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Managed care of chronically ill older people: the US experience

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The continuing debate over changes in geriatric care in the United Kingdom could be informed by some difficult lessons learnt from recent developments in the United States.[1] Medicare, created by US law in 1965, is a low cost health insurance programme that is available to most Americans aged 65 or older and to some disabled younger people. Medicare is a traditional indemnity insurance plan that reimburses physicians, hospitals, and other professionals for providing Medicare beneficiaries with acute healthcare services. The coverage does not include drugs or, with few exceptions, preventive or long term care services.

In the mid-1980s Medicare began looking to "managed care" to help control its runaway expenditure. Under managed Medicare, an insurance company known as a health maintenance organisation accepts from the Medicare programme a fixed capitation payment for each person it enrolls, and it agrees to provide that person with at least the standard package of Medicare benefits. The amount of the capitation payment is based on the person's age, sex, income, type of residence (nursing home or independent dwelling), and geographical location. The health maintenance organisation may, at its discretion, cover additional services and charge monthly premiums. Beneficiaries have the choice of remaining in the traditional fee for

Summary points

The US Medicare health maintenance organisation industry has produced evidence on the cost effectiveness of new approaches to caring for elderly people

Some innovations change how and where health care is provided; others focus on educating patients and adapting their behaviour

Economic and organisational forces mean that most Medicare health maintenance organisations are reluctant to invest in new forms of care, even where programmes seem effective

Purchasers of health care for chronically ill older people should offer capitation payments that reflect each older person's probable need for health resources in the future

Purchasers should also facilitate the collection and public distribution of data about the quality and the outcomes of the care delivered by each provider

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service Medicare programme or enrolling in a Medicare health maintenance organisation. If enrolees use few services, the health maintenance organisation profits; if they use many, the health maintenance organisation absorbs the losses. Health maintenance organisations differ from indemnity health insurance companies by negotiating modest rates with a limited number of healthcare providers, requiring enrolees to obtain their care from these providers, and limiting the use of expensive resources. By August 2000, 261 health maintenance organisations had enrolled 6.3 million (16% of all) Medicare beneficiaries.

As the Medicare health maintenance organisation industry has evolved during the past 15 years, a substantial body of research has shown the cost effectiveness of several new approaches to caring for chronically ill older people.[2–4] The new interventions are summarised in the table; some change how and where health care is provided while others focus on educating patients and adapting their behaviour.

Innovations in chronic care

Acute or long term care

Interdisciplinary home care is distinguished from standard home care by the integration of medical and supportive services. Nurses, social workers, rehabilitation therapists, and physicians meet regularly to coordinate their care. A randomised trial suggests that, unlike traditional forms of home care, interdisciplinary home care is cost effective.[5] After six months, it was associated with greater satisfaction with care by the family caregivers, considerably less use of clinics, and trends toward lower use of institutional services and total resources.

Self management programmes seek to empower small groups of older people with chronic illnesses to become more confident and accomplished managers of their own health. Trained lay leaders teach short courses covering exercise; nutrition; emotions; use of medication and community resources; management of fatigue, sleep disturbances, and other symptoms; and communication with others (including health professionals). In a controlled trial, older people with chronic illnesses who took the self management course reported appreciably fewer admissions to hospital and days spent in hospital, better general health, less fatigue, and fewer social and functional limitations.[6]

The group care approach is to convene a group of 10-15 chronically ill older people whose use of health services has been high for monthly meetings with their primary physician. These cover health education, group discussions, and health maintenance updates, as well as private consultations, if needed. The first randomised trial showed that group care was associated with higher satisfaction by patients and physicians; increased utilisation of clinic nurses, health maintenance procedures, and advance directives; and reduced costs of care and use of emergency rooms, specialists, radiography, and hospitals.[7]

Home hospital programmes select older people with exacerbations of chronic diseases or with new acute conditions to receive diagnostic testing, therapeutic interventions, and professional monitoring at home according to evidence based protocols. Quasi-experimental studies suggest that this approach reduces iatrogenic illnesses and decreases total expenditure by 60-85% without eroding the quality of care or clinical outcomes.[8 9]

Disease management of older inpatients with heart failure also looks promising. In hospital, a team comprising a nurse, a dietitian, and a social worker teaches the patient about interpreting symptoms, use of medication, the effects of diet and exercise, and techniques for self monitoring. After discharge, a team member contacts the patient regularly to promote adherence to the programme and to answer questions. In a randomised trial, this intervention improved the quality of life and reduced further admissions to hospital for heart failure by 56%.[10] Many commercial organisations now offer disease management for single, isolated problems, but they do not address adequately the complex needs of older people who have several chronic conditions simultaneously.

Professional dyads' care of long term residents of nursing homes has produced similarly impressive preliminary findings. In collaboration with a physician, a nurse practitioner provides primary care designed to prevent illness and accidents, detect problems early, provide prompt treatment on site, and honour residents' preferences for end of life care. This model increases the frequency at which residents are visited by healthcare professionals and reduces their use of hospitals.[11 12]

Acute care for elders units are general medical inpatient wards designed to optimise older patients' functional recovery. Renovated to create a home-like atmosphere, these units are well lit, uncluttered, and equipped with hand rails, bathroom appliances, and carpets. The nurses are trained and empowered to keep patients active and to prevent, detect, and initiate treatment for the problems that often arise among older people in hospital. Medical care is directed by the patients' community physicians and is overseen by an interdisciplinary team which includes a geriatrician, a nurse, a social worker, a pharmacist, a physiotherapist, and an occupational therapist. A randomised trial showed that an acute care for elders unit increased patients' chances of recovering functional independence and returning home.[13] The average costs of acute care for elders were no greater than those of standard care.[14]

Geriatric evaluation and management is the most thoroughly studied innovation for chronically ill older people. It combines evaluation of an older person's medical, psychosocial, and functional capabilities and

The effects of innovations for older people with chronic illness

	Satisfaction	Function	Utilisation	Costs	Mortality
Interdisciplinary home care	+	+	+	+	
Self management	+	+	+	+	
Group care	+		+	+	
Home hospital	+		+	+	=
Disease management			+	+	
Professional dyads in nursing homes			+		=
Acute care for the elderly hospital wards	+	+	=	=	=
Geriatric evaluation and management	+	+	–	–	=
Transitional care	=	=	+	+	=
Case management		=	=	=	=

+ Indicates a superior outcome associated with the experimental form of care; – indicates a worse outcome associated with the experimental form of care; and = indicates similar outcomes for the experimental and the comparison forms of care. An empty cell indicates that an outcome was not measured.

limitations with several months of treatment and follow up. Geriatric evaluation and management is conducted by an interdisciplinary team (for example, a doctor and a nurse or social worker), using standardised assessment instruments and treatment protocols. Though some of the most successful results have been observed in inpatient settings,[15] a recent randomised trial showed that outpatient geriatric evaluation and management preserved functional ability, decreased symptoms of depression, improved satisfaction, and reduced the burden felt by family caregivers at a cost of about $1250 (£900) per person.[16]

Transitional care describes the process whereby senior practice nurses coordinate all health care as chronically ill older people make the transition from hospital to home. The nurse leads the discharge planning process and visits patients regularly at home for several months, monitoring their recovery and providing education, therapeutic adjustments, referrals, family support, and links to other professionals and community services. A randomised trial showed that transitional care was associated with appreciably less hospital care and lower Medicare expenditure in the six months after discharge home.[17]

Case management, in contrast to the nine programmes described above, has been widely adopted by the managed Medicare industry despite little scientific evidence of its effectiveness. This intervention is designed to contain costs by allocating health related services appropriately and coordinating them efficiently across healthcare settings.[18] The only two well controlled studies of its effects failed to show improvements in quality of life, functional ability, general health, or satisfaction with health care, and they were unable to show that this intervention saved money.[19 20]

Integrated care

Each of the foregoing innovations targets either acute care or long term care. In contrast, two comprehensive programmes attempt to integrate acute and long term care into a coordinated continuum.

Social health maintenance organisations provide the standard Medicare benefits plus limited long term care services to all Medicare beneficiaries who choose to enrol, in return for slightly higher capitation payments. The first social health maintenance organisations gave disappointing results,[21] but a second generation is more ambitious, attempting to identify clinical problems early and to intervene efficiently with expert interdisciplinary teams.[22]

The programme for all-inclusive care of the elderly is designed for people who are disabled enough to be eligible for nursing home care but who are still living in the community. This approach emphasises comprehensive, interdisciplinary care centered around an adult day health centre where the patients spend portions of several days each week participating in recreational activities, having their chronic conditions monitored, and receiving treatments. The programme's professional teams also provide care in the hospital, the nursing home, and the patient's home, as needed. Early evaluations have shown that this model reduces the use of hospitals and nursing homes, but its net effects on total healthcare costs, functional ability, and health status are not yet clear.[23]

ELIZABETH ELLIS/AP PHOTO

Interdisciplinary home care integrates medical and supportive services

Evidence

Scientific evidence suggests that interdisciplinary home care, self management, group care, and home hospital can improve the clinical outcomes of care and reduce its cost (table). Disease management, transitional care, and professional dyads in nursing homes reduce the use of services without compromising clinical results. Acute care for elders wards improve outcomes without increasing costs, and outpatient geriatric evaluation and management improves function at a small marginal cost. Case management has not yet proved its effectiveness.

Barriers to adoption of innovations

The competitive nature of the managed Medicare industry gives the health maintenance organisations incentives to meet their customers' needs, but the limited revenues from capitation fees require that these organisations contain the volume of services they provide. Somewhat surprisingly, the industry has embraced only disease management and case management.

The reasons for not adopting most of the innovations are debatable. Matching new programmes to organisational structures and resources is challenging, and persuading doctors to participate is often a problem. Replicating experimental innovations in the real world is difficult, and the benefits are sometimes less impressive there. Medicare's payment of the same capitation rates for the care of healthy and sick people has encouraged health maintenance organisations to market preferentially to those who are healthy. The risk of attracting high cost enrolees has actually given these organisations a disincentive to developing innovative care for people with chronic conditions. To counter this effect, Medicare has recently developed a method for adjusting its capitation rates on the basis of beneficiaries' diagnoses, and it plans to phase this in during the next five years.[24] Recently, increased scrutiny of quarterly financial performance has forced most American healthcare organisations—for profit and not for profit alike—to adopt six to 12 month perspectives for evaluating investments in these innovations. Few of the programmes are likely to show savings within the first year.

The organisational structure of a Medicare health maintenance organisation also influences its ability to

innovate. Most (63%) Medicare health maintenance organisations pay loosely affiliated networks of physicians to care for their enrolees. In a typical practice, any one health maintenance organisation's enrolees comprise only a small fraction of a doctor's list, so he or she has little incentive to implement the innovations in geriatric care exhorted by that health maintenance organisation. Other health maintenance organisations pay doctors a capitation fee, thereby transferring to them the risk of heavy use of services and, therefore, the incentive to innovate.

As a consequence of these economic and organisational forces, most Medicare health maintenance organisations are reluctant to invest in most new forms of care—even those programmes that seem effective. Instead, they rely primarily on traditional ways of controlling expenditure: "favourable selection" of enrolees, restricting enrolees' access to services, and case management of high risk enrolees.

Recommendations

We recommend two approaches to speed the adoption of effective innovations in health care for older people. The purchasers of health care for chronically ill older people, usually governmental, should offer capitation payments that reflect each older person's probable need for health resources in the future. These purchasers should also facilitate the collection and public distribution of data about the quality and the outcomes of the care delivered by each provider. In competitive markets, consumers could use this information to help choose their providers. In single provider markets, purchasers could use this information to adjust further the capitation rates. The coexistence of risk adjusted capitation rates and easy access to information about providers' clinical performance would encourage health care organisations to invest in innovations with the greatest promise for improving clinical quality and outcomes (to enhance marketing), reducing the need for hospitals and other expensive services (to cut costs), and increasing the size of their sick population (to boost capitation revenues).

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Corrections and clarifications

Letters

The three letters (by Ruth Brown, Chris Manning, and F S Goldby) in the cluster "The NHS: last act of a Greek tragedy?" (2 September, pp 572-3) all cited the same reference (Editor's Choice from an earlier *BMJ*), which instead of giving the issue number contained the page numbers for an unrelated scientific paper. The correct reference is:

Editor's Choice. The NHS: last act of a Greek tragedy? *BMJ* 2000;320(7239). (1 April.)

Personal view

A transcription problem led to an error in the cited dose for thyroxine in Kathleen Hilditch's "My Addison's disease" (9 September, p 645). In the second sentence of the third paragraph from the end, the dose of thyroxine should be 50 µg (not 50 mg).

News

The Joint Action Council, quoted in the news article "Indian agency admits publishing 'wrong' HIV figures" by Ganapati Mudur (12 August, p 402), points out that it has never alleged that the National AIDS Control Organisation (NACO) has "played down numbers [of new HIV cases] in several states." The council continues: "From the article it appears that we are supporting the claims of the international agencies. On the contrary we have been fighting for the last decade against what is an 'unfounded, alarmist campaign' managed and controlled by international agencies with strategic support of the NACO. We are not against the NACO, but we are against the abuse of our system by external agencies. Our stand has also been vindicated by the objections raised by the union minister of health and family welfare against the exaggerated figures being published by various UN agencies and foreign agencies."