**Introduction**

The community is the preferred location for the provision of long-term care services for disabled elderly people for two main reasons. First, community care is seen as responsive to the needs of older adults, because seniors living in the community are presumed to be surrounded by family, friends, and others who know and understand them. Secondly, community care is viewed as less costly than institutional care, because private familial support, in addition to formal support, is assumed. Several studies have shown that community-based services significantly improve the quality of life of the beneficiaries. The frail elderly often suffer from a mix of acute and chronic medical problems, and functional disabilities. Although this requires an elaborate and flexible combination of interventions, which is an important step towards reduced fragmentation and improved use of resources, significant limitations may remain, including the divisions between medical and social care, acute and continuing care, and community and institutional care. These factors commonly lead to increased, and sometimes inappropriate, use of medical and social services.

The frail elderly wish to stay at home in their own communities. Frequently, complex medical conditions and a lack of resources make nursing home placement the only option. How can health care providers best serve the needs of this frail elderly population in the community? Models of care must incorporate cost-effectiveness without compromising the quality of care or the quality of life. The Program of All-inclusive Care for the Elderly (PACE) is an innovative long-term care model that allows the frail elderly to remain at home. PACE integrates financing and delivery of acute and long-term care services and enables frail older people who are eligible for nursing home care to continue living in the community, with the full spectrum of medical, social and rehabilitative services. PACE provides a new paradigm of long-term care in the 21st century in Taiwan.

**Aging in Place: The Guiding Strategy of Taiwan’s Long-term Care Policy in the 21st Century**

Dramatic demographic and epidemiologic changes have been taking place over the last few decades, leading to a serious transformation in the health care needs of...
the world’s population. Long-term care need will increase even more rapidly in developing countries than in industrialized countries as a result of aging populations, the declining capacity of the informal support system to provide care, chronic disease pandemics, traffic accidents, violence and other sources of injury, longer life expectancies, and higher rates of disability.

A widespread contemporary belief is that older adults with chronic disease or disability are best cared for in the community rather than in nursing homes. Calhoun stated that community as a variable may be less determined by the structural features of local communities and more influenced by the lifestyle, temperament and emotional state of the individuals concerned. An empirical analysis conducted by Gilleard et al. determined the impact of aging in situ on sense of belonging. Attachment was evident amongst people in their 50s or 80s, just as it was amongst people living in poor or rich areas. They found that the feeling of belonging was associated with a sense of well-being independent of how much people had aged. Clearly, aging in situ does bind people to their community. Aging naturally in the community has become a key component of caring for the elderly, for maintaining independence, self-respect, privacy, and quality of care. Similarly, most people in Taiwan send their disabled family members to community-based long-term care facilities instead of nursing homes, because they are much less expensive and because they are generally closer to their homes, making visiting more convenient.

In the 1990s, concern about the future affordability of long-term care and the autonomy and choice of older people prompted many developed countries to use “aging in place” as the guiding principle for devising a gerontologic care policy. They launched a reform of long-term care with the expansion of community-based care in several areas, including resource development, service provision, management and financial schemes, independent of the political system.

Most of the long-term care in Taiwan is provided by family members, followed by institutionalized and personal care. Long-term care in Taiwan faces serious challenges, with a rapidly increasing elderly population and a decline in informal care. A pilot study launched in 2001 in Taiwan with two experimental communities (Chia-Yi City and San-Yin area of Taipei County), which established community care networks for long-term care of the disabled, found that 72.1% of respondents depended solely on family members, 10.1% were institutionalized, 14.2% had hired a caregiver, and 6.6% used community-based care.

With a view to reaching the goal of “aging in place”, the shortage of community-based care services may indicate that reforms and research are needed in the following areas: (1) performing needs assessments for elderly care in the community for projection of resource development; (2) developing various long-term care resources locally to serve local residents; (3) integrating service networks to improve efficiency of services; (4) encouraging home care and other supportive services to reduce the use of institutional care; and (5) devising a financing scheme consistent with the development of a community-based long-term care system.

In 2007, the Ten-Year Plan for a Long-Term Care System, funded by the Executive Yuan, was initiated to enhance long-term care in Taiwan, to increase job opportunities for local care service workers and to provide mainly community-based care services locally with the intention of supporting the elderly to remain in their familiar community as long as possible.

Older People Need the Integration of Health and Social Care Services in the Community

The integration of acute and long-term care to provide efficiency, user satisfaction and better outcomes for people with disabilities and chronic illnesses has been validated in both the United States and the United Kingdom. Subsequently, Leutz emphasized that greater numbers of older people experienced the need for different kinds of health and social care services, thus creating a complex situation with specific management and coordination tasks to be accomplished by different organizations, professionals, and family caregivers. These elderly people include:

• those discharged from hospital with long-term care needs, who suffer from gerontopsychiatric diseases and/or diseases of old age;
• those who have a chronic degenerative disease and are at risk of losing their autonomy; and
• those living alone in houses or apartments and having functional incapacities after illness and disability, which require a range of different services.

The frail elderly often suffer from a mix of acute and chronic medical problems, and functional disabilities. Their social support networks are frequently...
overstretched or at risk of breaking down. These factors commonly lead to increased, and sometimes inappropriate, use of medical and social services. Various international programs, through a diverse array of payment methods, organizational forms and managerial and clinical techniques, have attempted to address these outstanding problems and to provide a greater degree of integration.\(^{19}\)

A randomized controlled trial designed to evaluate the effectiveness of the program of integrated care for vulnerable community-dwelling elderly persons (SIPA, i.e., French acronym for System of Integrated Care for Older Persons) in Canada demonstrated that integrated systems appear to be feasible and have the potential to reduce hospital and nursing home utilization without increasing cost.\(^{20}\) Additionally, a research project, “Providing Integrated Health and Social Care for Older Persons” (PROCARE), co-financed by the 5th Framework Programme of the European Commission and carried out between April 2004 and February 2005 with 18 model programs from nine countries, aimed at exploring integrated care for the improvement of service delivery at the interface between the health and social care systems in Europe.\(^{21}\)

In the United States, several attempts were initiated to blend medical and social services to meet the comprehensive medical and social needs of frail older people. The integration of acute and long-term care has depended on integrating the medical and social care funding systems for a major reorganization of the infrastructure. Among the most prominent was PACE and the social/health maintenance organizations. Both have had some success, but they also had limitations (e.g., participants’ inability to retain their own physicians, high premiums for those who are not eligible for Medicaid, modest interest among insurers), and they have not become widely available.

Managed care seemingly supersedes traditional health insurance by taking direct responsibility for the way care is actually delivered, rather than simply paying for it. Its capitation basis can offer an incentive more closely aligned with the goals of good chronic care than those of fee-for-service. Specifically, managed care supports an investment philosophy. Better primary care, inclusive of comprehensive assessments where warranted, is a means of achieving this. It allows the ultimate savings by reducing the subsequent use of expensive services (e.g., hospitalization or nursing home services).\(^{22}\)

### Lessons from the PACE Model

Developed originally to serve an elderly frail Chinese population (On Lok Senior Health Services) in San Francisco in the mid-1970s, PACE became a permanent provider of comprehensive medical and long-term care services for the frail elderly with the passage of the US Congress Balanced Budget Act of 1997. At its simplest, PACE is a day care-based model that incorporates all aspects of seniors’ needs and permits them to remain in the community. PACE is now a permanent provider under Medicare and a state option under Medicaid, and stands as perhaps the best model of truly integrated care for the frail elderly.\(^{22,26–28}\)

### Practice innovations

1. **Interdisciplinary team**: The team consisting of physicians, nurse practitioners and a range of others, including, for example, physician assistants, nurses, social workers, therapists, van drivers, dietitians and aides, meets to coordinate the changing needs of their PACE participants. Their approach emphasizes creativity and flexibility, and makes it possible to base care decisions on collected information.

2. **Access to primary care**: A usual caseload of 120–150 participants allows the primary care physicians to perform frequent assessments and treatment interventions for their panel of patients. The program maintains, as a priority, the best interests of the individual, with an emphasis on continuous assessment and aggressive prevention strategies and without the restriction of fee-for-service reimbursement.

3. **Payment system**: PACE sites receive a monthly capitation (per person) reimbursement from Medicare and Medicaid. This approach of integration of acute and long-term care financing is the key to the success of PACE. By optimizing preventive, restorative and palliative care, the system avoids inappropriate and expensive use of hospitals and nursing homes.

4. **Adult day health center (ADHC)**: ADHC is where medical and other health care services and social services are delivered, and it also serves as a social center for participants. The services are not time-limited or tied to an acute event or hospital stay, resulting in a greater opportunity to note changes in a patient’s health status and to then implement prompt interventions.
5. Transportation: Van drivers not only provide transportation to the day health center and to specialist appointments, but also deliver supplies and medications as well as meals. Such mobility and necessary support services can allow frail elderly people to continue living in the community.

**Outcomes**

1. Target population: PACE sites serve older adults at high risk for institutional care, but only 5% of participants are living in institutions. A typical PACE participant is 80 years old and has an average of 7.9 chronic medical conditions and three activities-of-daily-living limitations.
2. Cost-effectiveness: In one study, PACE cost 38% less during the first 6 months of enrollment than the fee-for-service Medicare program, and saved 5–15% of state Medicaid.
3. Use of institutional care: Despite greater morbidity and disability, PACE patients do not use more hospital days than the general Medicare population. In fact, participants are more likely to receive preferred end-of-life care at home.

**Barriers to growth**

1. Need for upfront investment: Great investment is required to procure the necessary facilities, set up risk reserves, provide cash flow, and hire staff to begin a program. Although subsidized for several years, sponsoring organizations (hospitals, health care systems, and long-term care systems) need the site to become self-sustaining eventually.
2. Failure to attract the middle-income market: Medicare-only participants would need to spend a median of US$2,968.76 (around NT$98,000) monthly to enroll in PACE. The majority of the frail elderly are covered by Medicare but are not poor enough to receive Medicaid benefits, which make it difficult to expand PACE into the middle-income market.
3. Choice of primary care physician and involvement of community physicians: Participants must abandon their regular providers in order to join. Community physicians often see PACE as a competitor and are reluctant to refer their patients. Communicating to primary care physicians and specialists about the virtues of the PACE model and welcoming their involvement could be important to the establishment and growth of any PACE site.

**Conclusion**

Policy-makers and the public are attuned to the desire to age in their community and they respond accordingly. Owing to fragmentation and weak accountability in the care of the frail elderly, the requirements of each interested party need to be aligned to find and offer the most cost-effective and integrated package of services, resulting in more affordable options, as well as healthier, more purposeful senior years.

PACE is a successful model for integrating acute and long-term care service delivery and financing, allowing its participants to remain in the community. It also provides cost-effective and high-quality care to the frail elderly with complex medical, functional and social needs. The experience of PACE illustrates both the obstacles to and the opportunity for meaningful, widespread care delivery reform for vulnerable, chronically ill, older people in the community.

**References**


