coleman is a Robert Wood Johnson Clinical Scholar and a Beeson Scholar. He has served on the American Geriatrics Society health care systems committee and has worked with federal policy makers through convenings such as those of the National Health Policy Forum.



Eric Coleman, MD, MPH
Principal Investigator,
Care Transitions
University of Colorado

Older patients with serious or multiple chronic illnesses are at risk for suffering new health problems or worsening of their existing conditions following a hospital stay. For example, a patient with diabetes who has received confusing or possibly conflicting information about a change in his medication regimen while in the hospital may wind up with uncontrolled blood sugar levels.

Older patients with complicated health problems often see numerous health care providers, a number that increases if treatment in a hospital becomes necessary. The patient may be treated by a primary care physician and various specialists in their medical offices, a hospitalist physician and nursing team in the hospital, a different physician and nursing team during a stay in a skilled nursing facility, and a visiting nurse in the home. Care can become fragmented when these providers work independently of one another or, worse, at cross purposes. Even when each health care provider delivers high quality care, the result can be substandard care if their efforts are not coordinated.

Shorter hospital stays and inefficient systems for transferring medical information from one health care site to another often place a burden on patients and their families to navigate the complex health care system. Yet patients and their families rarely receive adequate information and preparation to manage and coordinate care after a hospital stay.

Lack of coordination on the part of health care providers and inadequate preparation of patients increases the risk for medication errors and health complications. This leads to avoidable readmissions to the hospital, leading to greater health care costs. National 30-day readmission rates among older Medicare beneficiaries range from 15 to 25 percent.^{12,13}

12- Coleman EA, Min S, Chomiak A, Kramer AM. Post-hospital care transitions: patterns, complications, and risk identification. *Health Serv Res.* 2004;39:1449-1465.

13- Centers for Medicare and Medicaid Services. Medicare Quality Monitoring System. 2006. http://www.cms.hhs.gov/QualityInitiatives/GenInfo/15_MQMS.asp.

Medication errors are of particular concern. A study by Dr. Eric Coleman and colleagues found that 14 percent of elderly patients admitted to the hospital experienced one or more discrepancies between their prehospital medication regimen, posthospital medication regimen, and what the patient reported actually taking.¹⁴ Factors involving patients, such as misunderstandings and other reasons for not complying with the regimen, contributed to about half of the medication errors. The other half of the errors were attributable to prescribers or the broader health care system. Medication discrepancies led to a greater number of hospital readmissions within 30 days.

Dr. Eric Coleman and his colleagues at the University of Colorado Health Sciences Center developed the Care Transitions Intervention team care model (www.caretransitions.org) to address these problems. The Care Transitions Intervention focuses on providing support and education for the patient and family caregiver. Interdisciplinary team care generally does not extend beyond the walls of a given institution. The only common thread moving across all sites of care is the patient and the caregiver, who become de facto care coordinators.

“We need to fix the broken health care system where providers don’t talk to each other,” says Dr. Coleman. “But in the meantime, we need to support patients and families in their self-management role.” Placing the older adult patient (and caregiver) at the center of the interdisciplinary team in no way abdicates the responsibilities of the health care professionals. This arrangement encourages greater accountability for ensuring that the essential steps that need to take place before and after transfer are executed.

The Four Pillars of Care Transitions

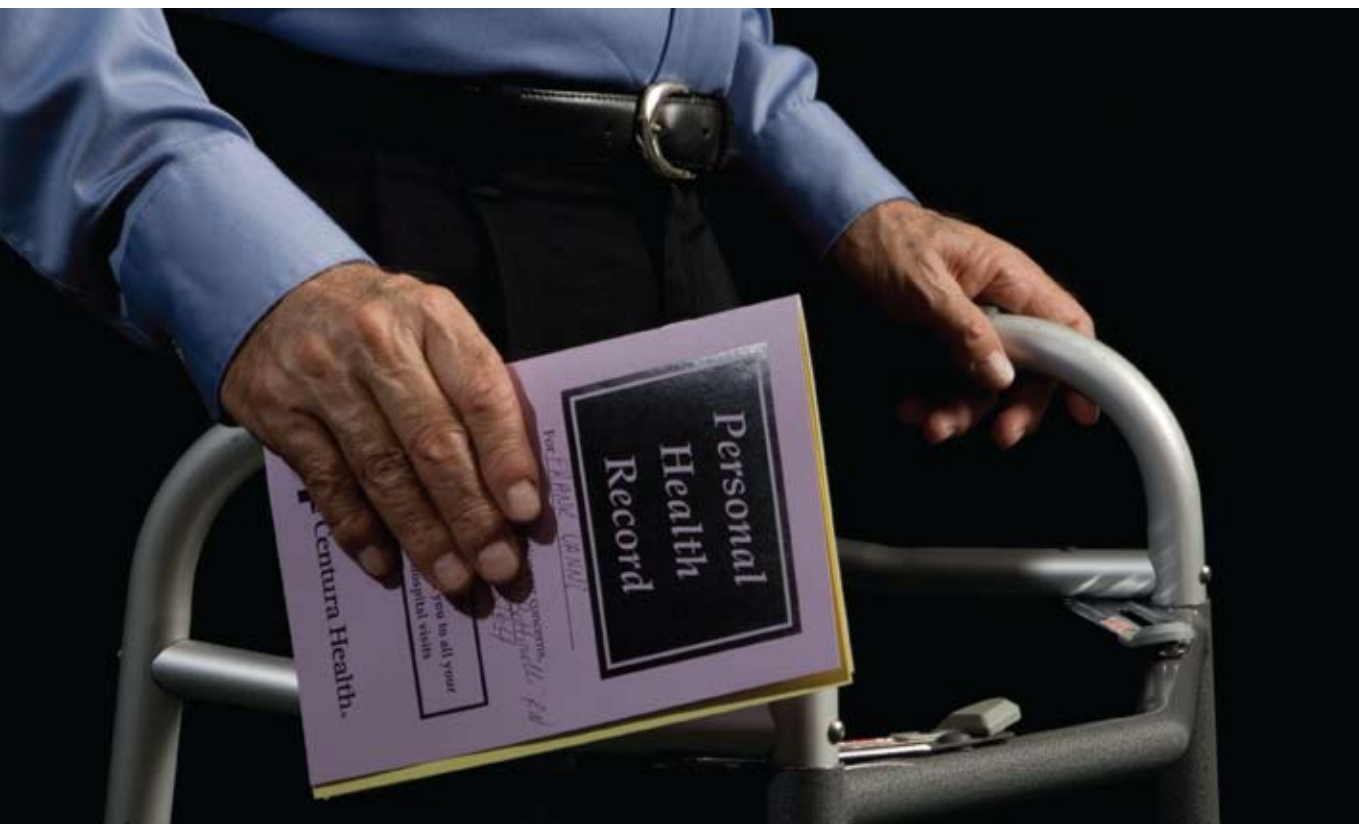
During the four-week Care Transitions program, patients with complex care needs and family caregivers work with a “Transition Coach” and learn self-management skills that will ease their transition from hospital to home. The coach is an advanced practice nurse or a registered nurse who has received training in the Care Transitions Intervention program. This intervention is centered on four pillars:

1. Medication self-management
2. The Personal Health Record
3. Timely primary care/specialty care follow up
4. Knowledge of red flags that indicate a worsening in their condition and how to respond

*“If you’re selling umbrellas,
you have to figure out
how to make it rain.
We make it rain by
reshaping the health care
environment to embrace
these team care models.”*

*Eric Coleman, MD, MPH
Principal Investigator,
Care Transitions*

14- Coleman EA, Smith JD, Raha D, Min S. Posthospital medication discrepancies. Arch Intern Med. 2005;165:1842-1847.



A low-tech but highly effective tool developed by the Care Transitions team—the Personal Health Record—helps patients track prescriptions and instructions from their different doctors and other health care providers. By bringing the record to each visit, patients can keep their different doctors informed and reduce the risk of rehospitalization or medication errors.

The transition coach visits the patient for the first time just prior to discharge from the hospital and then makes a home visit a few days later. During this home visit, the coach reviews all of the medications the patient is taking. If errors are detected or if the regimen is confusing or impractical, the coach helps the patient and family caregiver to communicate their questions and concerns to the relevant health care provider.

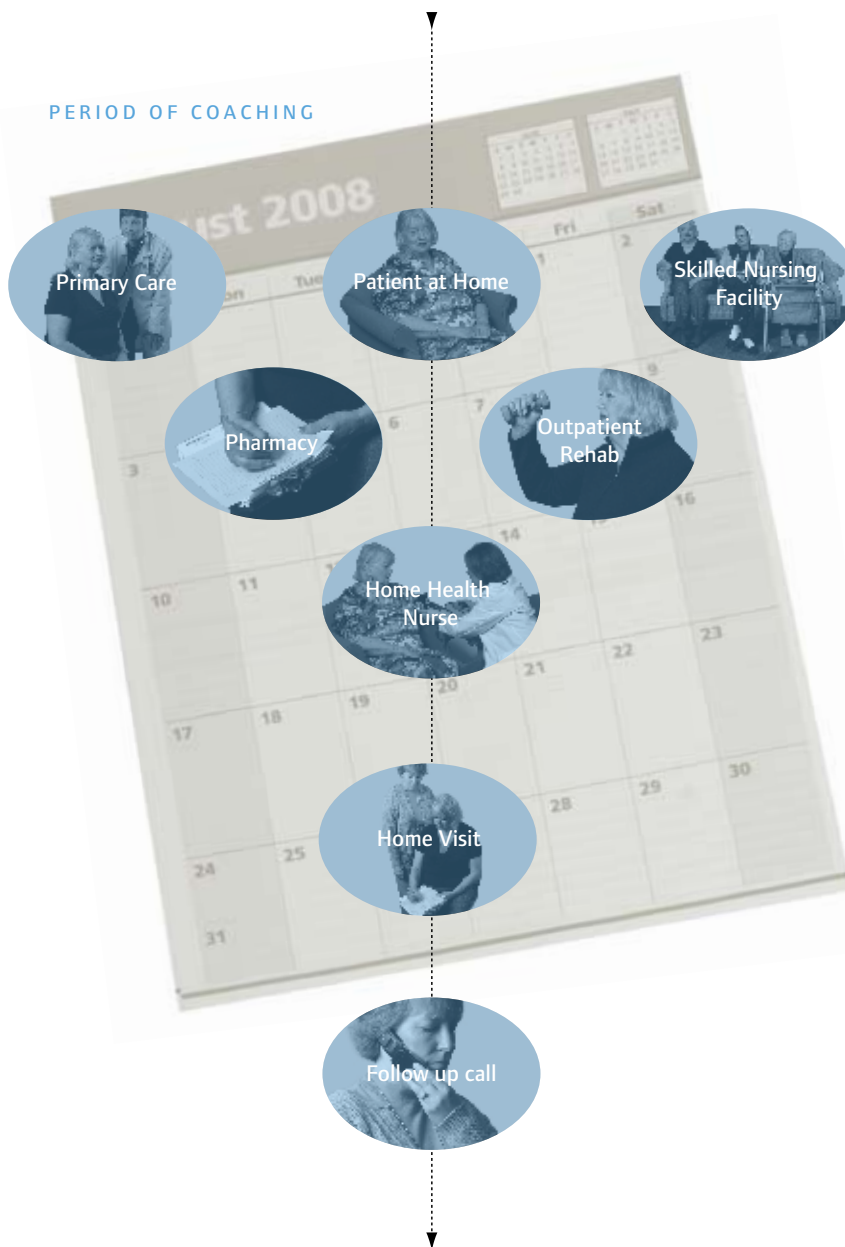
The coach also educates the patient about warning signs (red flags) that the patient's condition may be worsening and helps him or her to understand when to call the physician or other health care provider. If patients have particular questions or concerns about their care, if they've received conflicting instructions from different care providers, or if they simply need clarification about something, the coach supports them in communicating with their care providers.

The coach also instructs the patient in the use of the Personal Health Record, in which the patient records medicines and administration schedules, allergies, instructions from health care providers, red flags for his or her disease, and questions and concerns to discuss at future health care visits.



PATIENT LEAVING THE HOSPITAL

PERIOD OF COACHING



RETURN TO WELLNESS

The Care Transitions Model focuses on patients at high risk for complications or rehospitalization.

Prior to discharge from the hospital, a specially trained nurse (the coach) visits the patient to begin the process of a successful transition to self management at home.



The Transition Coach

For patients released to a skilled nursing facility, the coach makes a second visit prior to discharge home.

At the home visit, the coach:

- Reviews medication orders
- Educates about warning signs ("red flags") of a worsening condition
- Reviews the Personal Health Record
- Provides support in communicating with care providers

Three follow-up phone calls are made by the coach: two days later, a week after that, and then two weeks later.



Geriatric Interdisciplinary Teams in Practice **Care Transitions Model**

Eric Coleman, MD, MPH, Principal Investigator, University of Colorado

www.caretransitions.org

Supported by the John A. Hartford Foundation

"We recognized that even smart, innovative models can wind up with no takers if they turn out to be impractical from the standpoint of the delivery system."

Eric Coleman, MD, MPH
Principal Investigator,
Care Transitions

Structured visits and phone calls by the coach promote safe transitions during the critical first month at home following a hospitalization. The patient is encouraged to call the coach at any time with questions.

For patients discharged from the hospital to a skilled nursing facility, once weekly the coach visits the skilled nursing facility until the patient returns home.

"Patients really have a chance to regain their independence through this program," says Kathryn Botinelli, Transitions Coach, Centura Home Health, Denver, Colorado. She has witnessed the change in patients from being confused and overwhelmed to feeling confident and being active participants in their own healing. "The program, and particularly the Personal Health Record, helps them to feel that they can talk to the doctor instead of just being talked at by the doctor," she says.

While the Care Transitions program lasts for just one month, the impact has been shown to be more long-lasting. The patients who participate in the program have complex chronic illnesses and therefore are at high risk for repeat hospitalizations. They use the self-management skills learned during the program in subsequent episodes of care transitions.

Measuring the Success of Care Transitions

With the Care Transitions Intervention model patient health and well-being are improved and the health care system derives cost savings from reduced readmission to the hospital. Both patients and health care providers report satisfaction with the program.

These results were demonstrated in studies conducted by Dr. Coleman and his colleagues. In one study, performed in 2004, hospitalized patients who received the Care Transitions Intervention were approximately half as likely to return to the hospital as those who did not receive the intervention.¹⁵ In a study from 2006, which was funded by the Hartford Foundation, patients receiving the Care Transitions Intervention also had lower rehospitalization rates.¹⁶ This study also found that hospital costs were lower for patients with care transition coaches. The investigators estimated that the hospital, health plan, or clinic which employs the coach can realize annual net cost savings of \$295,594 across 350 patients.

Dr. Coleman's team has also shown that patients who were assisted by care transitions coaches had greater knowledge and skills regarding

15- Coleman EA, Smith JD, Frank JC, Min SJ, Parry C, Kramer A. Preparing patients and caregivers to participate in care delivered across settings: the care transitions intervention. J Am Geriatr Soc. 2004;52:1817-1825.

16- Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Arch Intern Med. 2006;166:1822-1828.

their illness.¹⁷ They understood how to manage their medications and they confidently knew what was required of them during the transition period. 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.

Moving the Model from Two Sites to 100

The Care Transitions model was initially tested in two health systems: Kaiser Permanente of Denver and Centura Health. Even after the demonstration project was completed, these institutions continue to utilize the Care Transitions Intervention. Efforts to disseminate the model to other institutions have resulted in 100 organizations adopting the model by the end of 2007.

Of the four team care models in the dissemination of GIT-P grant, the Care Transitions model is the most widely disseminated. One surprise for Dr. Coleman and his team has been the diversity of health care delivery systems that have adopted the model. In developing the model, the team felt that it was a natural fit for Medicare Advantage (Medicare Managed Care Plans). They have also partnered with hospitals and home care agencies.

One key to the Colorado team's success in disseminating their model lies in the groundwork laid from the beginning. "Early on we were encouraged to think about what the end adopters would need," says Dr. Coleman. As part of the initial grant, the Hartford Foundation had asked them to write a business plan, which proved to be pivotal to the success of the program. He and his team put together a panel of experts (the key decision makers from health plans, hospitals, nursing homes, and home care agencies), presented the model, and sought input from the outset. They received concrete suggestions, which were used to alter the model. These recommendations, combined with input from patients and families, allowed Dr. Coleman and his colleagues to create a model that was likely to be implemented.

Dr. Coleman also emphasizes that widespread dissemination depends on influencing the health care environment to build demand for this and other models of team care. Traditionally, a new model of care is developed and tested and then marketed to the end user or adopter. Dr. Coleman advocates a different approach. He works to influence the delivery system to make effective team care, including improved transitions across sites of care, a requirement. For example, Dr. Coleman and his colleagues partnered with the consumer

"The Care Transitions program is attractive because it is a relatively low cost and relatively simple intervention that has the potential to produce a very good return on the investment, both in terms of clinical outcomes and financially."

Alan Lazaroff, MD
Director of Geriatric Medicine,
Centura Senior Life Center
Denver, Colorado
Adopter of Care Transitions
Intervention



In Denver, CO, Frank Yanni meets with his primary care physician, Alan Lazaroff, MD, at Centura Senior Life Center several weeks after being discharged from the hospital.

17- Parry C, Kramer H, Coleman EA. A qualitative exploration of a patient-centered coaching intervention to improve care transitions in chronically ill older adults. *Home Health Serv Q*. 2006;25(3-4):39-53.

A Transition Coach Makes Recovery from Surgery Faster, Easier

When Frank Yanni, 69, a participant in the Care Transitions Intervention program, noticed that the pain he was experiencing weeks after surgery for a staph infection of the spinal cord was not only not getting better but was getting worse, he knew to insist that it be looked into. A magnetic resonance

imaging test revealed a postoperative infection that required a second surgery. "Had he let that go for even another week, he could have ended up in the ICU, septic and horribly sick," says Kathryn Bottinelli, Frank's transition coach. Colorado, has witnessed the devastating consequences when older adult patients fail to recognize early warning signs of an exacerbation of their illness and wind up critically ill. Now working as a Transitions Coach, Ms. Bottinelli is particularly interested in educating patients just discharged from the hospital about warning signs of complications that require early attention before a crisis occurs.

Ms. Bottinelli began working with Frank and his wife Beatrice in August 2007. She first met the Yannis in the hospital when Frank was preparing to go home. The first surgery for the

infection had left Frank in pain, for which he needed potent medications. Ms. Bottinelli focused much of her work with the Yannis on pain control issues. Frank relied heavily on his wife to keep track of his medication schedule. "Our little purple book [the Personal Health Record] has been a great help to us," says Beatrice. "I can keep track of all his medications." Because Frank's medications were changed frequently, Ms. Bottinelli worked closely with the couple on medication reconciliation.

Ms. Bottinelli also helped Frank with goal setting. He set as his goals being free from pain and being able to walk unaided. After the second surgery, Frank began to feel markedly better. The pain was diminishing and he was able to start physical therapy, including water aerobics, to regain mobility. He is steadily getting better and is optimistic that he will achieve his goals.

Having the opportunity to work with a Transitions Coach meant a lot to the Yannis. "Kathryn has been a great help to us," says Beatrice. "Working with her was very rewarding for me," adds Frank.

Ms. Bottinelli also derives great satisfaction from working with the Yannis and other patients and family caregivers as their coach. She sees patients who are able to maintain their independence largely because they have access to the tools provided by the program, such as the Personal Health Record where they can read about red flags for their condition, write down the content of conversations with their coach and health care providers, and keep track of medications. This can be especially helpful for patients experiencing memory difficulties.

"With the Personal Health Record, patients feel more intelligent talking to the doctor," says Ms. Bottinelli. And it helps the physician, especially for patients seeing multiple health care providers at different sites. "The patient feels more like a member of the team and the doctor talks to the patient with more respect, which motivates the patient to be more active in his or her own health care," she adds, "and the patients heal quicker."



As a former ICU nurse, Kathryn Bottinelli, RN, Transitions Coach, Centura Home Health, Denver,

(Above) After coming home from spinal cord surgery, Frank Yanni and Transition Coach Kathryn Bottinelli, RN, review Mr. Yanni's upcoming appointments.

(Right) The Personal Health Record provides Mr. Yanni and his wife Beatrice with an easy reference for medications information, post-hospital care needs, and space to log questions for the next time they visit the doctor.



representatives to the Joint Commission, a national accrediting body for hospitals and other health settings. This ultimately led to changes in the requirements of the Joint Commission regarding how patients are moved across the health care system. A Joint Commission Resources publication, titled “Improving Hand-Off Communication,” features the Care Transitions Intervention model.

“This is how we create an environment that identifies a need for innovation and then we present our model as the logical solution,” says Dr. Coleman.

Other changes in health care policy also work to the advantage of dissemination of the Care Transitions Intervention model. For example, hospitals are now required to publicly report 30-day readmission rates. A program such as the Care Transitions Intervention, which has proven to reduce readmission rates, becomes even more desirable.

Dr. Coleman continues to foster awareness of the poor quality of many care transitions, their adverse consequences for elderly patients and the need for reform. He does this through specially convened meetings of national and regional health care leaders, briefings with federal officials and other regulatory bodies, publications, speeches, and the Care Transitions Program Web site (www.caretransitions.org). His efforts have paid off as there is now much more system-wide recognition of the importance of this problem and a willingness to address it.

The long-standing commitment of the Hartford Foundation to the creation and dissemination of the Care Transitions Intervention model has allowed the University of Colorado Health Sciences Center to raise over \$2.5 million in support of the model from additional funders. Sources of funding have come from the following:

- CMS (in partnership with the Colorado QIO)
- Community Health Foundation of Western and Central NY
- California Health Care Foundation
- Robert Wood Johnson Foundation
- Christus Health Care
- National Institutes of Health
- Aetna Foundation

“Creating the Care Transitions Intervention model required creativity and innovation; developing the avenues for dissemination and widespread adoption necessitates a different skill set, but just as much innovation.”

*Eric Coleman, MD, MPH
Principal Investigator,
Care Transitions*