Chronic care case management for the frail elderly population in the United States: normative, funding and organizational aspects

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Abstract

In the most developed countries, it is necessary to bring about significant changes to health care delivery through the strengthening of prevention, rehabilitation and the integration of the social and healthcare dimensions. This means moving the policy focus from "treating" to "taking care" of the sick in a broader and more integrated way, one which is more closely linked to the World Health Organization's definition of health as physical, psychological and social well-being.

This change involves the delivery of care for the elderly. Developed countries are confronting this issue by using different community-based programs to integrate acute and long-term care services for frail elderly individuals with complex health needs.

The objective of this health policy article is to give an overview of the most recent initiatives on long-term care management for the elderly including normative, funding and organizational issues in the USA, as their public health system largely differs from those of the Western European countries.

Particular attention is given to the PACE (*Program of All Inclusive Care for the Elderly*), which applies a comprehensive approach to managing the care of the frail elderly population and would represent a new framework in geriatric care. By incorporating a central core care team to manage the needs of each elderly individual, this approach recognizes the contributing factors that non-traditional health related functions play in the overall health of the individual. Although there is a little knowledge of this program, as it covers a very small percentage of the eligible individuals, and it may be difficult to extrapolate to other sectors of the population, PACE offers many lessons that could be applied to more effective integration of care for individuals and lead to better health outcomes.

Key words: long-term care management, managed care, elderly people, public health strategies

Introduction

Long-term care is the clinically-oriented, on going medical care, management, and disease prevention for people with multiple chronic conditions organized to maintain health status, slow disease progression and maintain the functional status of the individual.The frail elderly population could receive the greatest potential benefit from the broader application of such an approach, as well as other individuals and the health care system overall.

To examine the PACE program's integrated care approach, it is necessary to analyse the whole normative, funding and organizational aspects of chronic care management for the frail elderly in the USA.

Medicare and Medicaid, established in 1965 as part of the Social Security Act (SSA), are health care programs for the elderly and disabled (Medicare), as well as the indigent (Medicaid, for low-come pregnant women, children and some parents). Medicare is funded and operated by the Federal government, while Medicaid is operated by each State and is funded through a combination of federal dollars that "match" the dollars paid by the State at a specified rate, referred to as the "matching rate." Each State has a "Medicaid State Plan" which outlines how that State operates its Medicaid program, including who is eligible, what services are covered, who may deliver these services, and how much the health professionals are reimbursed for their services to Medicaid enrollees.

A Medicaid State Plan is the contract between the States and the Federal Government whereby States agree to administer the Medicaid program in accordance with federal law and policy. The State plan preprint defines the breadth of the Medicaid program, including groups covered, services furnished, and payment policy. When a State completes a new State Plan preprint page due to changes in its Medicaid program, called a

"State Plan Amendment", the preprint page must be approved by the Centres for Medicare and Medicaid Services (CMS, formerly HCFA) in order for the State to receive Federal matching funds. The State plan approved by the Federal government must adhere to the regulations laid out in the SSA.

An elderly person, initially not eligible for Medicaid, who accrues significant medical expenses may eventually become eligible through a process of "spending down" or spending so much on medical care that their assets diminish and they fall below the eligibility threshold.[1]

Elderly population with chronic conditions

In 2002, there were 35.6 million 65+ (about 12.5% of the total population of 285.933 million in the US, with the projected population to be 71.5 million by 2030.[1] About 31% of non-institutionalised older persons live alone (7.9 million women, 2.6 million men).[2]

Three million six thousands older persons lived below the poverty level in 2002 and another 2.2 million (6.4%) of the elderly were classified as "near poor" (income between poverty level and 125% of this level).[2] In 2002, the median income of older persons was 19 436 US dollars for males and 11 406 US dollars for females. The major sources of income for older people were: Social Security (91% of older people), Income from assets (reported by 58% of older persons), Public and Private pensions (reported by 40% of people) and earnings (reported by 22% of persons).[2]

According to the Medicare Standard Analytic File for 1999, 78% of the Medicare population has at least one chronic condition, while almost (64%) have two or more. Of those with two or more conditions, almost 1/3, or 20% of the total Medicare population, have five or more chronic conditions, or co-morbidities.[3]

Existing coverage options

There are some assistance options through which these individuals may be receiving chronic care management. They are listed below with age categories indicated:

1) Regular Medicare Part A (hospital insurance) and/or B (medical insurance) (age 65+);
2) "Medigap" coverage or Medicare Supplemental Insurance provided by a previous employer to cover services not covered under Part A and B (age 65+);
3) Medicare + Choice which consists of managed care plans and private plans (age 65+);
4) Medicaid covers services of low-income elderly who qualify for both Medicaid and Medicare; these individuals are referred to as dual eligibles. Some of these individuals are enrolled in Medicaid managed care plans (age 65+);
5) Military and retired veteran plans;
6) Long-term care insurance purchased through a private insurer;
7) Employer-sponsored insurance (age 55-64);
8) Other private insurance (age 55-64).

It is important to note that the majority of the 65+ population is covered by more than one form of insurance. As shown in Table 1, about 95% of the 65+ population is covered by Medicare, but since this does not include services such as long-term care and prescriptions, many use previous employer coverage or purchase their own private insurance plan to cover these and other services.[4] For this reason, the percentage of the elderly covered by private insurance (60.4%) and the percentage covered by government sponsored insurance (95.8%) does not add up to 100%. There is also an overlap between the three government sponsored programs, as low-income elderly are covered as "dual eligibles" in Medicaid and some also receive military health care coverage. These categories do not correlate directly to those eight listed above.[3]

Coverage by these types of insurance, however, does not necessarily indicate that individuals with chronic conditions are receiving chronic care case management. Managed Care Organizations (MCOs) aim to manage the overall health care of

Table 1. Health Insurance Coverage for the Entire Year and Type of Coverage for 65+ in US, 2002 (Numbers in thousands).

Characteristics	Covered by Private or Government Health Insurance								Not covered	Total Population
	Private Health Insurance			Government Health Insurance				Total		
	Direct purchase	Employement based	Total	Medicaid	Medicare	Military Health Care	Total			
Total Age 65+	10 135	11 583	20 685	3283	32 631	2259	32 813	33 976	258	34 234
Percentage Age 65+ (%)	29.6	33.8	60.4	9.6	95.3	6.6	95.8	99.2	0.8	100
Total U.S.	26 639	175 296	198 973	33 246	38 448	10 063	73 624	242 360	43 574	285 933

Source: US Census Bureau[2]

an individual and so some elderly people may be receiving chronic care case management through these methods. Medicare A and B do not cover long-term care or disease management programs. Owing to this, it is difficult to know whether the elderly covered by these programs are receiving management of their chronic conditions or whether they are receiving disconnected symptomatic care of these conditions.

New normative issues on chronic care

The Older Americans Act (OAA), signed into law in 1965 and amended by the Older Americans Reauthorization Act of 2000 (Public Law 106-501), created the Administration on Aging (AoA), to be led by an Assistant Secretary for Aging, within the Department of Health and Human Services (DHHS).

Title I of this act declares the objectives of this administration's policies and programs. There are ten such objectives, including provisions for housing, and employment, but among them those that relate to health care and to which older persons "are entitled" are:

- The best possible physical and mental health…without regard to economic status.
- Full restorative services for those who require institutional care and a comprehensive array of community-based long-term care services… including support to family members.
- Efficient community services…which provide choice…with emphasis on maintaining a continuum of care…
- Freedom, independence, and the free exercise of individual initiative…and protection against abuse, neglect, and exploitation.

Title III, Part A indicates that it is the responsibility of the State and area agencies on aging to foster the development and implementation of comprehensive and coordinated systems to serve older individuals. Federal monies are available through grants to support such work if needed.

In this way, the OAA provided a normative framework for health care programs, including chronic care management, for the elderly.

The Medicare Modernization Act (MMA), passed in 2003, includes the creation of the "Medicare Chronic Care Improvement" (MCCI) demonstration programs, intended to study the cost-effectiveness, quality of care outcomes and provider and patient satisfaction which may result from the usage of a co-ordinated care approach for selected chronically ill Medicare patients. This could be interpreted as recognition of the importance of chronic care case management, as well as an attempt to institutionalize chronic care case management in the US health care delivery system. Some analysts, however, are sceptical as to whether this demonstration program will ever become operational. [5]

A new perspective in chronic care case management: the PACE program

Established in 1999, Programs of All-Inclusive Care for the Elderly are pre-paid, capitated programs for beneficiaries who meet special eligibility requirements and who elect to enroll for long-term care as an alternative to the traditional health care services.

They are operated by individual PACE sites within a State, but a State is not required to offer them. PACE is considered part of both the Medicare and Medicaid programs and a State that would like to house PACE sites must apply for an amendment to its Medicaid State Plan. Once this amendment is approved, a site in that State may apply to be approved as a PACE site. Therefore, there are two approval processes which must be undertaken before a PACE program can commence. The individual PACE site takes over full delivery and financial responsibility for eligible individuals. These three levels competencies are listed in Table 2.

Initial knowledge of the program and consequent enrolment usually occurs when there is a dramatic change in a senior's life. Hospital discharge administrators, nursing home staff, long term care providers, retirement housing organisations and local agencies on aging are potential points of referral to a PACE program.

One problem cited in the evaluations of the program is that there is little knowledge of these programs, even among the listed points of reference, which has resulted in a lower than expected enrolment at some sites.

To be eligible for PACE, individuals must be 55 years or older, qualify for nursing home care in their

Table 2. Federal/State/Local Competencies Chart on PACE programs.

Level of Government	Competency
Federal	Administration on Aging and establishment of PACE program framework
State	Submission of a "Medicaid State Plan amendment" to CMS to elect PACE as an optional Medicaid benefit
Local/PACE site	Delivery of comprehensive services

state (determination of frailty), and live in a PACE service area. As of 31 December 2000, 8160 people were assisted by PACE across the USA. This number, however, is only a small portion of the total over 55 years population that requires chronic care case management, the number of frail elderly and disabled people who could benefit from PACE is approximately three million.[1]

PACE Delivery Structures and Organization

A PACE site may take different forms. It can be a health system (42% of current PACE), a free-standing community agency (21%), a community health centre (17%), a long-term care provider (10%), a hospital (7%), or a State agency (3%). Currently they are all not-for-profit entities, but for-profit entities can also be PACE sites.[6]

Each PACE centre includes a day health centre (with all the services offered by a typical, free-standing adult day health centre) and a fully serviced medical clinic. At the heart of the model is an interdisciplinary team consisting of primary care physicians, nurse practitioners, occupational and physical therapists, dieticians, health workers, recreation therapists, and transportation workers.[7] Details of the services are given below.

At the PACE Center: physician/nurse practitioner, nursing, social work, physical therapy, occupational therapy, speech therapy, recreation therapy, nutrition counseling, personal care, chore services, transportation, meals and escort services.

In-home Services: home health care, personal care, homemaker/chore services and meals.

Specialist Services: medical specialists, audiology, dentistry, optometry and podiatry.

Other: prescriptions, laboratory tests/procedures, radiology services/procedures, durable medical equipment, outpatient surgery, emergency room and medical transportation.

Inpatient: hospital, nursing home and inpatient specialists.

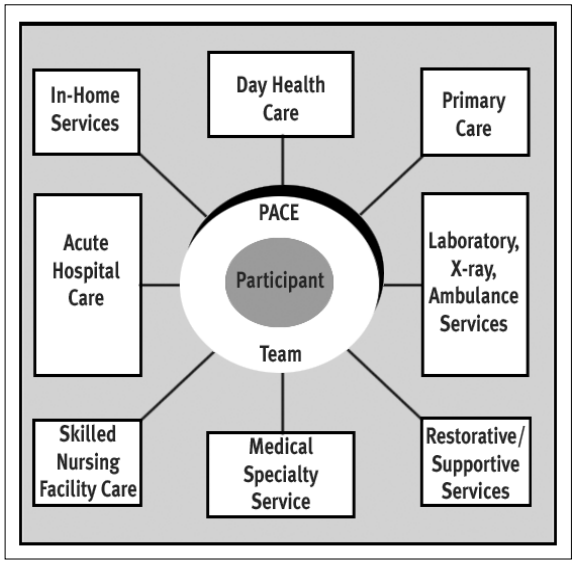
Social services intervention, care management, respite care, and extended home-care nursing are among the services provided, but are not covered by Medicare or Medicaid separately when a patient is not also enrolled in PACE.

Although the PACE sites can take different forms, each has a central adult day centre and enrolees must attend a specified number of times per week (average of 3 times per week across sites), depending on the individual PACE site requirements, health needs and treatment program for the individual.

One of PACE's main characteristic is the interdisciplinary team model. The "Interdisciplinary Team" (Figure 1) is assigned to each enrolee and is comprised of a representative from each of the following areas: home care, nursing home, hospital, lab/x-ray/medications/ durable medical equipment, day health (nursing, social service, occupational therapy/physical therapy, speech, nutrition, recreation, personal care, pharmacy, transportation), primary and specialty care. The entire team serves as a care manager, and each team member's expertise and contributions enhance the delivery of the other team members' services. The enrolee, however, has a single point of contact on the care delivery team so that communication is kept as simple as possible.

Services may also be provided at the enrolee's home, at a specialist's office or at inpatient and outpatient hospital services, as well as in the emergency room.

Figure 1. Pace interdisciplinary team model (modified from [8]).



PACE Funding

PACE sites are paid by a monthly capitated rate which combines money from federal funds (i.e. Medicare) and State funds (i.e. Medicaid) or individual out of pocket payments, if the enrolee is not eligible for Medicaid assistance, as listed in Table 3.

As Medicare capitation is based upon the rate used to reimburse health maintenance organizations and as PACE is limited to the frail elderly who are eligible for nursing home care, the rate would be increased by an adjustment factor. This factor was originally 2.39 for the PACE model precursor, the On Lok Senior Health Services - created in 1971 in Chinatown, San Francisco - but has since changed.[9]

Medicaid rate is set at 85% of the cost of fee-for-service care for a similar population, according to each State and therefore varies.[10]

Table 3. Funding of PACE programs.

Level	Funding Responsibility
Federal Government	Medicare dollars contributed to capitated payment
State Government	Medicaid dollars contributed to capitated payment
Local/PACE	Financially responsible for all services; receive monthly capitation payment
Individual	Out-of-Pocket contribution (only for those not eligible for Medicaid)

The PACE Assessment

As a process dealing with the continuity of care of a particularly at-risk population, chronic care case management can be evaluated in various ways:

Outcome Indicators*:* i.e. hospital admission rates, hospital re-admission rates;

Process/Administrative Indicators: i.e. enrolment responsiveness - waiting time between notification and enrolment;

Quality of Life Indicators: i.e. self determination and other subjective measures;

Financial Indicators: i.e. costs savings as compared to similar programs and Medicaid/ Medicare population.

As for PACE programs, the majority of evaluations have been conducted to determine cost savings by comparing it with different alternatives for care.[1,2] Evaluations of the PACE indicate that some programs, such as the PACE site in Milwaukee, Wisconsin (Community Care for the Elderly) have experimented with making arrangements with private physicians in hopes that this would help enrolment, since a patient may keep his or her own primary care physician. Preliminary data (as of 1999) show that costs are higher for the 25% of patients who use non-PACE physicians.[11] Other surveys have been conducted to evaluate patient and provider satisfaction with the program.

Abt Associates Inc., was contracted by the US government to evaluate the PACE program.

They applied a set of indicators that related more to the relationship between capitated rate and actual expenditures of individuals outside of the program, rather than to qualitative characteristics.

Abt Associates Inc., has also produced two other evaluations of the program.[12,13]

Texas and Tennessee have both conducted evaluations of their State PACE sites, indicating advantages of the program such as improved health outcomes, as well as barriers to enrolment such as long waiting times between initial knowledge and enrolment.[1,13]

Evaluations of PACE sites have so far focused on the cost savings to Medicare and Medicaid.

The PACE site assumes total financial responsibility for providing all services. Consequently, the provider organization must be able to manage risk, i.e. monitor clients, services, costs and be able to readily adapt to any type of situation. This provides a powerful incentive to increase the service system's efficiency and effectiveness. PACE providers successfully manage enrolees' use of high-cost inpatient services by providing expanded preventative and supportive services. The first analysis on cost containment have shown that the PACE enrolees' rate of hospital use is comparable to the Medicare 65+ population[1,7] and that PACE produced savings comparable to payers' costs for treating comparably frail individuals in the fee-for-service health care system.[6] Moreover, since PACE is an alternative to institutional care, developing PACE programs to care for an increasingly elderly population could substantially lower future capital expenditures on nursing home construction.[11] In order to introduce or develop the PACE model, it is necessary to identify advantages and disadvantages not only for the organization itself, but also to consider the implications for the patients enrolled, the alternative programs and the public health system as a whole.

Table 4 lists the most comprehensive aspects of this assessment, considering patient, Medicare/ Medicaid, PACE and public health implications, as a whole.

Conclusions

Considering the predicted increase in the elderly population in the US, along with the urgency to combine expenditure and quality in healthcare, the PACE program represents an innovative way towards managed care and offers an attractive option to both State and Federal governments to provide comprehensive healthcare for the elderly.

The PACE program's ability to combine both passion for the cause and vision is a great catalyst in the maintenance of its coordination of multidisciplinary and multi-governmental levels. However, it needs a more comprehensive set of indicators to evaluate and monitor quality more effectively than the fee-for-service system, where different parts of long-term care and other services are more fragmented.[7]

The future of PACE will depend on the examination of a variety of issues in order to determine the reasons for its relatively poor ability to meet different communities' needs.

Table 4. Advantages and disadvantages of PACE.

	Advantages	Disadvantages
Patients/ "Participants"	• Less (no) bureaucracy once enrolled • Patient-focussed care management • Single point of contact once enrolled, therefore easy for patient to navigate system • Continuum of care as a goal of the model • Demonstrated decrease in hospitalization rates, disease progression and complications[1,7] • Attendance at Day Centers provides a social community for the patient[1] • Patient who otherwise would be in a nursing home, may remain in own home or with family • Extended services not available under Medicare or Medicaid individually • Provides rest for care givers at home, as well as opportunity to work, increasing happiness across the living situation, in which the patient resides[6]	• Limited selection of doctors • Required to go to Day Center regularly • Potential out-of-pocket payment (depends upon Medicaid eligibility)[10] • No evidence-based guidelines exist regarding "necessary services" and therefore rationing decisions could result[1]
Medicaid & Medicare	• No financial risk • Medicare rate setting guarantees at least 5% savings[7] • Medicaid rate setting is under projected cost, as well, but varies by State • Increased provider satisfaction[1]	• Medicaid office, as regulated in PACE legislation, must submit State Plan Amendment if State is not already approved to house PACE sites
PACE	• Full control of care plan and service provision decisions[14,15]	• Some components make PACE sites unattractive for recruiting doctors (not a large center or academic facility, daily meetings of treatment teams) • Full financial risk • Reliant on State funds, which can be cut if required by budget
Public Health Implications	• All of the above, plus: • PACE provides an example of a comprehensive, coordinated program to deal with aging population • Educational opportunities for doctors in ways to provide comprehensive care, treat the elderly, and operate within a capitated payment structure population • Simplifies the health care system for consumers[1] • Provides knowledge for states to use when addressing other large populations. population • Model of "true" social-sanitary integration • Provides a non-fragmented "public health laboratory" (informative systems and guideline development, etc)	• Funding of PACE site is often political and requires the PACE director to "fight" for funding[14] • All of the above, plus: • Difficult large-scale extension • Only for really frail, since those who are comparatively health and mentally competent are unlikely to find so prescriptive a program attractive • High start up costs

Some of these issues (i.e. enrolment of clients, recruitment of qualified health professionals and other financial and management issues) have been discussed in this article. However, further evaluation, refinement and field-level experience are needed to enable implementation and application of this program to other sectors of the population and/or public health systems.

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