The PACE Program:
Home-Based Care for Nursing Home–Eligible Individuals

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(See the commentary by Lyn and Johnson on pages 205-206 and the commentary by Wroth on pages 207-208.)

The Program for All-Inclusive Care of the Elderly (PACE) is a Medicare/Medicaid managed care benefit for frail adults aged 55 years and older who, although certified by the state as nursing home eligible, choose to live in the community. The PACE model features comprehensive medical and social services coordinated by an interdisciplinary team whose goal is to promote independence and quality of life.

More than 30 years ago, On Lok, a community-based organization in San Francisco, California, developed the Program for All-Inclusive Care of the Elderly (PACE) as an alternative to nursing home care. PACE is a Medicare/Medicaid managed care benefit for frail adults aged 55 years and older who, although certified by the state as nursing home eligible, choose to live in the community. Enrollees (ie, participants) must be able to live safely at home within a PACE site's geographic area. PACE became a Medicare benefit and a state Medicaid option under the Balanced Budget Act of 1997. Monthly capitation payments from Medicare and Medicaid provide revenue for PACE. At the end of 2010, there were 75 approved PACE sites in 29 states, covering 23,000 participants. The goal of these programs is to extend participant independence in the community and to enhance the quality of their lives.

The North Carolina PACE Model

In 2004, the North Carolina legislature mandated the creation of 2 pilot PACE programs. This legislation provided the funds to the Division of Medical Assistance at the North Carolina Department of Health and Human Services to secure actuarial analysis for the Medicaid capitation rate for North Carolina, to add PACE to the North Carolina Medicaid State Plan (in 2007), and to work with the 2 pilot sites, Elderhaus PACE and Piedmont Health SeniorCare, to complete applications to the Centers for Medicare and Medicaid Services and allow them to provide Medicare benefits. Elderhaus PACE first enrolled participants in April 2008; Piedmont Health SeniorCare opened in September 2008. LIFE St. Joseph of the Pines (Fayetteville) and PACE of the Triad (Greensboro) will open in 2011. Sites in the process of applying are in Durham, Hickory, Statesville, Asheville, and Greenville. These PACE sites are sponsored by a variety of existing community health care providers, including a day care program, a community clinic, a national religious organization, hospital systems, hospices, and a national housing organization.

TABLE 1.
Characteristics of Elderhaus PACE Participants

Variable	Participants (N = 70)
Living arrangement	
Home alone	13 (18.6)
Home with caregiver	53 (75.7)
Skilled nursing facility	3 (4.3)
Assisted-living facility	0 (0)
Group home	1 (1.4)
Demographic characteristic	
Age, years, mean	79.9
Sex	
Female	44 (62.9)
Male	26 (37.1)
Dual eligibility payer	66 (94.3)
Most frequent diagnosis	
Dementia	51 (72.9)
Diabetes	27 (38.6)
Chronic renal failure	19 (27.1)
Cerebrovascular accident	19 (27.1)
Vascular disease	19 (27.1)
Congestive heart failure	18 (25.7)
COPD	13 (18.6)

Note. Data are no. (%) of participants, unless otherwise indicated. COPD, chronic obstructive pulmonary disease; PACE, Program for All-Inclusive Care of the Elderly.

Elderhaus PACE developed from an existing day care center that has operated in Wilmington for 25 years. Early

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enrollment focused on participants from the existing day care center, on recruitment from the practices of 2 local geriatricians, and on establishing referral relationships with hospital and skilled nursing home discharge planners. Within 2 years after opening, we had outgrown space in the day care center. Elderhaus PACE now operates in a separate, larger space. To date, Elderhaus PACE has enrolled 90 individuals and has a current census of 70 individuals. Table 1 is a description of our participants' characteristics.

PACE as a Health Care Intervention

The heart and soul of PACE is the interdisciplinary team. The interdisciplinary team includes a primary care physician, a nurse, a social worker, a physical therapist, an occupational therapist, a recreational therapist or activity coordinator, a dietitian, a PACE center supervisor, nursing aids, and drivers.

Through a process of integrating all discipline-specific assessments and interventions and acknowledging each participant's preferences for care, the interdisciplinary team is responsible for determining care needs, allocating resources, coordinating all services, and evaluating outcomes for participants, whether their care is based in the home, hospital, long-term care facility, or hospice. The product of this process is a comprehensive care plan.

This care plan addresses a standard set of biopsychosocial/functional issues or domains that are relevant to the health of frail older adults: diagnoses and medications, nutrition, bowel and bladder function, cognition, emotion, social activity, mobility, activities of daily living, and cooperation with the care plan. In addition to generating the care plan, the interdisciplinary team meets daily to maintain continuity of care and every 6 months to evaluate and revise the care plan.

All decisions about resource allocation for services, consultation, durable medical equipment, and home care are made during the daily interdisciplinary team meetings. On average, participants at Elderhaus PACE attend the day center 3.9 days per week. All participants receive primary care at the day center from the Elderhaus PACE physician or nurse practitioner. The PACE center transport team provides most transportation required by PACE participants, whether to and from the center or to medical services. The rehabilitation program offers individual assessments and treatments, balance and strengthening groups, and supervision of the daily use of a seated exercise bike by all participants. There are a variety of recreational and social events presented daily in the center, as well as a hot lunch and a snack. Our behavioral health program provides one-on-one or group therapy by our social workers, primary care nurses, and a consultant counselor from the community. Our nutritionist also provides counseling to participants and their caregivers, as well as oversees meal preparation and service and our restorative dining program for very frail individuals. She works closely with our speech therapist, for individuals with dysphagia. Also provided are daily personal care at the participant's home, as well as in the day center; on-call coverage; emergency department visits; acute in-hospital and skilled nursing care; and long-term and hospice care in the individual's home or at the nursing facility.

Outcomes and Observations of Patients at Elderhaus PACE

Table 2 contains a description of participants' outcomes. During our 3 years of providing care for these 90 frail individuals, we have accumulated 14 hospital stays, with a mean length of stay of less than 3 days, and 19 emergency department visits. We have had no hospital admissions for ambulatory care–sensitive admissions and no readmissions for the same cause. We have had 15 deaths (16.7% of the baseline population), with more than 50% occurring in the participant's home. Three of the 5 deaths in the skilled nursing facility were within 7 days of acute massive cerebrovascular accidents. Participants have been able to continue coming to the day center up to 10 days prior to their death, indicating a

TABLE 2.
Outcomes of 70 Elderhaus PACE Participants

Outcome	Value
Hospitalization	
Events, no. of participants	14
Duration, no. of days, mean	2.9
Readmission for same cause, no. of participants	0
Admission for ambulatory care–sensitive condition, no. of participants[a]	0
ED visit, no. of participants	19
Death, by location, proportion (%) of participants	
Home	8/15 (53)
Skilled nursing facility, by stay duration	
Short term	4/15 (27)
Long term	1/15 (7)
Hospital	1/15 (7)
Day center	1/15 (7)
Falls	
Rate, no.	
Per member-month	0.132
Per 1,000 days	4.35
Injury score, proportion (%) of falls[b]	
1 (no injury)	41/82 (50)
2 (minor: abrasions/bruises)	38/82 (46)
3 (moderate: fractures)	2/82 (2)
4 (major: surgery required)	1/82 (1)
5 (death)	0 (0)

Note. Data are for 1,328 member-months of observation. PACE, Program for All-Inclusive Care of the Elderly.
[a]Defined as congestive heart failure, chronic obstructive pulmonary disease, diabetes mellitus, pneumonia, and urinary tract infection.
[b]Mean injury score, 1.5.

compression of time spent in a bed-bound state. While falls are frequent (we discourage the use of wheelchairs), 96% of falls resulted in no or minor injuries. Several aspects of our program may underlie the ability of Elderhaus PACE and other PACE programs to offer quality long-term care in the community at a cost lower than that of the fee-for-service system. Central to our success is the financial incentive to develop a system of care that involves shared decision making with the participants and their families. Specific features are (1) building primary care relationships of trust, (2) maintaining our exhaustive efforts to obtain advance directives early in the enrollment, (3) creating a loving and stimulating environment in the day center, and (4) evolving, during the 3 years, a "culture of exercise" in the day center. All participants enthusiastically embrace this culture of exercise, which makes the day center a popular place where our participants come to help themselves.

The Future of PACE in North Carolina

One of the most exciting changes during the past 3 years has been the rapid spread of PACE sites across the state of North Carolina. This group of 11 sites has formed the North Carolina State Alliance. Contacting the Alliance, at pacenc@google.com, is the first step for a potential PACE program. The National PACE Association (available at: http://www.npaonline.org) advocates for all PACE sites in the United States.

In the recent debates on health care reform, the PACE model has been identified as an example of the "new" proposed models of care: accountable care organizations, which accept capitation as the financing structure, and medical and health homes, which provide comprehensive primary care to groups of medically and behaviorally complex individuals. Evaluation studies of PACE have demonstrated that the model can reduce the number of emergency department visits and hospital admissions and readmissions, while providing a longer mean survival duration among participants with high mortality risk at enrollment [2-7]. By creating an organized system of care with primary care and shared decision making, PACE has provided a high quality of care while reducing costs to Medicaid and Medicare.

Given PACE's outcomes of increased value at a lower cost, what is the limiting factor for PACE's expansion from the 23,000 currently served to the millions who will require and desire community-based long-term care during the next 20 years? How can we scale up the numbers served without losing the trusting relationships so crucial to the lower rate of emergency department and hospital visits? The National PACE Association, supported by the SCAN Foundation, recently held a PACE Policy Summit (available at: http://www.thescanfoundation.org) to review the challenges and opportunities for the expansion of the PACE model.

In North Carolina, we have a unique opportunity to increase the value of long-term care services while restraining costs. We have the existing statewide network of Community Care of North Carolina (available at: http://www.communitycarenc.com), with its primary care physicians and case managers, which, like the statewide network of PACE sites, is serving individuals with both Medicaid and Medicare. PACE, by assuming financial risk for all health care expenses, shifts the financial incentives for care to the improvement of health and function, rather than to the increased provision of services. Linking these small and rather intense PACE providers with the larger primary care network of Community Care of North Carolina would allow the sharing of this expertise and the development of common assessment tools and resources, which could hopefully maintain these complexly ill individuals in community care for as long as possible. Providing good value in health care at a reduced cost is the ultimate challenge for the federal and state governments during the next 10 years. PACE is clearly part of the solution. NCMJ

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