Advances in medical science and technology, accompanied by the graying of America, mean tremendous growth in the number of individuals living with chronic illnesses. Approximately 80 percent of Americans ages 50 and older have at least one chronic condition (Anderson, 2010). They present significant challenges to our healthcare delivery system, which provides questionable quality of care to this population.

A majority of these chronically ill people are publicly insured through either Medicare or Medicaid, and have combinations of complex, interacting medical and mental health conditions, as well as functional or physical limitations. Though a small percentage of total Medicare and Medicaid beneficiaries is comprised of the chronically ill, it accounts for a majority of expenditures. The majority of beneficiaries covered by both Medicare and Medicaid (dual eligibles) who have one or more chronic conditions and functional limitations have annual expenditures that are typically in the ninety-fifth percentile (The Lewin Group, 2010). The high cost of healthcare for the chronically ill can be attributed to several factors, including poor medication adherence, deficient self-care skills, low health literacy, lack of access to primary care, psychosocial issues, and communication and coordination gaps across multiple healthcare providers (Brown, 2009; Hamblin and Somers, 2011).

The Patient Protection and Affordable Care Act (ACA) legislation lays the foundation for potential changes in healthcare delivery and financing. Many of the ACA’s provisions address individuals with chronic illness, and are focused on improvements in how services are delivered, including payment reimbursement, public health expansion (home- and community-based services), and care coordination (Shugarman and Whitenhill, 2011). The legislation contains delivery models, such as accountable care organizations (ACO), medical homes, health homes, and transitional care interventions, that offer incentives to providers for improving care for chronically ill populations.

This article presents an overview of the emerging research evidence on two new approaches to primary care for the chronically ill, patient populations that benefit from their different perspectives and approaches to care,
and a case study that highlights the need for integrated, comprehensive care coordination.

Two Approaches to Primary Care for the Chronically Ill
During the past two decades, a number of healthcare professionals and researchers have developed and tested new models of primary care for patients with chronic illness. Two leading approaches are transitional care and comprehensive care coordination. Both models target similar at-risk, vulnerable chronically ill adults, and focus on reducing avoidable hospitalizations and re-admissions. Methods used include performing an initial comprehensive assessment; implementing an evidence-based care management strategy and evidence-based coaching and self-care education approach; and, facilitating and coordinating appropriate medical and community-based services. The two models differ on where the intervention is initiated, intervention staffing, and intervention duration. Both approaches seek to improve health outcomes as well as the patient’s quality of life and satisfaction with care. They have demonstrated success with improving care processes, quality of life, and satisfaction with care, but have shown limited success in reducing total healthcare costs, which is commonly what the broader healthcare system seeks. However, the results suggest that certain of the models’ components are potentially cost-effective when included in comprehensive efforts to manage the healthcare needs of adults with multiple chronic conditions. Enhancing the effectiveness of either of the two approaches depends upon appropriate targeting of those patients whose healthcare profile makes them better suited for one over the other.

Prominent and Emerging Models of Transitional Care
Both transitional care and comprehensive care management have shown promise in reducing costs for adults with multiple chronic illnesses. Transitional care is a set of time-limited activities designed to coordinate healthcare as patients move between different locations or levels of care, typically from hospital to home. Two prominent models of transitional care that have reduced re-admissions and costs are the Transitional Care Model developed by Mary Naylor (Naylor et al., 2004), and the Care Transitions Intervention developed by Eric Coleman (Coleman et al., 2006).

Although the two models differ, both programs engage patients with chronic illnesses while hospitalized; follow patients intensively post-discharge (for four to twelve weeks) and use a transitional coach or team to manage clinical, psychosocial, rehabilitative, nutritional, and pharmacy needs; teach or coach patients about medications, self-care, and symptom recognition and management; and, remind and encourage patients to keep follow-up physician appointments.

Another emerging model is the Enhanced Discharge Planning Program (EDPP) at Rush University Medical Center. Designed to improve quality of care and reduce costs, the EDPP provides care management services from social workers to assist older adults in a safe transition home after hospital discharge (Perry et al., 2011). EDPP social workers ensure the discharge plan is fully implemented, assist with coordinating community resources and follow-up appointments, and intervene around other issues that may arise as a result of a complex transition. The EDPP has provided evidence that increased use of community-based social services and outpatient medical services improves functional status, health-related quality of life, and patient experience. Impact on cost currently is being evaluated.

A Look at Care Coordination and Comprehensive Care Management
Despite the intrinsic appeal of the new models of coordinated care specified in the ACA, there is no consensus on a successful intervention that will improve quality and lower costs. Promising care management programs documented in the
literature usually involve a combination of physicians, registered nurses (RN), social workers, and other professionals working together with patients and caregivers to implement evidence-based practices and provide coordinated care.

No consensus exists about a successful transition intervention that improves care quality and lowers costs.

What is effective care coordination? Although care coordination is mentioned multiple times in the ACA, there is no formal or consistent definition. Effective care coordination should consist of interventions that demonstrate improvement in patient-related outcomes and a reduction in total healthcare expenditures.

In this article we use the following definition, which was developed by the National Coalition on Care Coordination (N3C, n.d.):

‘Care coordination’ is a person-centered, assessment-based, interdisciplinary approach to integrating healthcare and social support services in a cost-effective manner in which an individual’s needs and preferences are assessed, a comprehensive care plan is developed, and services are managed and monitored by an evidence-based process which typically involves a designated lead care coordinator.

Care coordination includes activities that assist individuals and their families and caregivers to self-manage chronic health conditions and related psychosocial problems more effectively; coordinate care between multiple health and community providers; bridge gaps in care; and, receive appropriate levels of care (Bodenheimer and Berry-Millett, 2009).

Comprehensive care management models

In contrast to transitional care, comprehensive care management identifies individuals with multiple chronic conditions who are at increased risk of hospitalization within twelve months, and assigns a care coordinator to work with them and their physician(s) to manage their chronic illnesses in order to reduce risk of hospitalization.

Effective models include Geriatric Resources for Assessment and Care of Elders (GRACE) (Counsell et al., 2007; Counsell et al., 2009); Care Management Plus (CMP) (Dorr et al., 2008); Guided Care (Boult et al., 2011); and the four best-practice sites that participated in the Medicare Coordinated Care Demonstration (Brown, 2009; Peikes et al., 2009).

These interventions share the following common components:

- Interdisciplinary team care with designated care managers who are advance practice nurses, RNs, social workers, occupational therapists, and other rehabilitative specialists (the most successful teams thus far are those managed by RNs);
- Frequent face-to-face patient contact in the clinical, hospital, and home settings;
- Regular phone monitoring;
- Relatively small patient caseloads; and,
- Psychosocial assessment combined with mental health and social support services, as needed.

They also share the following activities and practices:

- Use evidence-based practice guidelines for care management;
- Conduct a comprehensive, multidimensional in-home initial assessment;
- Develop a collaborative plan of care—and a specific action plan and goals—with the patient, their caregiver, and primary care provider;
- Implement self-care, coaching, and support, and an effective medication management plan with the patient and their caregiver;
- Facilitate communication among the patient’s providers about the patient, as well as between the patient and their providers;
- Manage transitions with a timely comprehensive response to care setting changes, especially from hospitals and skilled nursing facilities; and
• Arrange and coordinate needed health- and community-related support services. See Schraeder and Shelton (2011) for a review of the components and a detailed review of the evidence-based care coordination literature.

Which Care Approach Is Most Effective?
There is compelling evidence that good transitional care reduces hospitalizations and costs, but questions remain about its sustained effectiveness. While there have been favorable short-term effects on hospital re-admissions, it is unknown how long hospitalization and cost reductions continue, and when or if positive benefits fade when contact ceases with a care manager or transition coach.

Comprehensive care coordination, given its longer duration, potentially could more effectively address psychosocial and environmental determinants essential to achieving better care and ultimately better health. Comprehensive care coordination is associated with better satisfaction with care, quality of care, quality of life, and survival (Boult et al., 2009). It also provides for an approach that connects the patient and their family with a healthcare team.

In either approach, effective care coordination tries to bridge the gap between the needs of people with complex chronic health management issues and our health system’s fragmented mix of multiple providers and payors. Questions about the effectiveness of transitional care and comprehensive care coordination, and which populations are best served by either approach, can only be answered through rigorous evaluation.

Who benefits from which approach?
People who would benefit from comprehensive care coordination share certain characteristics: an increased morbidity burden because of advanced or multiple chronic conditions; a prior pattern of using healthcare that suggests such a pattern will continue; self-reported decreased quality of life; difficulties with activities of daily living; non-adherence to medication regimens; and chronic pain issues (Freund et al., 2011). Additional factors include functional decline or impairment; prior hospitalization; prior nursing home placement; and high cumulative costs. Decreased health literacy and patients experiencing gaps in care, as well as those with limited caregiver support, are other factors that may help identify persons at high risk and in need of comprehensive care coordination (Bernstein, 2007).

Evidence says good transitional care reduces hospitalizations and costs.

Patients who would benefit from a less intensive approach include people with limited comorbid conditions who would benefit from short-term follow-up, post-transition, for managing medication and service coordination until they achieve independence; people with a higher education and health literacy who communicate well with healthcare professionals, but may need short-term monitoring and social service support until they gain independence; people who live in assisted or supported living environments; people who have high-level, supportive caregivers (with higher education and health literacy); people who will have few functional limitations, especially mobility, after hospitalization; and, patients who have a planned surgical procedure requiring limited follow-up.

Conclusion: Transitional Care Needs to Go the Distance
Reflecting on the patient’s journey described on pages 17 and 18, it is evident that when and where care coordination was most needed—during rehabilitation and multiple surgeries—it was the least in evidence. Clearly the patient has a need for ongoing comprehensive care coordination, since care transitions services are more focused and time-limited. As mentioned previously, older adults with less complicated,
Care Coordination in the Key of (Real) Life

Often, professionals who are not delivering healthcare “in the trenches” are those who discuss and define care coordination. To better demonstrate the realities—and deficiencies—of care coordination as it is currently conducted in the U.S. healthcare system, we offer the following case study involving a patient with complex health and homecare needs who experienced the healthcare system’s fragmentation firsthand, and acquired a deeper understanding of the needs and benefits of care coordination.

Phase 1: Treatment at a Trauma Center

In May 2009, a 65-year-old female was seriously injured in an automobile accident, which rendered her a quadriplegic. Due to her serious injury, she was unconscious much of the time, and given the uncertainty of her survival and long-term health prospects, it was a very difficult time for her husband. Fortunately, the lead trauma surgeon recognized the importance of interdisciplinary care and personally coordinated every part of her medical care. He also established a daily communication system with the patient’s husband, telling him that if he ever felt his wife’s treatment was not proper, to discuss it with him and he would try to correct the situation.

The patient’s husband was told that the first two weeks of her return to health was primarily in the provider’s hands; subsequently, it would largely depend on the patient and her support system. It was clear that the patient and her husband had a very unusual physician who well understood the need for care coordination that involved not only the entire medical team but also the patient and caregiver. The patient later expressed that this physician’s commitment to teamwork was an invaluable aid to her survival and recovery during this phase.

Phase 2: Surgeries and Rehabilitation at an Academic Medical Center

In this next phase, the patient was admitted to a rehabilitation center at a major academic medical center, where she had multiple surgeries and experienced complications from various drugs. Many providers and specialists treated her in this setting, and care coordination was very limited. Physicians did not routinely speak to one another unless encouraged to do so, and medical records were not always read completely.

The patient and her husband realized that if she was going to recover as fully as possible they were going to have to take control. With the assistance of the patient’s primary care physician, they requested that specialists speak to one another and that all providers read the patient’s medical records before beginning any treatment. Physicians were asked to identify themselves before initiating an examination. In essence, the patient and her husband functioned as care coordinators because the system did not encourage collaboration or teamwork. They came to realize that although they could coordinate her care quite well, they lacked medical expertise and did not always have the necessary knowledge to be completely effective. The end result was better than what was offered in this setting, but it was slower in coming, as they had to learn how to work through a fragmented system.

Phase 3: Coming Home

After four months in rehabilitation, the patient returned home and received homecare, in which visiting nurses and therapists chiefly provided her care. At this point, the patient and her husband had acquired sufficient expertise in care coordination; they were able to efficiently arrange treatment from physicians, nurses, physical therapists, and other providers, as needed. They quickly learned, however, that only a few homecare specialists were familiar with the patient’s injuries and how to provide the necessary care. They had to be taught on the job, including learning about many of the fundamental aspects of care for a person with serious physical limitations. This showed up the current deficiencies in homecare services and a need for better homecare provider training.
Phase 4: Return to Work and Continuing Homecare

The patient was able to return to work eight months after the accident. She continued with homecare, and still receives it. The patient now has a primary care physician who understands the need for (and practices) care coordination and believes that her role is to help maintain the patient’s health in the best possible manner. It has been the patient’s experience that there are selected healthcare providers who do their best to provide comprehensive care coordination. In her case, her trauma surgeon and her current primary care physician made care a team effort. In addition, the patient believes strongly that both the person receiving treatment and the caregiver must be involved in the process in order for care to be fully integrated.

Patients and caregivers both must be involved in order to achieve fully integrated care.

less intense health conditions could instead benefit from short-term transitional care.

While the patient in our case study needed comprehensive care coordination, she was fortunate to have the education, resources, and caregiver support to ensure that care coordination was implemented. There are many older adults with multiple chronic conditions, complex healthcare needs, and functional limitations where social determinants and other factors may make them less likely to do this.

Targeting the appropriate level of care coordination to individuals based on their health profile, educational background, and knowledge of the healthcare system and other resources will continue to be key in determining the effectiveness of care coordination when it comes to health outcomes and cost.

It is also clear that care coordination was not embraced on the institutional level; rather it was a few committed healthcare providers who took charge of this effort. As noted previously, the ACA provides an opportunity for making care coordination an integral part of healthcare reform so that steps can be taken to combat the current ad hoc approach to care coordination. Additionally, the case study shows that no one had a clearly delineated care coordinator role, such as an RN or social worker. Instead, care coordination fell to the physician, who took it upon himself to play this role.

In order for care coordination to be implemented more widely and effectively, whether it be transitional care or comprehensive care coordination, we must do a better job of providing interdisciplinary training for all health and homecare providers on the educational and institutional levels. It is a lofty goal to have coordinated care become the norm for care delivery, but as the population ages—further increasing the need for integrated care—and healthcare reform offers fresh opportunities for implementing effective models of care coordination, we must work to improve a healthcare system plagued by fragmentation and inadequate training.

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