

Case management in capitated long-term care

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For a very impaired population needing multiple interrelated services, the case management approach used by On Lok Senior Health Services in San Francisco, California, produces a responsive, flexible service system. Case management in On Lok's consolidated model has three key characteristics: (1) a true multidisciplinary team of medical as well as

nonmedical personnel who separately assess, then, as a group, plan with the client and/or the family the services to be given; (2) use of the same team to assess needs and deliver services; and (3) team access to a potentially unlimited array of services, with freedom to adapt or create needed services.

Background

Generically, case management refers to any method of linking, managing, or coordinating services to meet client needs and typically includes client assessment, service coordination, and followup. The concept of case management in long-term care was popularized through a number of demonstrations in the 1970's and early 1980's and evolved from concerns about the quality and accessibility of long-term care services, as well as the cost of nursing home and, to a lesser extent, acute medical care (Ruchlin, Morris, and Eggert, 1982). One of the first of these demonstrations, Triage (1974-78), sought to "increase the range and availability of [community long-term care] services and to coordinate service delivery" (Quinn and Hodgson, 1984). In other demonstrations, case management was used as a service and became a means to control unnecessary nursing home use (Eggert, Bowlyow, and Nichols, 1980). Zawadski (1984), in his review of eight demonstrations, differentiates three models of case management:

- The prior authorization screening model, in which a health professional assesses the individual considering institutional placement, determines whether alternative community services could be provided and, if appropriate, arranges those services.
- The brokerage model, wherein a health professional independently assesses an impaired individual, arranges services through other providers, and regularly reassesses and follows the client.
- The consolidated model, in which a multidisciplinary team assesses needs and actually provides the services ordered.

Blending the objectives and experiences of both the prior authorization and brokerage models, Section 2176 of the Omnibus Budget Reconciliation Act of 1981 established the 1915 waiver authority. Among other things, this authority allows Medicaid reimbursement for case management systems of community-based long-term care. Under this waiver program and through other private sector initiatives, case management has begun to emerge as a separate reimbursable service. Today case management more commonly refers to this specific service—a health

professional assessing the needs of an impaired individual, arranging services, and monitoring the individual's progress on an ongoing basis. The National Institute on Community-Based Long-Term Care, an affiliate organization of the National Council on the Aging, is now developing standards for case management services.

This article describes the consolidated model of case management as used in On Lok's capitated long-term care program. The consolidated approach to case management combines the assessment and monitoring functions with service coordination and delivery. The model is described, service utilization impacts are presented, and the strengths and weaknesses of this case management model are discussed. The role of the physician, as a member of the multidisciplinary case management team, and the role of medical management within this program are examined.

On Lok's approach

The On Lok program

On Lok Senior Health Services began in 1972 as an adult day health program serving the elderly in San Francisco's Chinatown, North Beach, and Polk Gulch areas. By 1983, On Lok had developed into a comprehensive long-term care program, the Community Care Organization for Dependent Adults (CCODA), which differed significantly from traditional long-term care models in that:

- The full range of social and medical services were integrated into a single program.
- The same professionals (a multidisciplinary team) planned and delivered nearly all services.
- On Lok had total control over all service expenditures.
- On Lok emphasized personal independence and utilized the day health center as its primary delivery setting.
- A single source (Medicare) paid for all services.

From 1979 to 1983, the CCODA operated under Federal Medicare waiver authority. At the end of this waiver period, the CCODA appeared to be a financially viable model that benefited its funders, its participants, and their providers. In 1983, On Lok initiated the risk-based CCODA, in which the successful service program remained unchanged, but

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its funding base under Medicare and Medicaid waivers was broadened to offer fixed, competitive rates to the system's traditional payers for long-term care services. Since 1983, On Lok has received prospective monthly payments from Medicare, Medicaid, and/or the individual (based on the individual's entitlement) and has assumed full responsibility for using the resulting pool of funds as needed to meet all the health and health-related needs of its 300-plus enrollees, each of whom has been certified by the State of California as needing a nursing home level of care, intermediate care facility (ICF), or skilled nursing facility (SNF). With assumption of financial responsibility, On Lok gained freedom from traditional (fee-for-service or diagnosis-related group) reimbursement systems and requirements, becoming the first provider to assume full financial risk for the total health care of an impaired long-term care population.

In the fall of 1986, Federal legislation (Public Law 99-509) authorized On Lok-type Medicare and Medicaid waivers enabling capitation financing for as many as 10 other programs around the country, and the Robert Wood Johnson Foundation funded On Lok to study the feasibility of extending its model to other settings. More than 100 organizations expressed interest and, as of spring 1988, two of these organizations have begun trial years of operation.

Six working principles underlie On Lok's model:

- Focus on the very impaired and frail elderly who require ongoing care for the rest of their lives.
- Comprehensive medical, restorative, social, and supportive services that together address the client's multiple, interrelated problems.
- A fully integrated, coordinated response to the needs of the client.
- Complete control by the service team of any and all services needed.
- Emphasis on participants' continued community residence.
- A risk-management orientation.

The organization's administrative structure allows for rapid adaptation to changing conditions; its philosophy and financial base make possible the assumption of financial risk; and its management skills and information base enable effective monitoring of clients' services and costs. Specific features of the risk-based CCODA model include the multidisciplinary-team approach to service coordination, the primary care provider as an integral member of the service team, extensive use of day health services as an efficient community service option, and flexible use of housing with services.

Although all On Lok enrollees are certified by a representative from the California Department of Health Services to be at the ICF or SNF level of care, only 5 percent actually reside in nursing homes. The other 95 percent live in the community, with support services provided by On Lok, family, and friends. On Lok's participants are old (average age is 81.2 years), functionally impaired (Table 1), and medically frail. Each participant has an average of more than five medical conditions.

Table 1
Summary of participants' medical conditions and impairments in functional skills:
July-September 1987

Condition or impairment	Percent of participants
Medical condition	
Total: 324 persons	
Cardiovascular	74
Nervous system/sense organ	62
Musculoskeletal	45
Digestive	41
Blood/blood-forming	40
Mental disorder	39
Neoplasm	27
Skin condition	23
Endo/nutri/metabolic	22
Respiratory	17
Genitourinary	14
Congenital	0
Functional impairment	
Total: 315 persons	
Cognition:	
Short-term memory	87
Long-term memory	81
Orientation	62
Sensory:	
Vision	94
Hearing	57
Speech	29
Musculoskeletal:	
Lower extremity	85
Upper extremity	54
Continenence:	
Bladder	77
Bowel	48
Activities of daily living:	
Bathing	75
Grooming/hygiene	59
Dressing	53
Toileting	47
Transferring	58
Walking	55
Eating	18

SOURCE: On Lok Senior Health Services: Data from the *Risk-Based Community Care Organization for Dependent Adults Progress Report No. 4*, August 1987 through October 1987, San Francisco, Calif., Dec. 1987.

The multidisciplinary team

It is well recognized that medical management of the frail elderly requires a comprehensive approach (National Institutes of Health Consensus Development Conference, 1988) that includes not only a careful assessment of their multiple and complex medical problems, but also an assessment of their functional capabilities, their social supports, and their psychosocial well-being. All these goals are accomplished at On Lok through the collaborative efforts of multiple professionals and allied health care providers within the framework of multidisciplinary team management, the core of the On Lok model of

long-term care. The physician's role is integrated in a unique manner into this multidisciplinary team approach.

The multidisciplinary team at On Lok is comprised of many professionals, including physicians, nurse practitioners, nurses, social workers, nutritionists, and therapists (occupational, physical, and speech), as well as health workers and drivers who have frequent close contact with participants. Each professional individually assesses the participant according to a defined protocol. The team meetings, which are held weekly, begin with summaries of the formal assessments made by each professional and may also include health workers' observations of individual cases. Assessments are made on persons newly referred to the program, on established participants (each is fully assessed every 3 months), or on participants with significant interval management problems. Upon completing the assessment of each case, a treatment plan is formulated by the team members, usually through a process of negotiation and agreement. The wishes and needs of the participant and/or family are incorporated into the assessment process and the treatment plan is discussed with and approved by them. The plan is then implemented by members of the team.

Implementation of treatment plans by primary care providers who also formulate them and monitor results of treatment is an important and crucial characteristic of the On Lok model of risk-based long-term care. Services are allocated and rendered efficiently based on the needs assessment of each patient. Outcomes of treatment become apparent to the care providers, and adjustments can be made quickly under this system. There is efficient feedback and reaction. This dual role of the multidisciplinary team—that of formulation and implementation of treatment plans with continuous adjustments—is unique among community-based long-term care programs.

A nontraditional element of On Lok's multidisciplinary team is the inclusion of the staff physician as an integral member. Unlike most teams with physician members, the On Lok team is not physician-led. Participant's medical problems are managed by the physician, but as a member of the team, the physician takes part in a process of shared decisionmaking when a participant's medical problems coexist with such needs as housing, psychosocial supports, and in-home supports.

Medical services

Most medical services are provided in the outpatient setting (Table 2): a medical clinic open 8 hours a day, 7 days a week, adjacent to an adult day health center, integrally linked to home health and in-home support services. A day health center is an expanded model of day care that is oriented to the very impaired and provides an array of services including nursing, therapy, and personal care. Currently, On Lok has three adult day health centers, together serving about

305 participants. The linking of day health to clinic services is crucial. On Lok's three centers are also licensed and serve as outpatient medical clinics, making possible the provision of a full range of outpatient medical services.

Primary care is provided by a team of staff physicians, nurse practitioners, nurses, and health workers. They comprehensively assess patients newly referred to On Lok, provide routine quarterly health assessments and physical exams, evaluate and treat episodic illnesses, monitor and treat chronic conditions, give intravenous fluid therapy, administer and monitor medications, provide health education, and coordinate services.

Table 2
Service utilization summary in selected service categories: July-September 1987

Type of service	Total number of service days for quarter	Average percent receiving services per month	Average number of service days per user per month
Day center services			
Social service	1,878	90	2.1
Primary medical care	731	61	1.3
Nursing	11,196	97	12.3
Personal care (activities of daily living)	6,449	79	8.6
Physical therapy	2,234	48	4.9
Occupational therapy	545	31	1.8
Meals	¹ 21,700	95	24.2
Transportation to the center	² 10,998	81	14.3
In-home services			
Home health services:			
Primary medical care	59	11	0.6
Nursing	410	29	1.5
Physical therapy	32	2	1.5
Occupational therapy	44	5	0.9
Social service	44	6	0.9
Supportive services:			
Personal care	4,177	37	11.8
Homemaker/chore	978	36	2.8
Portable meals	14,681	65	23.9
Attendant care	6,563	27	25.5
Inpatient services			
Hospital	170 ³ (0.6%)	9	2.3
Intermediate care facility or skilled nursing facility	1,529 ³ (5.4%)	6	28.8

¹Number of meals.

²Number of round trips.

³Percentage of total capitation days (28,150).

NOTE: Total number of persons using any services is 323.

SOURCE: On Lok Senior Health Services: Data from *The Risk-Based Community Care Organization for Dependent Adults Progress Report No. 4*, August 1987 through October 1987, San Francisco, Calif., Dec. 1987.

The major portion of clinic services is provided by nursing personnel with physician supervision. Each of the three clinics serves about 60 participants a day and is staffed by two registered nurses (RN's) and one licensed vocational nurse (LVN). Because the physician must provide services in the hospital, in the nursing homes, as well as in the clinic, the day-to-day variations in a participant's health status are monitored by the RN staff and discussed with the physician. A collegial relationship exists between physician and nursing staffs that promotes collaboration on skillful, timely, and often innovative management of complex medical conditions in the outpatient setting.

For those participants with significant psychiatric impairments, consultation by a psychiatrist is available. Outpatient primary care also includes dental, optometry, audiology, podiatry, and speech therapy services and equipment, all included in the single capitation rate.

Only On Lok's staff physician can authorize referrals to and treatments by outside medical consultants, keeping primary coordination and allocation of services under On Lok's control. Conditions requiring consultation and treatment by outside specialists are first evaluated by the staff physician prior to referral for medical consultation. Consultants are members of On Lok's specialist consultant panel comprised of community physicians who charge fees for their services according to a rate schedule negotiated with On Lok.

Ancillary clinic services—all laboratory tests, X-rays, and complete pharmacy services—are provided under contract with two local hospitals and a community pharmacy. The monthly capitation rate includes these services and all drug costs, which for some participants exceeds \$150 per month.

Participants who require acute hospital care are admitted to either of two nearby community hospitals, with which On Lok annually negotiates a flat, all-inclusive per diem rate for services. (Rates are adjusted upward for stays in the intensive care unit, coronary care unit, or burn unit.) On Lok's staff physician manages the care of the On Lok patient in acute care and coordinates and authorizes all necessary consultations. Discharge planning is coordinated by On Lok's physician and the multidisciplinary team, thus relieving the hospital's discharge planners of that responsibility.

Participants who require 24-hour skilled nursing care reside in one of three nursing homes within reasonable proximity to On Lok, with which On Lok annually negotiates a per diem rate per patient. These participants remain in the On Lok system with continuing physician management and weekly visits by a nurse from On Lok's home care staff who coordinates management between nursing home staff and On Lok's multidisciplinary team.

On Lok is not a traditional home health agency; home services are approved by the multidisciplinary team and implemented by the home health nursing staff, comprised of three RN's and one LVN. The RN

staff train and supervise licensed home health workers to provide services to participants in the home. There is direct and, when necessary, immediate contact between nursing staff and home health aides whenever participants have a change in health status or change in home support systems. Adjustments are often immediate after coordination with the multidisciplinary team.

Since 1981, respite care has played a significant role in the medical management of On Lok participants. Respite services are provided in a housing unit served by On Lok. The multidisciplinary team authorizes entry into respite care. While residing in the respite unit, the participant attends the day health center daily to receive professional services and receives personal care and monitoring during the evening and night hours from health workers under the supervision of the home health nursing staff.

Ethical concerns and medical management

Nowhere is the collaboration between physician and other members of the multidisciplinary team more important than in the area of ethical concerns. At a time when health care technology can artificially preserve and prolong lives, frequently at great cost, and when the means to provide such extraordinary care may become limited (Fuchs, 1984), medical management of the frail elderly is fraught with treatment dilemmas. In risk-based models of care such as On Lok's, in which there is a finite pool of resources, these dilemmas are already commonplace.

Decisions to undergo or forego treatments always rest with patients or their legal surrogates (Ruark et al., 1988). At On Lok, medical management includes determination of those decisions. In collaboration with the multidisciplinary team, the physician has an opportunity to work closely with participants and families. The physician offers advice with a knowledge of complex medical conditions in perspective with functional capabilities and psychosocial supports. Early on, and within the context of quarterly evaluations, patients are encouraged to express their health wishes. In a nonemergency setting, even the most frail and demented participants can often express wishes regarding life supports and artificial means of feeding. Written advance directives, such as durable powers of attorney for health, are encouraged for participants capable of signing them. Utilizing these advance directives and health wishes, the physician has guidelines for intervention and treatment. In On Lok's experience, the majority of patients, when given the opportunity to express health wishes in a nonemergency situation, do not desire aggressive, noncurative, life-prolonging measures such as hemodialysis, nasogastric tube feedings, and ventilator support of respiration.

The vulnerability of the program's frail elderly population is a significant concern. Unlike younger, more mobile, and healthier consumers of health care, the frail elderly are often too cognitively and

physically impaired to assume self-advocacy roles or find alternatives to care. To safeguard the care of this vulnerable population within the consolidated model, On Lok has implemented additional quality assurance measures.

First, On Lok strives for accountability to the community it serves. On Lok solicits community input in every facet of its program and allows community service providers access to processes that monitor care within the agency. The medical advisory and utilization review committees, comprised of community health professionals, provide regular, independent assessments of appropriateness and timeliness of care. Community members serve on On Lok's ethics committee and provide input on the handling of sensitive ethical issues impacting on service delivery. Formed in 1984, the ethics committee acts in an advisory capacity only and does not direct care delivery. The committee is accessible to all On Lok staff as well as On Lok participants and their families. Deliberations of the committee are confidential.

Within the agency, the multidisciplinary team is itself a quality assurance process. Treatment plans are tailored to the individual participant's needs after full face-to-face assessments every 3 months. Services allocated are monitored for effectiveness. The team members are accountable to each other in ensuring that services are delivered without fragmentation or delay. In this respect, the members of the team are engaged in an ongoing process of peer review. In addition, as a matter of policy, On Lok's administrators exert no cost restraints on service allocation decisions by the multidisciplinary team.

Quality assurance also is furthered by the presence of a data collection system at On Lok that tracks patient demographics, health and functional status, and service utilization patterns. This tracking system has allowed both internal and external reviewers to determine whether the volume of services received by individual participants is appropriate for their health and functional status.

Findings and discussion

The direct impact of On Lok's consolidated model of case management can be seen in patterns of service use. The high degree of service control made it reasonable to expect reductions in use of high-cost inpatient services, but the reduction exceeded expectations. The most significant impact has been the reduction of high-cost hospital days. As shown in Table 2, hospital days for the program's very impaired population during the period July to September 1987 was .6 percent of all capitation days or 2,204 days per thousand enrollees per annum. This rate is comparable to hospitalization rates for a sample of 19 TEFRA (Tax Equity and Fiscal Responsibility Act) HMO's (health maintenance organizations) (2,223 days per 1,000 member years in 1984) (Langwell et al., 1987). On Lok's hospitalization rate is also below that for the general

aged Medicare population in the fee-for-service system (3,197 days per 1,000 Medicare enrollees in 1984) (Langwell et al., 1987) and well below rates for a comparably impaired population (10,950 days per 1,000 persons) (Zawadski et al., 1984).

Moreover, hospital use was reduced over time within the On Lok program for essentially the same population. From February 1980 to May 1981, hospital utilization was 6,935 days per 1,000 enrollees. From July 1981 through October 1982, utilization dropped by more than one-half, to 2,920 days per 1,000 enrollees, and for the next 5 years remained below that level. Eng (1982) studied the change in utilization and found it to be the result of reduction in both the number of hospitalizations and lengths of stay. Hospitalization related to exacerbation of chronic conditions was almost eliminated and number of hospitalizations for diagnostic work was reduced. Hospitalization related to acute events, e.g., hip fracture or stroke, was not reduced. For all hospitalizations, length of stay was reduced from 10.5 days in 1980 to 8.5 days in 1982. On Lok's success in reducing numbers of hospital admissions and lengths of stay was achieved in 1981-82, approximately 1 year before the enactment of the prospective payment system. Currently, length of stay of On Lok participants is averaging 6.5 days.

Nursing home days were also reduced. In 1981, more than 9 percent of On Lok participants resided in nursing homes. An aggressive deinstitutionalization policy reduced nursing home days to less than 3 percent by 1984. This policy was subsequently tempered by an analysis of client outcomes and costs, which found nursing home care to be an appropriate and cost-effective option for some. During the third quarter of 1987, nursing home use was 5.4 percent.

Community services have increased, offsetting some of the decrease in inpatient services. Day health is essential to the On Lok model; effectively each participant attends the day health center at least once a week, with average attendance of 15 days a month. A majority of clients (approximately two-thirds) also receive some in-home services. In-home support services increased dramatically as nursing home days decreased.

These changes in service utilization can be attributed in large part to On Lok's consolidated model of case management. First, linking case management with service delivery increases the responsiveness of the service system. Changes in this medically unstable population can be identified quickly and service plans changed immediately. Second, the staff physician assumes total inpatient and outpatient primary medical care responsibility, and, through the multidisciplinary team process, has access to a broad array of services, making it possible to find alternatives to high-cost hospitalization and nursing home use and to facilitate early discharge. Finally, capitation financing and provider assumption of financial risk gives the multidisciplinary team the opportunity to create new, more cost-effective services not otherwise reimbursable in the fee-for-service

system. An example of a new service that has contributed to the reduction in inpatient care is respite care.

Respite care services were developed in 1981 by the On Lok multidisciplinary team, which recognized that frail elderly patients frequently develop medical conditions or family/support crises that cannot be resolved while the patient continues to reside at home. Some medical conditions such as mild respiratory or urinary tract infections do not necessarily warrant acute hospital care. However, for a frail elderly patient marginally managing at home, such infections can tip the balance into a state of functional dependency. With medications, the patient may develop increased forgetfulness, unsteady gait, or incontinence. For such patients, traditional alternatives have been acute hospitalization or nursing home placement once the functional impairments complicated the illness. But hospitalization under these circumstances often disorients the patient even further, and nursing home placement often means permanent institutional care. Respite care has also been used to reduce length of stay following acute episodes. In recent years, respite care has become an important long-term care concept (Berman et al., 1987). Respite services are now an integral part of On Lok's risk-based model of long-term care. The case study below demonstrates some of the functions of a consolidated model of case management and the role of respite care.

There are disadvantages to a consolidated model of case management. First, it is staff-intensive and therefore expensive. At least 5 professionals independently assess and reassess each client every 3 months and a team of 10 to 15 providers meets to discuss the participant's needs and to develop a coordinated service plan. Case management linked with service delivery responsibility is certainly more expensive than an assessment by a single case manager in a brokerage system and followup arrangements with providers. However, providers under a brokerage

model must also communicate with case managers and, for service delivery and reimbursement purposes, do their own assessment, service planning, and monitoring. When many different providers are involved, this duplication, in addition to case management, can prove more costly and can undermine the coordination of care. Capitman, Haskins, and Bernstein (1986), in comparing different models of case management, disaggregated service component costs at On Lok and found case management costs in On Lok's consolidated model to be lower than those of many of the brokerage models.

A second disadvantage of the consolidated model of case management is the lack of independence. In a brokerage model, the case manager typically provides no other service and therefore can impartially find the most appropriate and cost-effective service provider and objectively monitor service quality. A consolidated model, by definition, removes this independence. The increased control over services and strong incentive for cost control in On Lok's model potentially places clients at risk. On Lok has been careful to develop quality assurance mechanisms to address this concern. Although adequate for its program, these protective mechanisms are still not foolproof; better quality assurance mechanisms are needed prior to the widespread use of this model.

Conclusion

In its generic sense, as a method of linking clients with services, On Lok's multidisciplinary team with direct-service-delivery capability represents the most complete and comprehensive model of case management. Although similar in purpose, the approach to case management in On Lok's capitated long-term care program is quite distinct from the more popularly known brokerage models of case management. In the brokerage model, the assessment/linking/followup functions of case

Case study

An 88-year-old woman, who lived alone and had Alzheimer-type dementia and a previous right hip fracture, was found on the floor of her apartment one morning by On Lok staff. She had fallen as she had arisen from her bed and subsequently was unable to get up or to summon help. She was admitted to the hospital by On Lok's staff physician after X-rays revealed a displaced left hip fracture. Orthopedic consultation was obtained on admission. The following day, under spinal anesthesia, the patient underwent open reduction and placement of a hip prosthesis. Postoperatively, there were no complications. Physical therapy began the first postoperative day.

The patient was discharged from the hospital on the first postoperative day to On Lok's respite care unit. For the next 2 weeks, she attended the day health center daily, where On Lok's physical therapist supervised a treatment plan of progressive ambulation

with the patient using a walker. The clinic nursing staff monitored the surgical wound for infection, and dressing changes were done daily. At the end of each day, she returned from the day health center to reside in the respite care unit, where she received personal care from home health aides in the evening and night. Personal care included helping her to learn to use a bedside commode safely at night. At the end of the 2 weeks, the patient was ambulatory with a walker, without hip pain, and her surgical wound was healed.

She was discharged from respite care back to her home, where increased hours of home care were arranged for her each morning and evening. She continued to attend the day health center 5 days a week for physical therapy. Although she was ambulatory with a walker, she was unable to negotiate the three flights of stairs to her walk-up apartment. She was accommodated by being carried up and down the stairs by two drivers until she could navigate the stairs herself.

management are a stand-alone service deliberately separated from service delivery. In the consolidated model, the case management functions are integrally linked with service management and delivery.

The question is not: Which model is better? There are advantages and disadvantages to each. The more appropriate question is: For what type of client, and in what type of situation, is each model most appropriate? For a client with minor impairment who is alert or has family assistance, good information and referral is probably the only service that is needed. A moderately impaired individual with little or no informal support would benefit from brokered case management. A seriously impaired individual with a number of medical conditions, multiple interrelated needs, and limited, if any, informal support typically requires many services simultaneously and also needs close monitoring to deal with these frequently changing conditions. For these individuals, a consolidated model of case management may be the most effective way to meet client needs and to organize and deliver services.

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