What Cost Case Management in Long-Term Care?

Rosalie A. Kane, Joan D. Penrod, Gestur Davidson, and Ira Moscovice
University of Minnesota

Eugene Rich
University of Kentucky

We describe data from a convenience sample of 48 case management programs, illustrating variation in both program features and costs. Case management varied in practice and in ways that affect both the cost of case management and the costs of services being managed. Nonetheless, information linking cost to client characteristics, client outcomes, or even case management inputs is rare. Implications for research and policy in case management in long-term care are discussed.

Introduction

Case management is widely hailed as a solution to many problems in the delivery of health care and social services in the United States, with advantages for clients whose care is being coordinated and for the community as a whole.[1] It is particularly recommended for populations with multiple problems that cut across traditional service delivery systems. Its short-run political advantage is that it can be overlaid on existing systems of health and human services without requiring basic organizational change.

In this article, we examine this ubiquitous, rapidly growing but poorly defined phenomenon of case management as applied to long-term care for the elderly and disabled. We focus particularly on the

Social Service Review (June 1991).

0037-7961/91/6502-0006$01.00

underlying incentives that may affect not only the cost of case management but also the costs of the services being managed.

We took two distinct approaches to exploring case management costs: empirical and conceptual. In the former, the focus of this article, we describe a convenience sample of 48 case management programs, illustrating substantial variation in both program features and costs. In the latter, we use economic modeling to generate five case management models and to speculate on the factors associated with cost differences within models and across models of case management. Elsewhere we discuss in detail economic modeling of case management costs.[2]

Background

Case management has its roots in social work and public health practices.[3] As it has evolved in long-term care, case management is distinguished from the ordinary coordinating efforts of any social worker, nurse, or primary care physician on behalf of a client or patient by the notion of a defined target population followed over time. Case management has been a feature of many demonstration projects in long-term care for the elderly and disabled. These projects, which began in the 1970s, have moved through increasingly sophisticated research designs,[4] culminating in the National Channeling demonstration[5] and the capitated Social Health Maintenance Organizations (S/HMO) demonstration.[6]

Under the 2176 Medicaid waivers, effective in 1981, states are permitted to receive matching federal dollars to pay for a range of community services to prevent or postpone nursing home use.[7] Case management is the most frequently included service under the waivers. It is also the avenue by which clients most frequently gain access to other services.[8] Effective October 1985, states can include case management as an optional service in their regular Medicaid programs. Consumers, however, must be allowed free choice of provider, and, thus, the gatekeeping function of case management is weakened.

Some states, such as Massachusetts and Pennsylvania, have managed socially oriented, long-term-care services largely funded with state dollars since the early 1970s. These programs have the advantage of coherent, geographically based case management, but medically oriented home care tends to be allocated under a different auspice. Under such parallel systems, case management programs can hardly be held accountable for the general well-being of a particular target population or for the overall costs and distribution of care. Despite the fragmentation inherent in multiple funding streams for case management, several states have pieced together statewide case management systems.[9] Sometimes these are tied to preadmission screening programs for nursing home placement.[10]

Case management has other manifestations as well. In many proposals for private, long-term-care insurance, a case management feature is included to determine eligibility for benefits and to design, authorize, and monitor the service package.[11] Case management is a mainstay in regional treatment programs for the developmentally disabled and has more recently been proposed as the ideal approach for the care of AIDS patients.

In the acute-care sector, a variant of case management is suggested as a way to allocate services and curb high-cost users. In 1989, two congressionally mandated, multisite Medicare demonstrations of case management were initiated, one for Alzheimer's disease and one for high-cost beneficiaries of the recently repealed Catastrophic Health Insurance Act.

Finally, private practice of case management, wherein individuals or organizations sell case management directly to the elderly, their families, and to employers is also a growing phenomenon.[12]

Definition

In the *Encyclopedia of Aging*, case management is defined as "a service function directed at coordinating existing resources to assure appropriate and continuous care for individuals on a case-by-case basis."[13] The Omnibus Budget Reconciliation Act (OBRA) of 1981, which introduced case management as service under Medicaid waivers, called it "management of a specified group of services for a specified group of people." The Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985, which permitted states to include case management for targeted populations as an optional service under their regular Medicaid programs, referred to it as "a system under which responsibility for locating, coordinating, and monitoring a group of services rests with a designated person or organization."

The population focus in the definitions underscores the idea that case management can be construed as an administrative function as well as a potentially valued service. Indeed, case management often involves an uneasy balance between advocacy for members of the target population (which includes providing clients with information about available services to meet their needs) and efforts to allocate limited services fairly and parsimoniously among all those with needs in the target group.[14] The greater the case management program's authority to purchase or allocate services, the greater the likely tension between advocacy and allocative (or gatekeeping) functions.

Although case management programs vary markedly in goals, settings, and target populations, there is general agreement about their components. By consensus, these are (1) screening, that is, procedures to identify those in the targeted population who need case management;

(2) assessment, typically a comprehensive, multidimensional, functionally oriented evaluation of applicants' needs and situations, including the adequacy of present arrangements of formal services and family care; (3) care planning, that is, using assessment information to derive a plan for care; (4) implementation, through "brokering" or purchase of services, or both; (5) monitoring, both of the client's progress and the service providers' adequacy; and (6) reassessment at fixed intervals.

Classification of Case Management Programs

Various attempts at classifying case management and case management programs have already been made. For example, case management has been classified by target population;[15] by the authority of the case manager and the consolidation in the delivery system;[16] and by the desired outcomes, such as improving clients' access to service and funding, decreasing inappropriate use of services, improving client functioning, or achieving ambitious multiple goals.[17] In their evaluation of 24 Robert Wood Johnson hospital-based, long-term-care demonstration projects, John Capitman, Margaret MacAdam, and Donna Yee classified case management programs by their goals, which yielded four types: (1) programs that attempt to divert clients from inappropriate nursing home use; (2) programs that manage postacute care on a short-term basis; (3) programs that coordinate medical management for complex cases; and (4) programs that coordinate community-based, long-term care on a long-range basis but that lack financial control over the services.[18]

When case management is used for acute care, it is often more accurately described as utilization management. For example, it may be used to limit lengths of stay in hospitals and maximize revenues under the diagnosis-related group (DRG) system of Medicare reimbursement. It may also be used by health maintenance organizations to control their costs and rationalize their services, or insurance companies may use it to control costs. Often, such case management involves a computerized information system that identifies high-cost users. Sometimes it entails preauthorization of care for high-cost users or high-cost procedures or counseling to reduce utilization.

Commentators on case management often fail to distinguish between case management of acute-care services (as in the above examples) and case management of long-term-care services occurring in acute-care settings. For example, long-term-care plans are often made while older people are in the hospital, and hospitals have thus been convenient sites for case managers. Sometimes, hospitals themselves offer long-term-care case management programs, sometimes a case management function is designated to hospital personnel from another program if the client is in the hospital, and sometimes personnel from case management programs work in hospitals. In all these examples, however,

the focus of management is not on hospital care but on posthospital and other long-term care. In this article, we exclude case management that exclusively manages acute-care services, though we include some examples of case management under which both long-term care and acute care are managed (the latter to varying degrees).

Variations Related to Cost

Despite its prevalence, relatively little is known about the costs of case management in long-term care—its actual costs under various program designs or its expected proportion of the cost of delivering services. In addition, the monetary or other benefits gained through the use of case management are not known. Yet case management is not free, and as James Callahan, Jr., noted, resources devoted to case management may be used more effectively as direct-service dollars.[19] Case management is hard to extricate from the services being managed, and, with few exceptions, this disentangling has not been attempted. In addition, scant information is available to link variation in case management programs to cost variation. A retrospective, cross-cutting evaluation of case-managed, long-term-care demonstrations found wide variation in the cost of case management in the five demonstrations in which cost was examined in depth.[20] This variation was attributed to the intensity of the case management, the level of the professional, the specialization of the case management functions, and differences in the availability and variety of services in particular areas (which influenced the difficulty of generating a care plan). The evaluators of the National Channeling demonstration, which tested two types of case management at 10 sites in 10 states, noted intersite variation in project costs that they could not fully explain.[21]

From the literature, we identified factors believed to be associated with the cost of case management or the cost of services being managed. (Often authors draw no clear distinction between the two costs.) Among the suggested factors associated with costs of case management in long-term care are the following:

1. Status as an operational program compared to a demonstration program;
2. Stage of development: costs per user are greater during start-up, when procedures and caseloads are being developed;
3. Staffing, caseloads, intensity, and program design: the larger and more professional the staff and the smaller the caseloads, the more expensive the case management. Similarly, telephone monitoring at infrequent intervals is less expensive than home visiting at frequent intervals;
4. Case mix: case management costs and efforts may be greater for programs designed to help relatively older, frail, and disabled clients. For example, programs aimed at nursing home diversion may result

in greater case management costs than a program that attracts less impaired clients.

5. Freestanding entity versus one incorporated into existing service providers: the freestanding entity would appear more expensive, but case management agencies that are closely associated with providers of service have an incentive to channel desirable clients to their own programs and to assess clients as needing service, thus increasing costs of care.

6. Consolidated, capitated delivery systems: if the program is at financial risk to deliver care for a fixed amount, it has an incentive to be parsimonious in the services delivered. But it may also spend case management time on efforts to find other payers and to enhance the likelihood of family care instead of care covered under the plans, thus increasing costs of case management itself.

7. The authority of the case manager to sanction or purchase services: this discretion or flexibility will influence how problems get defined and approached in the care plans. Although the costs, particularly the public costs, of long-term care should rise when the case manager has authority without financial risk, the cost of case management itself may be greater when the case manager cannot conveniently authorize services.

8. The way the case management organization itself is paid: reimbursement ranges from fee-for-service case management to budgeted case management programs with overall and per-client cost limits. Cost attributions will vary when case management is considered administrative. Incentives may exist to attribute costs directly to the case management unit (for example, resource development, management-information system) or, conversely, to charge some aspects of case management to a different cost center.

9. Cost-control elements: these include an annual average care plan limit across all clients, an individual care plan limit, or client cost sharing. A combination of these elements can be imposed and strict algorithms developed to link allowable services to assessed disability.

Case Management Cost Models

Table 1 describes five case management models that we identified as theoretically related to costs, namely, broker, purchase authority, capitated, insurance, and fee for service. We think that all long-term-care case management programs currently operating can be incorporated into these models. In addition, the five models are specific and distinct enough to permit reasonable cost comparisons within models. A detailed description of each of the cost models, their theoretical economic underpinnings, and our hypotheses for factors affecting within- and between-model differences in cost is found elsewhere.[22] As Table 1

shows, our approach to classifying case management includes three dimensions: service features, the goals of case management, and the reimbursement method for case management.

Two aspects are encompassed in service features: the extent of integration of case management with service delivery and the number of case management functions performed by the program.

The goals of the case management unit are usually multiple, including such vague goals as contributing to the full independence of its clients. To define case management cost models, however, we define goals as the expression of what the case management decision-making unit is trying to optimize.

Case management programs are reimbursed or receive revenues for case management services in a variety of ways, for example, as a fixed budget based on cost at a capitated amount per client or in hours billed. Our approach to classifying programs using the reimbursement mechanism assumes that this dimension by itself does not distinguish between models. However, the incentives that result from the reimbursement method combined with the differences in goals and service features are sufficient to distinguish the five models from one another.

Description of Case Management Programs

Method

To explore variations in programs and costs and to determine the type and quality of information generally available on case management intensity and costs, we collected a convenience sample of 48 programs. We limited ourselves to case management in long-term care or in programs in which both long-term and acute care are managed. For the purposes of sample selection, programs were further defined with the following criteria: (1) at least three of the six accepted components of the case management process were employed (i.e., screening, assessment, care planning, implementation, monitoring, and reassessment); (2) the sponsor agency considered it to be case management; and (3) the availability of cost information. We also sought programs that varied in the nature of the case management services provided, in the auspices of the sponsoring agency, in the degree of integration with service delivery, and in the reimbursement mechanisms for case management.

We identified the sample through a combination of computerized searches of literature in gerontological and health-related library data bases and the professional contacts of the principal investigators. Although the sample includes a good cross-section of long-term-care case management programs in the country, past and present, we make no claim that it is representative of the complete range of case man-

Table 1

FIVE MODELS OF CASE MANAGEMENT

Model Description	Service Features*	Goals	Reimbursement Mechanism
1. Broker: Public, nonprofit, or for-profit firm provides case management to nursing-home-eligible functionally impaired adults; case management can arrange CBLTC but cannot authorize or purchase services	Case management only; full spectrum of case management; case management unit may be closely affiliated with service provider	Minimize use of nursing home for eligible clients by more effective and efficient use of available CBLTC	Fixed budget based on historical caseload and cost experience
2. Purchase authority public funds: Public, nonprofit, or for-profit firm provides case management to functionally impaired adults eligible for CBLTC under Medicaid waiver or other public program	Case management only; often screening is done before case manager becomes involved; case management unit may be affiliated with service provision	Maximize time spent outside nursing homes for persons eligible for nursing homes because of impairment level, for those who prefer home care, or for those who can be maintained at home at less than nursing-home cost	Fixed budget based on historical caseload and cost experience

3. Capitated: Case management provided in context of a program at financial risk for all acute and long-term care services for enrolled group	Firm may provide full range of long-term care plus acute care; full range of case management provided including a utilization review function	Minimize the cost of case management plus CBLTC plus institutional care plus acute care subject to standards of care	Annual capitation amount from insurer plus annual fee from enrollees
4. Insurance: Within private long-term-care insurance, case management is provided by firm or contracted to outside company	Case management only; full continuum of case management	Provide case management to minimize case management costs plus CBLTC costs plus institutional costs of covered services	If done internally, it is administrative cost; if contracted out, it could be fee for service or capitated
5. Fee for service: For-profit or nonprofit firm vending case management and paid by clients or their families	Assessment plus arranging plus monitoring CBLTC or institutional placement only	Maximize profits for nonprofit firms; maximize revenue within acceptable rate ceiling	Billable hours or flat fee per client

NOTE.—CBLTC = community-based, long-term care.

* Service features refers to two items: (1) extent of integration of case management with service delivery; and (2) the number of case management functions performed, namely, screening, assessment, care planning, care implementation, monitoring, and reassessment.

agement programs in the community. Rather, we attempted to represent a large number of 2176 waiver programs as well as the earlier 1115 waiver demonstration programs and made no effort to gather more than a small representation of the many private agencies that claim to do case management of the brokering variety.[23] The best information about costs of case management, the focus of our inquiry, tends to come from programs with authority to purchase services because of public accountability for the use of public funds. In contrast, only limited cost information is available from private social, health, and family service organizations. We believe we have captured an adequate range of case management programs in long-term care to develop the cost models and point out inter- and intramodel variations.

For operational case management programs, we interviewed the administrator or a designated assistant by telephone. The interview was designed to collect information on specific program elements that might be likely to influence costs, and on costs themselves. When the selected program was a demonstration project, we studied the demonstration evaluations and contacted the evaluators for additional information as needed.

Determining the proper level of aggregation for describing programs and costs required many decisions. For example, we treated each of the 10 sites of the National Channeling demonstration and the four sites of the S/HMO demonstrations as separate programs because each had distinct features, and ample information was available for each about program characteristics and costs. Conversely, some demonstration projects with multiple sites were treated as single observations because that is how the cost and program information was presented in evaluations. For operational programs, we faced similar difficulties. Some states had one or more statewide case-managed programs with uniform reporting requirements, and the most readily available data were at the state level; in such instances, we treated the program as a single observation, although we also sought to describe intrastate variation. In other instances, we report a particular site rather than the entire state because a single site was the best available source of information.

Results

The 48 programs included 28 operational case management programs and 20 demonstration projects. Included in the demonstrations were the channeling sites, five long-term-care demonstrations analyzed in detail by Berkeley Planning Associates,[24] four S/HMOs (using data from the first 30 months of the evaluation), and the California Multipurpose Senior Services project.[25] The 48 case management programs

were distributed across the case management cost models in the following way:

Model 1.—Broker: eight observations including the five basic channeling sites.

Model 2.—Purchase authority: 31 observations, including the five financial control channeling sites, six 1115 waiver programs evaluated by Berkeley Planning Associates, a number of 2176 waiver programs, both statewide and local, and one Canadian provincial program.

Model 3.—Capitated: five observations, including the four S/HMOs and On Lok.[26]

Model 4.—Insurance: we had no observations. For the most part, long-term-care insurance policies that incorporate home care are at a rudimentary stage, although many under development have a case management component. Experience with benefits for home-based services under long-term-care insurance is limited. To the extent that data are available on the cost of case management in long-term-care insurance, the information is proprietary.

Model 5.—Fee for service: four observations.

In table 2, general program features are summarized according to cost models. Program goals identified by administrators or in evaluation reports were consistent across the models. The majority of the programs identified reducing nursing home admissions and promoting home care as the primary program goals. Cost control and improving access were goals for 60 percent of the programs.

Case management agencies can provide case management solely or in combination with direct services managed. A large nonprofit hospital with both a home care program and a case management program is an example of the latter. Alternatively, as in the capitated model, all services needed by members are provided or purchased on a capitated basis, and the case management is thoroughly integrated with the program.

The relationship of case management to service provision, however, is often subtle. Organizations in the broker model may have an arm's-length relationship to service provision yet be part of a parent organization that is a service provider. Some fee-for-service case managers also act as hiring agencies for home care workers.

Most programs (79%) expect the case managers to arrange whatever community-based services are needed to maintain the client at home. However, a few programs (10%) limit case managers to arranging services reimbursed by the program funding source. Case management usually stops when a client enters a nursing home (except for provision of short-term respite), and case managers are rarely involved in arranging and monitoring acute care. Only the programs in the capitated model and in one Medicaid waiver program in the purchase-authority model

Table 2

DESCRIPTION OF PROGRAM FEATURES BY CASE MANAGEMENT MODELS

Program Features	Broker (N = 8)	Purchase Authority (N = 31)	Capitated (N = 5)	Fee for Service (N = 4)
Identified goals:				
Cost control	6 (75)	18 (58)	5 (100)	. . .
Improve access	8 (100)	12 (38)	5 (100)	4 (100)
Reduce nursing home and promote home care	7 (87)	30 (97)	5 (100)	. . .
Improve quality	6 (75)	7 (23)	5 (100)	. . .
Allocative equity	1 (12)	2 (6)	. . .	. . .
Average number of months of program operation	25	68	45	50
Target population:				
Elderly 60+	1 (12)	13 (41)	1 (20)	1 (25)
Elderly 65+	5 (62)	8 (25)	4 (80)	1 (25)
Elderly and disabled	2 (25)	10 (34)	. . .	2 (50)
Relationship of case management unit to service delivery:				
Case management and some services	8 (100)	16 (53)	. . .	3 (75)
Case management only	. . .	15 (48)	. . .	1 (25)
Case management and all services (fully consolidated)	. . .	. . .	5 (100)	. . .
Scope of care arranged:				
All CBLTC services	8 (100)	27 (87)	. . .	3 (75)
Limited to services reimbursed by program	. . .	4 (13)	. . .	1 (25)
CBLTC and nursing home	. . .	. . .	4 (80)	1 (25)
CBLTC and nursing home and acute care	. . .	. . .	1 (20)	. . .
Authority to purchase services	. . .	1 (100)	5 (100)	. . .
Single-entry access to CBLTC for all clients with public funding	8 (100)	31 (100)	5 (100)	N.A.
Role of physicians:				
Limited	8 (100)	27 (87)	4 (80)	4 (100)
Plans care or part of case management team	. . .	4 (13)	1 (20)	. . .

Source of most referrals:				
Client/family	3 (37)	9 (29)	1 (20)	2 (50)
Health care providers	3 (37)	12 (39)	4 (80)	1 (25)
Social service providers	1 (12)	1 (.03)	...	...
Outreach	1 (12)	...	...	...
Other	...	...	...	1 (25)
Missing	...	9 (29)	...	...
Most frequent professional level of case managers:				
Nonprofessional (no college degree)	2 (7)	...	...	...
Professionals	1 (12)	13 (42)	...	2 (50)
Advanced professionals	...	6 (19)	...	2 (50)
Mixed	6 (75)	10 (32)	5 (100)	...
Missing	1 (12)	...	...	...
Case manager:				
Average salary (in $)*	N.I.	23,043 range, 16,000–34,000	N.I.	24,000 range, 18,000–27,000
Missing	18	...	...	1
Most frequent source of client attrition:				
Death or nursing home	5 (62)	19 (61)	N.I.	...
Client improves	2 (64)	...	...	...
Other	...	...	4 (100)	...
Missing	3 (37)	10 (2)	...	...
Funding source:				
Medicaid waiver	...	10 (32)	...	...
Medicaid regular benefit option	...	2 (6)	...	...
Medicare waiver	5 (62)	9 (29)	4 (80)	...
Other state funds	3 (37)	9 (29)	...	...
Out of pocket	...	...	...	4 (100)
Other	...	1 (3)	1 (20)	...
Case management reimbursed to the program as a:				
Billable service	1 (12)	9 (29)	...	4 (100)
Administration cost	6 (75)	21 (68)	...	...
Other	...	1 (3)	1 (20)	...
Missing	1 (12)	...	...	...

NOTE.—CBLTC = Community-based, long-term care; N.A. = not applicable; N.I. = no information. Percentages are in parentheses.
* Adjusted to 1988 dollars.

continued case management for nursing home residents. Fee-for-service case managers will follow clients in nursing homes if the client or family pays for this service.

The case manager's power to authorize services or purchase care to implement the care plan varies. Alternatives for case managers include brokering services, such as in the basic channeling model, or advising clients and making referrals but not authorizing expenditures. Brokering programs are common and indicate the extent of interest in case management by home health and voluntary social service agencies.

Our sample includes a large number of publicly funded programs in which service funds are managed. However, within case management programs with purchase authority there is variability in the flexibility of the purchases they can make—both in choice of vendors for a particular service and in choice of services to cover. For example, municipal rules for letting purchase-of-service contracts sometimes severely restrict the number of vendors that can be used for, say, homemaking or home health service in a community. Similarly, waiver programs may be more or less comprehensive in the list of covered services used, and their case managers may or may not be allowed to reimburse self-employed vendors of home care. Even the four S/HMOs vary in the flexibility allowed the case managers.

Several states have made efforts to reduce the number of entry points in a particular community to one for all clients using public funding sources. Oregon, Wisconsin, Maine, and Ohio fall into this pattern. It is expected that reduced fragmentation and greater cost control, quality control, and access will result. Other programs act as one of many different entry points to case management and community-based care. In our sample, 79 percent of the programs were in a single-entry-point system, and 21 percent were part of multiple-entry systems.

Physicians played small to nonexistent roles in most of the programs we sampled. Many administrators expressed a wish that physicians were more interested in home care services and case management. Conversely, several of the programs deemed it a strength that they did not need to limit their clientele to those referred by physicians or their interventions to those endorsed by physicians.

Many programs (44%) use a mixture of professionals (Bachelor of Arts, Bachelor of Social Work, Registered Nurse) and advanced professionals (Masters of Social Work, Masters of Science in Nursing, physicians) as case managers. Programs that rely mainly on nonprofessionals are unusual (4%), but few programs mandate specific educational levels for workers. Rather, characteristics of the labor market tend to determine reliance on the more advanced professionals. Some programs require only that a case manager have knowledge of the client group served and of available resources.

Table 3 shows characteristics of case management itself in the 48 programs. Case management functions are generally not mandated in any detail by program regulations, and their evolutions reflect professional standards and the desire to serve large caseloads effectively. Two of the S/HMOs added utilization review as part of the case manager's responsibility.

Case management cost information was available in a number of forms: the average cost of case management per client per month; the average cost for a client while on the caseload; cost of case management as a proportion of the cost of services managed; costs by case management function (e.g., the assessment); and costs by client characteristics. We found, however, that the information tended to be rudimentary and varied widely.

Table 4 provides direct information about the cost of case management. Because the measures of cost and program features are not uniform across models, cost comparisons among the models are not meaningful. However, we present cost per client per month for three of the models (broker, purchase authority, and capitated) where that is an available and appropriate measure. Cost information for the insurance model is not presented because it is limited and proprietary. Cost per client per month is not an appropriate measure of cost (and is unavailable) for the fee-for-service model. However, price per hour of case management is available and reflects the cost to consumers of case management. Costs per client per month for case management ranged widely within the models, as did the quality of the information on which we based the calculation.

We were able to find information on the cost of case management as a proportion of the cost of the care plan for 12 programs, and within these the range was between 7 and 50 percent. This important but elusive measure is difficult for a case management program to obtain under any circumstances because of the wide variety of service payers and the problems of pricing volunteer services and services of families.

Furthermore, the information on total caseload size is meaningful only if the scale of the program is indicated; therefore, programs in the broker and purchase authority models are further divided by the source of the available information: single-site, multiple-site, or statewide programs. The table also highlights the variability in the number of clients served and average length of stay in the program.

Discussion

This exploration of case management in long-term care confirms that case management costs, and program features and functions, are varied

Table 3

DESCRIPTION OF CASE MANAGEMENT FUNCTIONS BY CASE MANAGEMENT COST MODEL

Program Functions	Broker (N = 8)	Purchase Authority (N = 31)	Capitated (N = 5)	Fee for Service (N = 4)
Program provides:				
Assessment, care planning implementation, monitoring	8 (100)	29 (93)	5 (100)	1 (25)
No assessment	· · ·	2 (6)	· · ·	· · ·
No reassessment	· · ·	· · ·	· · ·	3 (75)
Frequency of monitoring contact:				
Weekly	· · ·	4 (13)	1 (20)	3 (75)
Monthly	· · ·	10 (32)	1 (25)	· · ·
2–4 months	6 (75)	9 (29)	4 (80)	· · ·
4–6 months or less often	· · ·	3 (10)	· · ·	· · ·
Missing	2 (25)	5 (16)	· · ·	· · ·
Frequency of formal reassessment:				
Every 3 months	5 (62)	11 (35)	1 (20)	1 (25)
Every 6 months	2 (25)	16 (52)	4 (80)	· · ·
Yearly	· · ·	3 (10)	· · ·	· · ·
None	· · ·	· · ·	· · ·	3 (75)
Missing	1 (12)	1 (3)	· · ·	· · ·
Monitoring by:				
Telephone	1 (12)	11 (35)	4 (80)	2 (50)
Home visit	5 (62)	17 (55)	1 (20)	2 (50)
Missing	2 (25)	3 (10)	· · ·	· · ·
Specialization of case managers:				
One worker for all case management tasks	5 (62)	14 (45)	4 (80)	3 (75)
Separate worker or team for tasks	1 (12)	6 (19)	1 (20)	1 (25)
Screening is only separate task	2 (25)	11 (35)	· · ·	· · ·

Table 4

CASE MANAGEMENT COSTS AND CASELOADS

	BROKER		PURCHASE AUTHORITY		CAPITATED		FEE FOR SERVICE	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Caseload per worker . .	53 (18) (N = 7)	36–90	58 (21) (N = 26)	30–113	73 (20) (N = 5)	45–100	30 (6) (N = 4)	23–38
Clients per month in program:								
Single-site observations	200 (27) (N = 6)	159–232	364 (283) (N = 19)	120–1,100	312 (105) (N = 5)	138–310	90 (84) (N = 4)	6–200
Multiple-site observations	N.A.	N.A.	14,120 (16,281) (N = 6)	504–35,000	N.A.	N.A.	N.A.	
Statewide observations	2,547 (2,753) (N = 2)	N.A.	10,472 (13,711) (N = 6)	4,813–44,000	N.A.	N.A.	N.A.	
Number of months client in the program	N.I.	N.I.	47 (52) (N = 8)	2–144	N.I.	N.A.	4 (4) (N = 2)	1–7
Cost of case management (in $):*								
Per client case month	123 (29) (N = 6)	72–156	101 (107) (N = 27)	14–550	97 (61) (N = 5)	54–205	N.A.	
Charge per hour . . .	N.A.		N.A.		N.A.		75 (12)	60–90
Percentage of case management cost relative to service costs	31 (N.A.) (N = 1)	N.A.	28 (13) (N = 11)	7–50	N.I.	N.I.	N.I.	

NOTE.—N.A. = not applicable; N.I. = no information; standard deviations (SD) are in parentheses.
* 1988 dollars.

in practice. Moreover, variations in features and functions are likely to affect both the cost of case management and the costs of services being managed.

Although we were able to gather some information about the cost of case management, information linking cost to client characteristics, client outcomes, or even case management inputs was rare. The best information available has been generated from demonstration projects with research components. Obtaining comparable cross-program cost information is hampered by differing conventions about attribution of costs to case management. In some instances, additional costs are loaded on the case management function, and in others, functions usually performed by case management are charged elsewhere.

Information about the cost of case management as a proportion of the costs of services being managed was particularly elusive. Although some information is important and useful, it is also expensive to generate. Only programs with financial accountability for services even attempted to collect it, and even they accounted only for the costs for which the program was responsible. The broker and fee-for-service model programs made no effort to keep records of any of the costs their clients incurred or that other agencies incurred on behalf of their clients. Yet broker-style case managers, when sufficiently numerous, influence community systems of long-term care, and one might argue that they should be conscious of costs.

Although incentives inherent in the case management programs will affect a case manager's behavior, there are several "human factors" that may complicate and sometimes reduce the impact of economic incentives. First, case managers bring to case management their particular professional standards, their altruism, and their beliefs about how they should or should not practice. During the course of our interviews, we noted that, in general, case managers approach their work with the conviction that it is effective in bettering the lives of older people and in postponing or preventing nursing home use. They tended to believe in what they were doing, even in the face of information that their own costs are a large proportion of their client's overall service costs. Case managers also have internalized concepts of when a client is or is not safe in the community.

Second, with regard to the costs of the service plans, case managers were not always conscious of the incentives inherent in their own programs. Thus, they may act out of habit and professional orthodoxy without cost consciousness. It is feasible, however, to induce case managers to attend to the costs of care plans. The Financial Control Model Channeling programs, to some extent, and the S/HMOs, to a large extent, have made efforts to make case managers cost conscious.[27] Social HMOs also attempted to standardize the approach to care plan-

ning within and across the four S/HMO sites by using case scenarios to achieve more reliable care plans.

It remains to be decided what is the most desirable blend of cost consciousness, standardization, and professional autonomy or judgment in case management programs. Case managers are perhaps most likely to be aware of the immediate incentives associated with their own salaries and the growth or survival of their agency's case management program. However, as we found from interviews with program administrators, how case managers function to maximize program goals is further complicated in statewide, multilevel programs. Although a state may have a clear incentive to minimize its share of costs under a Medicaid waiver, the public or voluntary agencies doing the work at local levels may be much more interested in maximizing the agency's budget while getting as much service to the client as possible. Paying case managers at an hourly rate for case management services or by budgets based on historical levels of case management activity is an invitation to higher case management costs. In that sense, many states seem to have undesirable incentives built into their payment methods. Indeed, the federal Medicaid waiver program may be accentuating this problem by the fact that it approves a maximum number of clients who can be served, by implication thus affecting both program size and dollar limit. This prevents programs from trying to serve more people within their resources to purchase service.

It would be interesting to find out whether case managers could be more efficient both in the use of their own time and in the use of the long-term-care funds if caseloads were allowed to rise at state discretion within the dollar limits. As long as local case management programs must regulate the size of the caseload, there will be a disincentive to spend less than the allowable per-client amount or to create ways to limit the costs of case management. Many waiver programs spend far less than the allowable amounts and have waiting lists and contacts with eligible clients they cannot serve because of program rules. Our informants have candidly told us that, under these conditions, there is no reason to seek a cheaper service for a client, although many wish they could attempt to serve more clients with the same money.

State-level officials should also examine the incentives built into their case management programs. States, sometimes unwittingly, create incentives and disincentives for case managers working in Medicaid waiver programs by the way they choose to reimburse the case managers. Typically, states establish an expected caseload for each case manager, which, combined with the established ceiling on the number of people who may be served in any given locality, establishes the parameters of the program. Under these circumstances, case management programs at local levels have no incentive to be more efficient in their functions.

They cannot use the money to serve more people, for example, or to defray the costs of assessments for those who prove ineligible based on their disabilities. States might be encouraged to consider ways of reimbursing case managers and other providers under the waiver programs in order to maximize the effectiveness and efficiency of the case management.

Finally, the incentives to be cost conscious about care plans typically pertain to the care for which the case management program is financially responsible. Therefore, in a fragmented service system, there is a clear incentive to maximize the contribution of other payers. Program administrators in the broker and capitated programs were conscious of this incentive, and one gauge of their case managers' effectiveness was their ability to procure benefits for clients from sources other than their own funds. This is also compatible with the altruistic notion of getting more services to clients despite cost caps in waiver programs. However, it is incompatible with an interest in reducing total costs of long-term care.

With case management fast becoming a norm in long-term care and a part of most proposed federal legislation, policy decisions about case management will undoubtedly be necessary before an ambitious research agenda can be fashioned and completed. Case management already exists, sometimes side by side, as a freestanding service and as a combined service and administrative function linked to particular programs. Provider agencies have an interest in promoting case management as a reimbursable service as is now possible under the Medicaid provision that allows case management for targeted populations. Case management is also being suggested as a provision under proposals for expanded Medicare coverage of home and community-based services.

Yet case management as a freestanding, reimbursable service is likely to add to the costs of long-term care, regardless of how parsimoniously price is set. In wending one's way through this minefield of vested interests and earnest advocates, it is important to go beyond the question of the cost of case management and to consider its benefits. If case management offsets inappropriate long-term-care costs, its value is easy to defend. If case management constitutes an added expense but is helpful to its clients, it may also be justifiable. If case management helps no one, it would have few advocates even if it were very inexpensive. And if its benefits are minimal and it is associated with increased long-term-care costs, it is also hard to defend. In the absence of research findings, each proposed use of case management should be tested by teasing out the incentives affecting the cost of case management and the incentives affecting the cost of the services being managed. This logical exercise has, it seems, often been omitted. We recommend that it be carefully undertaken by those making policies regarding case management.

Notes

This research was conducted as part of the work of the University of Minnesota Health Policy Center funded by the Health Care Financing Administration under HCFA Cooperative Agreement no. 99-C-99169/5-01. The conclusions are those of the authors and should not necessarily be attributed to HCFA.

1. Carol D. Austin, "History and Politics of Case Management," *Generations* 12, no. 5 (1988): 7–10; Carol D. Austin, Janice Low, Elizabeth A. Roberts, and Kathleen O'Connor, *Case Management: A Critical Review* (Seattle: Pacific Northwest Long-Term Care Gerontology Center, 1985); Carol D. Austin and Kathleen O'Connor, "Case Management: Components and Program Contexts," in *Health Care of the Elderly: An Information Sourcebook*, ed. M. D. Petersen and D. L. White (Newbury Park, Calif.: Sage, 1989); Rosalie A. Kane, "Case Management: Ethical Pitfalls on the Road to High Quality Managed Care," *Quality Review Bulletin* 14, no. 5 (1988): 161–66.

2. Gestur Davidson, Joan Penrod, Rosalie A. Kane, Ira Moscovice, and Eugene Rich, "Modeling the Cost of Case Management in Long-Term Care," *Health Care Financing Review* (in press).

3. Carol D. Austin, "Case Management: Options and Opportunities," *Health and Social Work* 8, no. 1 (1983): 16–30, "History and Politics of Case Management" (n. 1 above); James B. Weil, "Case Management and Long-Term Care Insurance," *Generations* 12, no. 5 (1988): 45–49.

4. Brenda Haskins, John Capitman, Frederick Collignon, Beverly DeGraaf, and Cathleen Yordi, *Final Report: Evaluation of Coordinated Community-oriented Long-Term Care Demonstration Projects* (Berkeley, Calif.: Berkeley Planning Associates, 1985); John Capitman, Brenda Haskins, and Judith Bernstein, "Case Management Approaches in Coordinated Community-oriented Long-Term Care Demonstrations," *Gerontologist* 26, no. 4 (1986): 398–404; Annabel O. Pelham and William F. Clark, eds., *Managed Home Care for the Elderly: Lessons from Community-based Agencies* (New York: Springer, 1986); Peter Kemper, Robert Applebaum, and Margaret Harrigan, "A Systematic Comparison of Community Care Demonstrations" (report prepared for University of Wisconsin Center for the Study of Poverty, Madison, 1987).

5. George C. Carcagno and Peter Kemper, "The Evaluation of the National Long-Term Care Demonstration: An Overview of the Channeling Demonstration and Its Evaluation," *Health Services Research* 23, no. 1 (1988): 1–22; Barbara R. Phillips, Peter Kemper, and Robert A. Applebaum, "The Evaluation of the National Long-Term Care Demonstration: Case Management under Channeling," *Health Services Research* 23, no. 1 (1988): 67–81. The Channeling demonstration was a 10-state, randomized, controlled trial of case management in long-term care; at five sites, the experimental intervention was case management in a broker model with limited funds to purchase "gap-filling" services. At the other five sites, the intervention was case management with purchase power up to per-client and per-program caps.

6. Social Health Maintenance Organizations (S/HMOs) were established on a demonstration basis to determine the cost effectiveness and other benefits associated with merging acute and long-term-care financing in a capitated system. Enrollees in an S/HMO designate their Medicare benefit and pay an annual membership fee. In exchange, they receive all hospital, physician, nursing home, and home care services covered under fee-for-service Medicare plus a range of socially oriented home care services not currently covered under Medicare. Four S/HMOs currently exist: Seniors Plus, Minneapolis; SCAN, Long Beach, California; Elderplan, Brooklyn, N.Y.; and Medicare Plus II, Portland, Oreg. All have currently moved beyond the demonstration stage and are fully at risk for the costs of services within the capitated rate. For more details see Walter N. Leutz, Jay N. Greenberg, Ruby Abrahams, Jeffrey Prottas, Larry M. Diamond, and Leonard Gruenberg, *Changing Health Care for an Aging Society: Planning for the Social/HMO* (Lexington, Mass.: Lexington Health, 1985); Walter N. Leutz, Ruby Abrahams, Mervin Greenlick, Rosalie A. Kane, and Jeffrey Prottas, "Targeting Expanded Care to the Aged: Early S/HMO Experience," *Gerontologist* 28, no. 1 (1988): 4–19; Ruby Abrahams, John Capitman, Walter Leutz, and Peg Macko, "Variations in Care Planning Practice in the Social/Health Maintenance Organizations: An Exploratory Study," *Gerontologist* 29, no. 6 (1989): 725–36; Ruby Abrahams, Lucy Nonnenkamp, Sheela Dunn, Sheila

Mehta, and Polly Woodward, "Case Management in the Social/Health Maintenance Organization," *Generations* 12, no. 5 (1988): 39–44.

7. In the context of Medicare and Medicaid, waivers are used to set aside statutory requirements of the program. Since 1972, states have been permitted to apply for Medicaid 1115 waivers for demonstration purposes. The 1115 refers to the section of the Social Security Act amended to create the waiver. Typically features to be waived are the requirement that programs be available on a statewide basis, eligibility requirements, and benefits features. The 2176 Medicaid waivers differ from demonstration waivers in that states may apply to waive requirements for operational programs that would enable persons to stay out of nursing homes. The 2176 refers to the section of the Omnibus Budget Reconciliation Act of 1981 that created the waivers. To receive such a waiver, states must successfully demonstrate that growth in long-term care expenditures under Medicaid will be no more with the waiver than without it.

8. U.S. Health Care Financing Administration, "Report to Congress: Studies Evaluating Medicaid Home and Community-based Waivers" (Baltimore: U.S. Department of Health and Human Services, 1984).

9. Diane Justice, *State Long Term Care Reform: Development of Community Care Systems in Six States* (Washington, D.C.: National Governors' Association, 1988).

10. Ira Moscovice, Gestur Davidson, and David McCaffrey, "Evaluation of Minnesota's Preadmission Screening and Alternative Care Grant Program" (report prepared for Center for Health Services Research, School of Public Health, University of Minnesota, Minneapolis, 1987).

11. Weil (n. 3 above), pp. 45–49.

12. Marcy Parker and Laura J. Secord, "Private Geriatric Case Management: Providers, Services, and Fees," *Nursing Economics* 6, no. 4 (1988): 165–95; Laura J. Secord, "Private Case Management for Older Persons and Their Families" (report prepared for InterStudy, Excelsior, Minn., 1987).

13. Monika White, "Case Management," in *The Encyclopedia of Aging*, ed. G. L. Maddox (New York: Springer, 1987).

14. Kane (n. 1 above), pp. 161–66.

15. Marie Weil, James M. Karls, and Associates, *Case Management in Human Service Practice* (San Francisco: Jossey-Bass, 1985).

16. Austin, "History and Politics of Case Management" (n. 1 above).

17. Joan Quinn and Jean S. Burton, "Case Management: A Way to Improve Quality in Long-Term Care," in *Case Management: Guiding Patients through the Health Care Maze*, ed. K. Fisher and E. Weisman (Chicago: American Hospital Association, 1988).

18. John Capitman, Margaret MacAdam, and Donna Yee, "Hospital-based Care Management," *Generations* 12, no. 5 (1988): 62–65.

19. James J. Callahan, Jr., "Paying for Case Management," *Generations* 12, no. 5 (1988): 75–76.

20. Haskins et al. (n. 4 above).

21. Craig Thornton, Shari M. Dunstan, and Peter Kemper, "The Evaluation of the National Long-Term Care Demonstration: The Effect of Channeling on Health and Long-Term Care Costs," *Health Services Research* 23, no. 1 (1988): 129–42.

22. Davidson et al. (n. 2 above).

23. Case management is a term used loosely and for some agencies synonymously with social work itself. It is not feasible to develop a logical sampling frame to capture true case management programs in the variety of medical, social, and family service organizations claiming to do case management in long-term care. Moreover, preliminary exploration determined that such agencies seldom separate the cost of case management from the costs of social casework.

24. Haskins et al. (n. 4 above).

25. Leonard S. Miller, "Increasing Efficiency in Community-based Long-Term Care for the Frail Elderly," *Social Work Research and Abstracts* 24, no. 2 (1988): 7–14.

26. Like the S/HMOs described in n. 6 above, On Lok is a capitated program that is expected to use the members' Medicare and Medicaid benefits to finance all acute and long-term care. In contrast to the S/HMOs, which attempt to serve a large number of well elderly, all those enrolled in On Lok require long-term care at a level that would qualify them for nursing home admission. The On Lok program is situated in San

Francisco in Chinatown. An adult day health center, where outpatient health care is also available, is the fulcrum for the program. On Lok, which is now at financial risk, largely serves a Medicaid population and receives per-capita payments from the state Medicaid program. At present an eight-site demonstration project funded by the Health Care Financing Administration and other private foundations is attempting to replicate the On Lok program in other states. This demonstration, called Program of All Inclusive Care for the Elderly (PACE), also uses an adult day health center as the primary care setting.

27. Austin et al. (n. 1 above); Abrahams, Capitman, et al. (n. 6 above).