Like the generation before them, an ever-increasing proportion of baby boomers in the United States have a chronic illness and often multiple chronic illnesses, using ever-increasing national healthcare resources. With the Triple Aim, Don Berwick’s overarching goals to help guide positive transformation to the healthcare system, palliative care can be seen as a valuable ally in the growing arsenal of models of care aimed at addressing the nation’s needs. The SPARK Program, the palliative care management program of a large home care agency in a metropolitan area, was created to address the needs of patients with chronic serious illness and palliative care needs.

Palliative Care Hits a Triple WIN

Access, Quality, and Cost

Background
With the aging of the baby boomer generation in the United States, an increasing number of adults are faced with serious illness and progressively worsening chronic illness. In 2003, 162 million cases of chronic diseases such as diabetes, hypertension, and heart disease were reported (DeVol et al., 2007). The burden of chronic illness is increasing, particularly among minority and low-income populations and in people over the age of 85 years (Bodenheimer et al., 2009). In a recent Health Affairs article, Kangovi et al. (2013) note that people with low socioeconomic status are more likely to be hospitalized for conditions that can be treated at home than those of higher socioeconomic status. The study also found that persons of low socioeconomic status use 45%...
less ambulatory and preventive care in direct contrast to the fact that they are four times more likely to require hospital admission and are more likely to require multiple hospitalizations.

The U.S. healthcare system is facing what has been called by many, the “silver tsunami.” On the crest of that tsunami are two thirds of all Medicare beneficiaries with at least one chronic illness (Blumenthal, 2011). In fact, boomers today account for a third of all healthcare spending, a third of all prescription drug use, and 40% of medical visits. Furthermore, boomers will represent 45% of the U.S. population by the year 2015 (Keller, 2013). The U.S. healthcare system has been slow to adapt to the challenge of chronic illness in old age. As a result, these patients must navigate a fragmented and inefficient care system, offering them a patchwork of uncoordinated services that do not meet their needs and have a negative impact on both cost and clinical outcomes (Agency for Healthcare Research and Quality, 2012; Lynn & Adamson, 2003).

Patients with serious illness including those with multiple chronic conditions and functional impairment represent approximately 10% of all patients in the United States but account for more than one half of the nation’s healthcare costs (Gelfman & Meier, 2010). An overwhelming amount of healthcare costs occur in the final years of life (Lynn & Adamson, 2003). Change is needed in our healthcare system and in fact has already begun with the 2010 Patient Protection and Affordable Care Act (ACA). The impetus for the ACA began with the Institute of Medicine’s (IOM) seminal 2001 report “Crossing the Quality Chasm” (Committee on Quality of Healthcare in America, Institute of Medicine, 2001). This report stressed the need for healthcare systems to promote the continuity of care and integration of services through safe, effective, patient-centered, timely, efficient, and equitable care. Fast forward to 2008 when Don Berwick, the Administrator of the Centers for Medicare and Medicaid Services (CMS) at that time, stated “the United States will not achieve high-value care unless improvement initiatives pursue a broader system of linked goals” (Berwick et al., 2008, p. 760). Berwick posited the linked goals called the Triple Aim, which was based on the previously established IOM goals. As a roadmap for healthcare system change, the Triple Aim goals are an improved patient experience, improved population health, and reduced healthcare costs.

**Defining Palliative Care**

Palliative care can be thought of as both a type of care and a philosophy of care. It is the medical specialty that provides interdisciplinary services focused on the quality of life of those who may be suffering from serious illness regardless of diagnosis or prognosis (GetPalliativeCare.org, 2013). Palliative care offers timely and effective management of the physical, emotional, and spiritual suffering that may occur for persons with serious illness as well as education about disease processes and treatment options so that patients and caregivers can make informed decisions about their healthcare consistent with their values and beliefs (Labson et al., 2013). Palliative care has been shown to not only improve the quality of life of patients, but prolong it, as seen in the landmark study published in the *New England Journal of Medicine* on patients with metastatic nonsmall-cell lung cancer (Temel et al., 2010).

Using the Triple Aim as a roadmap, palliative care can be seen as an effective means of reaching each of these three goals by supporting patient-centered care based on the values and beliefs of patients and their caregivers; improving the quality of life of patients and caregivers through effective and aggressive symptom management; and reducing overall costs through reducing unnecessary and often preventable hospital visits through timely and appropriate care. The ability of palliative care to address the needs of patients with chronic illness positions the specialty to play a critical role in the efforts to refocus healthcare delivery and to establish effective and efficient patient-centered care (Fletcher & Panke, 2012).

Palliative care programs have proliferated in hospitals throughout the United States in the past several years showing considerable cost savings to hospitals (Morrison et al., 2008). Community-based programs have been a little slower to follow for a variety of reasons including inadequate...
Palliative care service (Meier & Beresford, 2006). In a 2004 study by Naylor et al. examining the impact of a transitional care model, the researchers found that by using NPs rather than the more traditional home care registered nurse (RN), they were able to reduce rehospitalizations to one in five in their intervention patients, down from one in two of the control patients visited by the RN (Naylor et al., 1999, 2004). The researchers found that joint clinical decision making between the NP and the physician resulted in time-lower interventions in the home and prevented negative outcomes.

LCSWs, with their ability to perform concrete social work tasks such as entitlement applications and their training in psychotherapy and behavioral health support, are also well suited for a comprehensive cost-effective palliative care service. Approximately 20% of older adults have mental disorders such as depression and/or anxiety disorders, and cognitive impairment such as dementia (Norris et al., 2008). These disorders present an enormous burden for older adults and their family. They are associated with greater disability, poorer physical health, greater mortality, poorer quality of life, and higher healthcare costs.

Including a social worker that can address these issues has been critical to the success of SPARK and the population it serves 3.5 years. Data from the project indicate greater reductions in rates of hospital admissions in cohorts of patients with serious medical illness and co-occurring mental illness.

SPARK is a care management program. Care management programs, in keeping with the Triple Aim, seek to provide management of effective clinical care management and coordination. Early identification of change in condition. Education. Self-management. Disease prevention and processes. Treatment options. Comprehensive palliative care assessment and care planning. Diagnose illness. Prescribe medications and treatments.

<table>
<thead>
<tr>
<th>LCSW</th>
<th>Coordination</th>
<th>Community benefits</th>
<th>Entitlements</th>
<th>Provision of psychotherapy and psychosocial support</th>
<th>Diagnosis of mental disorders</th>
<th>Assessment-based treatment plan</th>
<th>Development</th>
<th>Implementation</th>
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Table 1. Examples of Full Scope of Practice Activities for SPARK Nurse Practitioners (NPs) and Licensed Clinical Social Workers (LCSWs)
and patient-centered long-term relationships; better care coordination across healthcare providers and care settings; and better management of healthcare costs. By combining care management with palliative care, SPARK patients and their caregivers serve to benefit from both foci. SPARK not only coordinates care for patients across healthcare providers and care settings but allows healthcare providers to work at full their scope of practice. SPARK staff participate in the medical and psychosocial care of patients over the course of care in the program.

In the previously mentioned study by Naylor et al., many of their study patients demonstrated an increased ability to manage their health needs (2004). However, because of the progressive nature of the chronic conditions, severity of resultant symptoms, and increasing frailty of this cohort of patients, the researchers concluded that ongoing NP involvement was required to maintain outcomes. This is an area in which care management excels.

The findings of Naylor and the other researchers in this study are consistent with the experience in SPARK to date. Although self-management education plays a critical role in the SPARK intervention, it has been our experience that a significant number of our patients have benefited from long-term involvement with the program.

SPARK patients are managed through a combination of telephonic and home visits. Each team of NP and LCSW comanage a case load of patients working closely together making joint visits during key times such as admissions and goals of care discussions. Both the NP and LCSW develop the SPARK plan of care together using their clinical judgment as palliative care providers in addition to patient/caregiver preferences. The team works in close collaboration with the patient’s primary care provider (PCP) and any other healthcare providers the patient may have including specialists such as oncologist or cardiologists and public health nurses assuring continuity of care across healthcare providers and care settings.

Visit use is based on an evidence-based acuity tool developed specifically for SPARK using validated measures such as the Palliative Performance Scale (Anderson et al., 1996) as well as evidence-based clinical protocols such as the one developed by the Global Initiative for Chronic Obstructive Lung Disease (2013). The tool examines all palliative care domains: pain, symptoms, psychosocial distress, spiritual distress, and advance care planning as well as functional status among others. By basing use on the acuity tool, SPARK staff is able to effectively manage larger caseloads while maintaining positive outcomes in our medically and psychosocially complex patient population.

SPARK was initiated on April 12, 2010 as a pilot program servicing a Medicare Advantage Plan in one section of a large metropolitan northeastern city. After 3 months the plan identified a trend showing reductions in hospital admissions in the members served by SPARK and requested full expansion to all areas of the large metropolitan city served by the organization. Since initiation, the SPARK Program has admitted almost 700 patients and currently has a growing daily census of over 400 patients.

The characteristics of the majority of the patients admitted with the patient’s primary care provider (PCP) and any other healthcare providers the patient may have including specialists such as oncologist or cardiologists and public health nurses assuring continuity of care across healthcare providers and care settings.

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to the SPARK Program reflect that of the highest cost Medicare beneficiaries with complex medical and psychosocial needs (Fletcher & Panke, 2012). Typical patients are the frail elderly with multiple chronic conditions, functional impairment, limited social support, low education level, and dual eligibility with Medicare and Medicaid (Table 2). Most have a history of fragmented care and high hospital use in the 6 months before admission to SPARK. There is a high rate of psychosocial distress among patients and their caregivers, and approximately 20% of the patients have a co-occurring serious mental illness such as major depression.

**Methodology**

Using a pre- and postprogram comparison of hospital admissions per 1,000 (patients) to evaluate its effect on reducing rates of hospital admissions in the patients serviced SPARK

<table>
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<tr>
<th>Table 2. SPARK Patient Characteristics</th>
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<td><strong>Age</strong></td>
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<td><strong>Gender</strong></td>
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<td><strong>Language</strong></td>
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<td><strong>Ethnicity</strong></td>
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<td><strong>Education level</strong></td>
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<td><strong>Marital status</strong></td>
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<td><strong>Frail and poor</strong></td>
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<td><strong>Multiple chronic conditions</strong></td>
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<td><strong>Mental illness</strong></td>
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<td><strong>Hospice eligible (%)</strong></td>
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<td><strong>CMS Hierarchical Condition Categories risk level</strong></td>
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Note: CMS = Center for Medicare & Medicaid Services.
has shown a 39% reduction in hospital admission rates. The palliative care management of SPARK patients has resulted in not only fewer unnecessary and preventable hospitalizations and aggressive care for those who don’t want it but also shorter hospitalizations and fewer ICU stays for those who do, consistent with other programs across the country (Brumley et al., 2007; El-Jawahri et al., 2011; Gelfman & Meier, 2010).

SPARK’s clinical outcomes are measured against thresholds set by the program by referencing rates achieved in clinical trials by programs providing similar interventions (Englehardt et al., 2009; Rummans et al., 2006) or by government statistics. In the cohort of patients enrolled into SPARK that meet hospice eligibility criteria, 65% have been transferred from SPARK to hospice in comparison to the average rate of admission in the metropolitan area, which ranges from 21% to 31% (Dartmouth Atlas of Health Care, 2013). Once admitted to hospice, the SPARK patients have an average hospice length of stay of 67 days, which is 10 days longer than the average hospice length of stay in the state (New York State Department of Health, 2008). Of the SPARK patients who have died, 67% have died at home, a rate that is much higher than the national rate of 24% of deaths at home for those 65 years and older (Centers for Disease Control and Prevention, 2010). Key measures that influence all other outcomes are completion of advance directives, which have been obtained in 92% of SPARK patients, and improvement or maintenance of overall quality of life, achieved in 91% of patients.

**Implications**

SPARK successes may be attributable to a number of factors, in large part to combining two proven models of care—care management and palliative care; using two clinicians working full scope of practice—NP and LCSW using a team-based approach; and working within a case rate payment structure. SPARK has addressed the goals of the Triple Aim by expanding palliative care access to community-dwelling patients and improving the quality of life of its patients while reducing hospitalizations all in a financially viable way.

Where does SPARK go from here? Although SPARK as it exists today is best suited for high-cost, high-use patients, the cost of providing the high intensity type of care SPARK provides may be considered high by some. To reduce costs while maintaining outcomes, next steps for SPARK include the integration of RNs to the team to provide care management support. Our hopes are that this will allow staff to care for a larger, more clinically diverse population as well as making the program more flexible and scalable. SPARK has also begun to look at the integration of community healthcare workers into the program to support the less clinically acute but still vulnerable patients and their caregivers.

SPARK is also looking to expand its services to other managed care payers and traditional Medicare through accountable care organizations. SPARK, with its skills and resources, is aligned to address the silver tsunami.

**Case Study**

Mr. A was an 86-year-old male with chronic obstructive pulmonary disease (COPD), hypertension, diabetes mellitus, and osteoarthritis. He was referred to SPARK because of multiple hospitalizations secondary to COPD exacerbations. Mr. A was a primary Spanish speaker with low health literacy who lived alone with very limited social supports in the area. When the NP and LCSW made the initial
visit to Mr. A, they found him exhausted by his frequent trips to the hospital. Following a comprehensive palliative care assessment, the team’s diagnoses were shortness of breath, pain, depression, and anxiety. Among the first issues resolved by SPARK was an immediate medication adjustment by the NP in collaboration with his PCP resulting in relief in his shortness of breath and pain. The LCSW initiated a Medicaid application to provide more personal care support to keep him safely in his home. The LCSW also began the process of providing psychosocial support for Mr. A’s depression and anxiety. Together the team worked with Mr. A to develop goals of care that were in keeping with how he wanted to spend the remainder of his life.

Over the course of the time Mr. A spent on SPARK, both the NP and LCSW called him frequently to assess his condition and provide education and support. They also made routine and emergent home visits alternating visits between the NP and the LCSW based on Mr. A’s need. For instance, when his medical condition would worsen, the NP would make an emergent home visit and make necessary changes to his medication, avoiding any potential hospitalizations. Eventually Mr. A’s disease progressed to the point that he met hospice criteria. The team met with Mr. A together to discuss the hospice benefit, and because of the trust they had built over the previous months, Mr. A was able to accept that he had reached the point when hospice was his best treatment option. Mr. A was smoothly transitioned to hospice shortly after this final meeting never having gone back to the hospital once following SPARK admission. He died quietly, in the comfort of his own home, 4 months later.

Karol DiBello, MSN, RN, FNP-BC, ACHPN, DNPc, is the Associate Director, SPARK Program, Visiting Nurses Service of New York Hospice and Palliative Care, New York City, New York.

Nureen Coyne, MSN, RN, OCN, is a Clinical Product Development Specialist, Visiting Nurse Service of New York, New York City, New York.

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Address of correspondence: Karol DiBello, MSN, RN, FNP-BC, ACHPN, DNPc, VNSNY Hospice and Palliative Care, 1250 Broadway, 4th floor, New York, NY 10001 (karol.dibello@vnsny.org).

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