



Issue Brief

Scaling Up: Bringing the Transitional Care Model into the Mainstream

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ABSTRACT: Elderly, chronically ill people experience frequent changes in health status that require transitions among health care providers and settings. This issue brief describes two projects that identified the essential elements of effective care management interventions for this population and the facilitators of translating one such intervention, the Transitional Care Model (TCM), into mainstream practice. Together these projects demonstrate that successful translation of the TCM, which incorporates both in-person contact and a nurse-led, interdisciplinary team approach, can effectively interrupt patterns of frequent rehospitalizations, reduce costs, and improve patient health status. Findings from these projects inform challenges that must be overcome to facilitate the translation of effective care management innovations into mainstream practice.



OVERVIEW

In an earlier Commonwealth Fund issue brief, Bradley and colleagues developed a conceptual framework of factors that determine the rate of adoption of health care innovations from research into practice.¹ This framework includes four domains: the innovation, the adopting organization, the dissemination infrastructure, and the external environment. Using this framework, this issue brief demonstrates how the key features of the innovation, the adopting organization, and the external environment created the conditions for translating an evidence-based transitional care model into mainstream practice.

Owing to the disproportionate costs associated with care of chronically ill people, especially older adults with multiple chronic conditions, work in recent years has focused on care management programs for these groups. But results have been equivocal, with one exception: results show that properly designed and executed transitional care improves quality outcomes and achieves cost savings.² The success of the transitional care model (TCM), for example, demonstrated in multiple National Institutes of Health (NIH)-funded clinical trials, positioned

it for translation in mainstream practice. But getting there would require evidence of success in bringing it to scale and knowledge of the critical ingredients to achieve quality and cost outcomes. With that evidence in hand, translation to mainstream practice would depend upon the degree to which it could meet the goals of the key stakeholders—the private sector purchasers and public payers of health care services.

TRANSITIONAL CARE: CRITICAL CARE FOR THE CHRONICALLY ILL

Transitional care comprises a range of time-limited services that complement primary care and are designed to ensure health care continuity and avoid preventable poor outcomes among at-risk populations as they move from one level of care to another, among multiple providers and across settings.³ Evidence-based transitional care is now recognized as an integral component of care coordination by leading public and private stakeholders.⁴ The core features of transitional care typically include:

- a comprehensive assessment of an individual’s health goals and preferences, physical, emotional, cognitive and functional capacities and needs, and social and environmental considerations;
- implementation of an evidence-based plan of transitional care;
- care that is initiated at hospital admission, but extends beyond discharge through home and telephone visits;
- mechanisms to gather and appropriately share information across sites of care;

- engagement of patients and family caregivers in planning and executing the plan of care; and
- coordinated services during and following the hospitalization by a health care professional with special preparation in the care of chronically ill people, often a master’s-prepared nurse.

Transitional care provides critically needed service continuity at the most vulnerable points for persons with multiple chronic illnesses—during the “hand off” or transition between settings of care. Jencks and colleagues recently showed that nearly one-fifth of all Medicare beneficiaries are rehospitalized within 30 days and one-third within 90 days of hospital discharge.⁵ The “churning” of these patients in and out of hospitals comes at a price—adverse clinical events, serious unmet needs, poor satisfaction with care, and avoidable readmissions.⁶ Sixty percent of community-based chronically ill elders transitioning from hospitals to next sites of care, for example, experience medication errors.⁷ The Medicare Payment Advisory Commission (MedPAC) estimated that the costs associated with 30-day hospital readmissions account for an estimated \$15 billion annually in Medicare spending.⁸ An additional \$34 billion is lost annually by American businesses because of employees’ need to care for family members.⁹ Transitional care is a patient-centered model intended to address unique burdens during episodes of acute illness by improving the quality of care and, ultimately, quality of life for patients with chronic illness and their families.

THE TRANSITIONAL CARE MODEL

The Transitional Care Model (TCM), developed at the University of Pennsylvania, embodies the core features of transitional care through comprehensive in-hospital planning and home follow-up for chronically ill high-risk older adults hospitalized for common medical and surgical conditions. These services are provided by a transitional care nurse (TCN)—that is, an advanced practice registered nurse with specialized training in caring for older adults with multiple chronic conditions and in supporting family caregivers—based on core program components that are tailored to the unique circumstances of each patient (see box).

TCM contrasts with other acute and post-acute care programs and interventions for chronic care management (Exhibit 1). Twenty years of NIH-funded clinical trials and related research conducted by the University of Pennsylvania show that transitional care targeted to high-risk chronically ill elders improves the quality of care, physical function, quality of life, and satisfaction with the care experience among patients and their family caregivers while achieving significant total costs savings.¹⁰

Essential Components of the Transitional Care Model

- The transitional care nurse (TCN) as the primary coordinator of care, to ensure consistency of provider across the entire episode of care
- Comprehensive in-hospital patient assessment
- Preparation and development of an evidenced-based plan of care
- Regular home visits by the TCN with available, ongoing telephone support (seven days per week) through an average of two months post-discharge
- Continuity of medical care between hospital and primary care physician facilitated by the TCN, who also accompanies each patient to his or her first follow-up visit
- Comprehensive, holistic focus on each patient's needs, including the reason for the primary hospitalization as well as other complicating or coexisting events
- Active engagement of patients and their family and informal caregivers, including education and support
- Emphasis on early identification and response to health care risks and symptoms to achieve longer-term positive outcomes and avoid adverse and untoward events that lead to readmissions
- Multidisciplinary approach that includes the patient, family, informal, and formal caregivers as part of the team
- Physician–nurse collaboration
- Communication among the patient, family, informal caregivers, and health care providers and professionals

Source: The Transitional Care Model, <http://www.transitionalcare.info/>.

Exhibit 1. Comparison of Transitional Care, Disease Management, and Case Management

	Transitional Care Model	Disease Management	Case Management
Primary goal	Interrupt cycles of repeated, avoidable hospitalizations	Identify, treat, and slow progression of chronic diseases by developing and engaging informed, activated patients over time	Deliver personalized services to facilitate optimum level of wellness and functional capacity; inpatient case management aims to enhance quality of patient care and satisfaction while reducing costs
Orientation	Continuity of care between hospital and primary care setting; active engagement of patients and family and informal caregivers; individualized, evidence-based plan of care focused on early identification and response to symptoms and health risks to improve long-term outcomes and avoid readmissions	Based on population health model that uses coordinated care interventions and communication to serve populations with conditions in which patient self-care efforts are significant	Collaborative assessment, planning, facilitation, and advocacy for services to meet an individual's health needs through communication and within available resources
Target population	Cognitively intact chronically ill older adults (i.e., patients with two or more risk factors, including recent hospital admissions, multiple chronic conditions or medications, and poor self-health ratings); ongoing study focuses on cognitively impaired older adults	Patients with one or more chronic diseases including, but not limited to, congestive heart failure, chronic obstructive pulmonary disease, kidney failure, hypertension, diabetes, and asthma	Individuals with difficult or complex health or social situations, including, but not limited to, illness, disability, aging, emotional or behavioral problems
Intervention	Comprehensive in-hospital assessment and planning and home follow-up and ongoing telephone support	Patient education, active symptom management, coordination of care across providers with range of tools (e.g., evidence-based care protocols, Web-based assessment tools, clinical guidelines, health risk assessments, and telephone contact)	Coverage verification, referral, resource management, case review, coordination of services, patient education, and appropriate follow-up
Primary setting	Hospital to home	Community-based; some programs follow patients into inpatient and skilled settings	Community-based acute and long-term care; initiate during hospital stay and extend across continuum

	Transitional Care Model	Disease Management	Case Management
Provider of service	Advanced practice registered nurse	Physician-guided, often delivered by registered nurse through physician offices, disease management firms, community hospitals, and ambulatory settings	Range of licensed professionals with a variety of educational levels, including nurses, social workers, and therapists
Onset of service	Hospital admission	Enrollment in health plan or disease management program	Referral points during episode of care (e.g., hospitalization) or self-initiated
Intervention delivery	Direct services through home visits and telephone contact	Direct services through telephone contact, home monitoring, telemonitoring, and a variety of interventions that can include in-person contact	Varies, but typically includes telephone contact and in-person meetings to ensure referral adequacy and resource management
Home visit	First visit within 24 hours post-discharge; weekly visits for first month; at least semimonthly for the duration of the service	N/A	N/A
Telephone support	Daily, immediately after discharge; weekly on an ongoing basis during any week a home visit is not made as well as evenings and weekends	Periodic, often daily with 24–7 availability	Periodic as needed
Coordination with primary care practitioner	Accompanied by advanced practice registered nurse on first post-discharge primary care visit and subsequent visits; maintains regular contact and transfer of information and documentation	Support for and collaboration with physicians through alerts when patients need medical attention, reminders when preventive services are due, periodic patient status reports	Routine communication and transfer of information to physicians

Sources: The Transitional Care Model, <http://www.transitionalcare.info/>; Care Continuum Alliance Definition of Disease Management, http://www.carecontinuum.org/dm_definition.asp; Congressional Budget Office, “An Analysis of the Literature on Disease Management Programs” (Washington, D.C.: CBO, Oct. 13, 2004), <http://www.cbo.gov/ftpdocs/59xx/doc5909/10-13-DiseaseMngmnt.pdf>; R. Z. Goetzel, R. J. Ozminkowski, V. G. Villagra et al., “Return on Investment in Disease Management: A Review,” *Health Care Financing Review*, Summer 2005 26(4):1–19; Commission for Case Manager Certification, “About Case Management,” <http://www.ccmcertification.org/>; Case Management Society of America, <http://www.cmsa.org/Consumer/GlossaryFAQs/tabid/102/Default.aspx>.

The significant and sustained outcomes of the Transitional Care Model include:

- **Avoiding hospital readmissions and emergency room visits for primary and coexisting conditions.** The TCM has consistently been shown to avoid unplanned readmissions. Additionally, among those patients who require rehospitalizations, the time between primary discharge and readmission is longer and the number of inpatient days is shorter than expected. In the most recently reported randomized controlled trial, significant all-cause reductions in readmissions were observed through one year.
- **Improvements in health outcomes after discharge.** Improvements in physical health, functional status, and quality of life have been reported by patients who received the TCM.
- **Enhancement in patient and family caregiver satisfaction.** Overall patient satisfaction has increased among patients receiving the TCM intervention. In ongoing studies, the TCM also aims to lessen the burden among family members by reducing the demands of caregiving and improving family functioning.
- **Reductions in total health care costs.** Both total and average costs per patient have been reduced among patients in the TCM. After accounting for the cost of the intervention, the mean savings in total health care costs was nearly \$5,000 per older adult.¹¹

BRINGING TRANSITIONAL CARE TO SCALE

This accumulation of evidence set the stage for the next step in translating the Transitional Care Model into mainstream practice: pursuing an opportunity with an insurer to “scale up” the intervention. One insurer, Aetna, was particularly interested in adopting the TCM into its programs and achieving better outcomes among a segment of enrollees with the greatest

health needs. The application of the TCM with Aetna members necessitated two modifications to the model that resulted from regulatory and legal issues. First, Aetna, as an insurance company (as opposed to a direct deliverer of care) was prevented from delivering the TCM services directly. As a result, Penn Home Care and Hospice (PHCH) was added as a partner to implement the model and a case rate per member paid to PHCH. Regulatory and legal issues further constrained TCNs from interacting with Aetna enrollees or their providers during acute hospitalizations. Instead, at-risk elders were identified in the community and enrolled in the TCM at a time that they were not necessarily experiencing episodes of acute illness. These modifications changed the timing of the onset of TCM services. While the tested protocol requires that patients are seen by TCNs within 24 hours of hospital discharge, in this translational study several days passed before the TCNs were notified about becoming involved in the care of some members. As a result of being unable to have an impact on the care of vulnerable patients during acute hospitalizations and during the immediate and critical post-discharge period, significant reductions in all-cause rehospitalizations were observed only through 90 days. However, cost savings per member were sustained through one year.

In partnership with the Aetna Corporation and with funding from The Commonwealth Fund and the Jacob and Valeria Langeloth Foundation, the Penn team used a two-phased, qualitative assessment to gauge stakeholders’ perceptions of the process and the relative ease or difficulty of the model’s translation within a defined segment of Aetna’s mid-Atlantic market. This assessment and analysis yielded key lessons that should guide the development of translational strategies and follow-up, which strikingly mirror the key lessons outlined in the previously published work by Bradley and colleagues.¹² These include the need for strong champions to guide and direct the translational effort, the degree to which the innovation fit within Aetna’s mission and structure, and the need for flexibility with operational and procedural matters, such as the legal and regulatory hurdles that were faced.¹³

Additionally, to study the clinical and economic results associated with the translational effort, the Penn team studied the outcomes of the TCM on 172 Aetna Medicare Advantage members in the mid-Atlantic region. The team examined enrollees' health status and quality of life, as well as member and physician satisfaction and health resource utilization and costs. Findings from these quantitative analyses included a significant decrease in number of rehospitalizations and total hospital days at three months after enrollment into the TCM, although reductions in other utilization outcomes such as reductions in rehospitalizations at six or 12 months or in hospital days were not statistically significant. The TCM was associated with a significant savings of \$439 per member at three months and \$2,170 per member at one year.¹⁴

Aetna's initial interest in the TCM was further fueled by these findings—strong clinical and economic outcomes and a favorable perception among key stakeholders of the innovation's fit and contribution. Even after taking into consideration the challenges and modifications required, Aetna saw the TCM as a high-value proposition. The return on investment stimulated Aetna's leaders to recommend expanding the model to markets with large numbers of Medicare members.

Healthcare Quality Strategies—the federally designated Quality Improvement Organization (QIO) for New Jersey—has advocated for the use of the TCM as part of the Centers for Medicare and Medicaid Services' national initiative to reduce hospital readmissions. The project, referred to as the New Jersey Care Transitions project, was initiated among Medicare beneficiaries in defined communities in 14 states. For example, Virtua Home Care nurses receive training and ongoing technical assistance in using the TCM from the University of Pennsylvania research team.

CRITICAL INGREDIENTS IN TRANSITIONAL CARE

In addition to scaling the Transitional Care Model for size, success in translating the model into mainstream practice depends on identifying clinical and economic outcomes. Doing so requires a comparison of quality

and cost outcomes of the TCM and similar programs offering post-acute care coordination to comparable populations in order to isolate the program elements that are essential in producing desired outcomes.

Under a separate project supported by The Commonwealth Fund, Sochalski and colleagues analyzed data from 12 randomized clinical trials testing the effect of post-acute care coordination programs, two of which employed TCM programs.¹⁵ The critical features that produced significantly lower hospital readmissions included in-person contact with patients and family caregivers and a coordinated interdisciplinary team approach to managing and delivering care. In an evaluation of the Centers for Medicare and Medicaid Services' Medicare Coordinated Care Demonstration Program, Peikes and colleagues¹⁶ found that the most successful coordinated care programs for chronically ill elders—i.e., those achieving both quality improvement and cost savings—were those that included effective programs of transitional care. In a commentary on this evaluation, Ayanian noted that successful coordinated care programs were those in which the designated care coordinators collaborated closely with patients' primary care physicians and clinical teams and were directly engaged in care (e.g., attended medical visits)—a feature fundamental to the TCM.¹⁷

POLICY CHALLENGES OF TRANSLATION

The successes in scaling the TCM into an insurance environment argue favorably for its broader use among other private purchasers, insurers, and public payers. The model's capacity to improve quality and reduce costs, specifically through the reduction of hospital readmissions, positions it as a compelling solution for the payer community. In addition, consumers and patient groups have also recognized the promise of transitional care. In March 2009, AARP released a report that called for changes in health care delivery, payment, and education to mitigate the effects of chronic disease on the elderly and recommended expansion of transitional care services.¹⁸ In 2010, the National Quality Forum endorsed deployment of evidence-based transitional care such as the TCM as

one of 25 national preferred practices for care coordination, and the Coalition for Evidence-Based Policy recognized the TCM as a “Top Tier” evidence initiative—a designation used by federal officials to identify social programs meeting a congressionally enacted standard.^{19,20} Finally, the Affordable Care Act (ACA) contains provisions that will support measurement of effective transitions, support delivery redesign and payment innovations that will foster evidence-based transitional care, support integrated models that hold providers accountable across a patient’s episode of care and distribute rewards accordingly, and establish public reporting of and payment disincentives for avoidable hospital readmissions.

These noteworthy incentives notwithstanding, there are a number of policy challenges that must be overcome to translate the TCM into mainstream practice:

- Current Medicare reimbursement policy does not recognize nor pay for transitional care. High-value transitional care programs, modeled on the TCM, would need to be clearly defined and effective payment methods developed.
- The Centers for Medicare and Medicaid Services has undertaken a series of care coordination pilot programs over a 10-year period that have not achieved anticipated cost savings targets.²¹ Consequently, CMS is likely to be reticent to embrace yet again another initiative to pursue that goal.
- As national quality improvement goals are being established, a priority should be placed on incorporating those that address transitions along with measurable targets that stretch and reward performance.
- The current organization of health care services restricts the clinical practice of health care clinicians to individual settings, and does not readily permit the provision of care across settings, which is the hallmark of transitional care.

CONCLUSIONS AND RECOMMENDATIONS

The translation of the TCM into mainstream practice depends on the dissemination of evidence of its effectiveness; however, as these projects demonstrate, evidence is insufficient. Fundamental changes are needed in the structures, care processes, and roles assumed by health professionals and their relationships to each other and the patients they serve. Important next steps in the translation of the TCM into mainstream practice will involve system redesign and payment changes. For example, as the majority of candidates for the TCM are older adults, Medicare policy changes will be required to pay for the development and coverage of transitional care services. Financial incentives that ensure the swift and widespread adoption of such programs as well as their ongoing support will be needed. Strategies to assure the availability of these services in small and hard-to-reach communities must also be explored. It will also be necessary to develop policy changes that eliminate barriers to clinical practice across health care settings and enhance the health care workforce’s understanding of and ability to deliver evidence-based transitional care. Finally, health information technology initiatives must incorporate mechanisms that will enhance the safe and targeted sharing of key health information across a broader set of services and resources to provide clinicians, patients, and family caregivers with the tools they need to truly coordinate care and manage health.

NOTES

- ¹ E. H. Bradley, T. R. Webster, D. Baker et al., *Translating Research into Practice: Speeding the Adoption of Innovative Health Care Programs*, (New York: The Commonwealth Fund, July 2004).
- ² For more information, see The Transitional Care Model, www.transitionalcare.info.
- ³ M. D. Naylor, “A Decade of Transitional Care Research with Vulnerable Elders,” *Journal of Cardiovascular Nursing*, April 2000 14(3):1–14; E. A. Coleman and C. Boulton, “Improving the Quality of Transitional Care for Persons with Complex Care Needs,” *Journal of the American Geriatric Society*, April 2003 51(4):556–57.
- ⁴ American Geriatrics Society, *Improving the Quality of Transitional Care for Persons with Complex Care Needs*, (New York: AGS, 2005); National Quality Forum, *NQF-Endorsed Definition and Framework for Measuring Care Coordination* (Washington, D.C.: NQF, 2006); Agency for Healthcare Research and Quality, *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies: Volume 7—Care Coordination*, Structured Abstract, 04(07)–0051)–7 (Washington, D.C.: AHRQ, June 2007), <http://www.ahrq.gov/clinic/tp/caregapt.htm>.
- ⁵ S. F. Jencks, M. V. Williams, and E. A. Coleman, “Rehospitalizations Among Patients in the Medicare Fee-for-Service Program,” *New England Journal of Medicine*, April 2, 2009, 360(14):1418–28.
- ⁶ Naylor, “Decade of Transitional Care Research,” 2000; Coleman and Boulton, “Improving the Quality of Transitional Care,” 2003.
- ⁷ A. J. Forster, H. J. Murff, J. F. Peterson et al., “Adverse Drug Events Occurring Following Hospital Discharge,” *Journal of General Internal Medicine*, April 2005 20(4):317–23.
- ⁸ Medicare Payment Advisory Commission, *Report to the Congress: Reforming the Delivery System*, (Washington, D.C.: MedPAC, June 2008).
- ⁹ MetLife Mature Market Institute and National Alliance for Caregiving, *MetLife Caregiving Cost Study: Productivity Losses to U.S. Business*, July 2006.
- ¹⁰ M. D. Naylor, D. Broton, R. Jones et al., “Comprehensive Discharge Planning for the Hospitalized Elderly: A Randomized Clinical Trial,” *Annals of Internal Medicine*, June 15, 1994 120(12):999–1006; M. D. Naylor, D. Broton, R. Campbell et al., “Comprehensive Discharge Planning and Home Follow-Up of Hospitalized Elders: A Randomized Clinical Trial,” *Journal of the American Medical Association*, Feb. 17, 1999 281(7): 613–20; M. D. Naylor, D. A. Broton, R. L. Campbell et al., “Transitional Care of Older Adults Hospitalized with Heart Failure: A Randomized, Controlled Trial,” *Journal of the American Geriatrics Society*, May 2004 52(5):675–84.
- ¹¹ Naylor, Broton, Campbell et al., “Transitional Care of Older Adults,” 2004.
- ¹² Bradley, Webster, Baker et al., *Translating Research into Practice*, 2004.
- ¹³ M. D. Naylor, P. H. Feldman, S. Keating et al., “Translating Research into Practice: Transitional Care for Older Adults,” *Journal of Evaluation in Clinical Practice*, Dec. 2009 15(6):1164–70.
- ¹⁴ M. D. Naylor, K. H. Bowles, K. M. McCauley et al., *High Value Care for Chronically Ill Older Adults: Translation of Research into Practice*, unpublished.
- ¹⁵ J. Sochalski, T. Jaarsma, H. M. Krumholz et al., “What Works in Chronic Care Management,” *Health Affairs*, Jan./Feb. 2009 28(1):179–89.
- ¹⁶ D. Peikes, A. Chen, J. Schore et al., “Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures Among Medicare Beneficiaries,” *Journal of the American Medical Association*, Feb. 11, 2009 301(6):603–18.
- ¹⁷ J. Z. Ayanian, “The Elusive Quest for Quality and Cost Savings in the Medicare Program,” *Journal of the American Medical Association*, Feb. 11, 2009 301(6):668–70.
- ¹⁸ AARP Public Policy Institute, *Chronic Care: A Call to Action for Health Reform* (Washington, D.C.: AARP, 2009).

- ¹⁹ National Quality Forum, *New Set of NQF-Endorsed Practices and Quality Measures Support Coordinated Healthcare for Patients*, Press release (Washington, D.C.: NQF, Sept. 27, 2010), available at: http://www.qualityforum.org/News_And_Resources/Press_Releases/2010/New_Set_of_NQF-Endorsed_Practices_and_Quality_Measures_Support_Coordinated_Healthcare_for_Patients.aspx.
- ²⁰ Coalition for Evidence-Based Policy, *Top Tier Evidence Initiative: Evidence Summary for the Transitional Care Model* (Washington, D.C.: Coalition for Evidence-Based Policy, 2010), available at: http://evidencebasedprograms.org/wordpress/?page_id=946.
- ²¹ Centers for Medicare and Medicaid Services, *Master Demonstration, Evaluation, and Research Studies for ORDI System of Record 09-70-0591: List of Projects* (Baltimore: CMS, 2010), available at: <https://www.cms.gov/DemoProjectsEvalRpts/downloads/MasterSORList.pdf>.

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