The Evaluation of the National Long Term Care Demonstration

4. Case Management under Channeling

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The channeling demonstration involved provision of comprehensive case management and direct service expansion. This article considers the former. Under both models, comprehensive case management was implemented largely as intended; moreover, channeling substantially increased the receipt of comprehensive care management. However, channeling was not a pure test of the effect of comprehensive case management: roughly 10–20 percent of control group members received comparable case management services. This was particularly the case for the financial control model. Thus, the demonstration was not a test of case management compared to no case management; rather, it compared channeling case management to the existing community care system, which already was providing comprehensive case management to some of the population eligible for channeling.

Underlying the design of the channeling demonstration was the assumption that the existing system of community care for the frail elderly was characterized by a variety of direct services but that these were uncoordinated and of limited availability. As described in Car-

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cagno and Kemper (this issue), the demonstration was to test the effects of providing (1) comprehensive case management of community services and (2) expanded community-based services. Under the financial control model, direct service expansion covered a broad range of needed community services; under the basic case management model, direct service expansion was limited. The case management offered under both channeling models was designed to differ from current practice in its comprehensiveness.

The nature and extent of case management services received by the treatment and control groups was a critical issue in evaluating the demonstration. If the treatment group did not receive substantially more comprehensive case management than the control group, one would not expect to be able to detect the case management effect of channeling. This article assesses the nature of case management under channeling, describes the levels of participation of clients, and compares receipt of channeling's comprehensive case management by the treatment group with receipt of comprehensive case management—from other sources—by the control group. (Expansion of community services is considered in detail in Corson, Grannemann, and Holden, this issue.) Complete documentation of the case management process is contained in Applebaum, Brown, and Kemper (1986).

CHANNELING CASE MANAGEMENT RECEIVED BY THE TREATMENT GROUP

Case management in channeling included five core functions:

- Comprehensive, structured needs assessment to determine individual problems, resources, and service needs
- Care planning to specify the types and amounts of care to be provided to meet the identified needs of each client
- Service arrangement to implement the care plan
- Monitoring to ensure that services were provided as called for in the care plan or modified as necessary
- Reassessment to adjust care plans to changing needs.

Whether the demonstration was successful in delivering comprehensive case management to the treatment group depends on two things: whether case management functions were in fact implemented as designed, and whether most of the treatment group received them.

IMPLEMENTATION OF COMPREHENSIVE CASE MANAGEMENT BY CHANNELING

The key components of comprehensive case management under channeling were implemented largely according to design. The demonstration placed a great deal of emphasis on implementing channeling as intended and in a consistent manner across sites. This was achieved through training and monitoring by the technical assistance contractor and periodic meetings of all project directors to exchange information with one another, the technical assistance and evaluation contractors, and DHHS staff. In addition, project staff were kept informed about the research and were involved in the planning of randomization and data collection. This helped to engender commitment to the research objectives of the demonstration, including standardizing the intervention (Applebaum, Harrigan, and Kemper, 1986).

The demonstration called for and obtained management and supervisory staff who met the standard professional qualifications of the field and were trained for channeling in a uniform manner. Most of the case managers had degrees in social work or other social science disciplines and/or human service experience; projects typically used nurses as supervisors or consultants. The case management and supervisory staff at each of the ten sites also received standardized training in assessment, care planning, and other aspects of case management.

Case managers were expected to have case loads of a size that would allow them to spend enough time on individual clients to provide comprehensive case management. To meet this objective, demonstration planners expected case managers to carry approximately 50 cases. Actual case loads averaged 45 per case manager under the basic model and 49 under the financial control model. A service audit and program review function originally planned to monitor case management quality was not implemented in most projects and was later made optional. Finally, case managers were to be supervised closely. This objective was achieved, with a case manager to supervisor ratio of about six to one under the basic model and four to one under the financial model.

The case management component was designed to include a comprehensive assessment, care planning, and service arranging process. In-person structured assessments, taking 75 minutes on average to complete, served the important clinical function of providing the basis for care planning as well as the research function of providing baseline data for the evaluation. They covered living arrangements, health and functioning, service use and needs, informal care, financial resources,

eligibility for services, and demographic information. The assessment was to be completed within 9–11 days (seven working days) after the sample member was randomly assigned to the treatment group. Assessments were completed on all clients. Although the average completion time of nine days was within the limit, assessments often took longer.

As intended, a formalized care plan that included both informal caregiving and formal services was completed for each participating client, and a supervisory review was conducted on all care plans as well as on their revisions in response to reassessment.

As indicated in Carcagno and Kemper (this issue), the financial control model pooled funds from Medicare, Medicaid, and other programs to give case managers authority over amount, duration, and scope of services, regardless of funding source. These funds were substantial: case managers could authorize up to 85 percent of prevailing nursing home rates for individual clients and 60 percent across all clients. (For further discussion of the features of the financial control model, see Corson, Grannemann, and Holden, this issue). In general, case managers reported being able to purchase service under the funds pool in all the service categories without constraint, although effective authority to specify the amount and duration of services was limited in some situations. For example, when ordering home health services, the home health agency staff also made a judgment about the appropriate level of services, and they and the channeling case managers jointly agreed on the amount and duration of services. In addition, supply shortages of some services (for example, homemakers) limited what could be ordered in some sites.

Case managers under the basic model relied primarily on a brokering approach to arrange services, in which they required the approval of provider agencies to deliver the necessary care. To enhance this service arrangement process, the design called for a small amount of gap-filling dollars to be used to purchase services needed to complete a care plan. Each basic case management project had $250,000 of federal funds as gap-filling dollars over the approximately three-year life of the project; three projects supplemented this with modest amounts of state or other funds. Case managers did report being able to use these funds as intended.

There was a difference between the two models, however, in the length of time it took for case managers to complete the care plan. Case managers under the basic case management model took longer (the median was 22 days elapsed time between assessment and completion of the care plan versus 13 days under the financial control model),

presumably because the ability to authorize and pay for direct services enabled the financial model case managers to reach agreement with clients more quickly than under the basic model. However, financial control case managers required more time for supervisory review and for arranging and initiating the first service, largely offsetting the time difference in achieving agreements with clients on the care plan.

Overall, the time from eligibility screening to service initiation was over a month for half of the clients under both models. (The median time was 33 days under the basic model and 32 days under the financial model.) Although channeling's focus on the chronic care needs of the target population implied a longer elapsed time than is typical of providers (such as home health agencies) that respond to acute care needs, channeling's elapsed times were longer than anticipated. The long elapsed times were attributed by project staff to the extensive assessment and care planning activities at intake and the work loads faced by case managers (which were perceived to be heavy given the frailty of the case loads even though on average they were no heavier than anticipated by the channeling planners). Because elapsed time data generally are not available for similar demonstrations or ongoing programs, we do not know how typical or atypical these elapsed times were.

After channeling projects had arranged for initial services, it was expected that ongoing case management would be an important activity. To this end, the demonstration design specified regular monitoring contacts with clients, to examine their condition and services received, and a formalized reassessment and care plan adjustment process. Case managers were to have regular contacts with clients by telephone and in person. Most regular contact was by telephone, and only a few clients did not receive regular telephone monitoring. In-person visits by case managers typically occurred less frequently. Projects were to perform the initial formalized reassessment and care plan revision after three months and further reassessments at six-month intervals. The requirement for the first reassessment at three months was relaxed to six months early in the demonstration, in part because of high work loads and in part because case managers were in frequent contact with clients during the care planning and service initiation period. The six-month reassessments occurred on schedule for the majority of clients.

The key components described above were thus implemented largely according to design. Implementation across sites within models was remarkably uniform. Implementation differed between the two models in several ways—lower case loads, less supervision, and longer elapsed time between assessment and initiation of services, for

instance, under the basic case management model than under the financial control model. These differences were not large, but they could potentially influence the effects of the case management component of channeling under the two models.

Total expenditures for staff were approximately the same for the two models, although the relative times spent performing various functions differed. The major difference between the two models was the relative amount of time spent on indirect functions such as administration, provider relations, and clerical support versus direct client functions. The financial control model spent 56 percent of its resources on these indirect functions compared to 43 percent under the basic model. This difference is explained by the additional management time necessary under the financial model to deal with provider contracts, provider payments, and financial monitoring, and the additional case manager and clerical time devoted to ordering direct services and reconciling expenditures to data on services ordered at the end of each month. Paperwork connected with the service orders and month-end reconciliation, and the greater number of services for which the financial control projects had direct responsibility, contributed to this extra burden. For example, although both models emphasized cost control in the care planning process, only under the financial control model were case managers required to complete a cost calculation worksheet and examine the costs relative to the cap for *each* of their cases. Case managers under the basic case management model typically only used the worksheets for the unusually high cost cases.

The channeling technical assistance staff at Temple University conducted a study of a small sample (254) of case files and found some suggestive evidence of differences in case manager behavior between models, which were probably a result of the responsibility under the financial model for authorizing direct services and associated paperwork (Carcagno, 1986). For example, although client characteristics and needs at baseline were similar under the two models, financial control model case managers appear to have identified more problems with physical and mental functioning for which they were able to authorize in-home care and other direct services. The basic model case managers, in contrast, identified a broader range of problems of community living (such as lack of a telephone, inadequate financial resources, fragile informal supports, poor housing, and need for legal help). These differences suggest that the direct service authorization power under the financial model may have affected what case managers judged to be a service need.

Also potentially related to the difference between models in power

to authorize services were differences between them in the proportion of activities recorded by case managers that involved providers rather than clients or informal caregivers. Provider-related actions were much more important proportionally under the financial control model, while client or informal caregiver support actions held much more importance under the basic case management model. In addition, technical assistance staff interviews with case managers suggested that case managers under the basic model were more likely than those under the financial model to have encouraged informal caregivers to participate in the case management function. This may have been due to the need for family involvement with the existing service system under the basic model, in contrast to the power to authorize payment for services which the case manager monitored directly under the financial model.

Although clearly not definitive evidence, these differences taken together suggest that the basic case management model may have led case managers to play a broader role and to provide more direct support for clients and their informal caregivers through reassurance and personal contact (rather than through the provision of formal services) than was the case under the financial control model.

RECEIPT OF CASE MANAGEMENT BY THE TREATMENT GROUP

Our discussion so far has focused on the characteristics of the case management functions implemented under channeling. We now look at the proportion of those assigned to become channeling clients who actually received case management. Channeling's case management could only have an effect to the extent that clients received it.

Table 1 shows the rates at which clients left the program at three stages of the case management process: between random assignment and assessment, between assessment and service initiation, and after service initiation.

Those who left between random assignment and assessment did not, by definition, receive any case management from channeling because they left before the first case management function. This was true for 11.0 percent of the clients in the basic case management model and 6.8 percent in the financial control model. This is the biggest difference in rates between the two models; most of it was accounted for by differences between the two models in rates of refusal to participate in channeling (7.8 percent under the basic model versus 3.1 per-

Table 1: Rates at which Clients Left Channeling during the 12 Months after Random Assignment, by Reason and Stage in Case Management Process (percent)

	*Basic Case Management Model**				*Financial Control Model**			
Reason for Leaving Channeling (%)	*Between Random Assignment and Assessment*	*Between Assessment and Service Initiation*	*After Service Initiation*	*Total*	*Between Random Assignment and Assessment*	*Between Assessment and Service Completion*	*After Service Initiation*	*Total*
Died	1.7	2.7	14.0	18.4	1.8	2.0	14.6	18.4
Institutionalized	0.6	2.0	9.4	12.0	0.8	2.0	10.5	13.3
Refused	7.8	2.8	3.7	14.2	3.1	2.4	2.0	7.5
Insufficient Disability	0.1	2.2	0.8	3.1	0.2	2.4	1.2	3.8
Moved/Unable to Locate	0.4	0.4	2.4	3.2	0.4	0.3	1.8	2.5
Other	0.4	0.5	1.9	3.0	0.5	2.1	1.4	4.0
Total	11.0	10.7	32.2	53.8	6.8	11.2	31.5	49.5

Source: Carcagno et al., 1986, Table VIII.8.

Sample Sizes: Basic model, 2,108; financial model, 2,498.

*In cases of urgent client need, service initiation came before care plan completion. The times shown here are for care plan completion and service initiation, whichever came first.

cent under the financial control model). Thus, it is probably due to the basic model's more limited ability to pay for services.

The proportions who left between assessment and service initiation were similar for the two models, with the rate slightly higher for the financial control model (10.7 versus 11.2 percent). Death or nursing home placement accounted for over a third of the total at this stage for both models.

Of the persons assigned to the channeling client group, therefore, 78.3 percent received case management services at least up to initiation of direct services under the basic case management model; 82.0 percent did so under the financial control model. Under each model, of the roughly 20 percent who did not remain in channeling through initiation of services, about a third (7 percentage points) had died or had been institutionalized.

Clients left channeling after service initiation at very similar rates for the two models (32.2 and 31.5 percent in the 12 months after enrollment); three-quarters of this was due to death or institutionalization under both models. Although data are not available for all prior demonstrations, and definitions of service initiation undoubtedly vary, the available evidence suggests that channeling was in the middle of the range of the other community care demonstrations with respect to rates of participation (Glennan, 1983).

Case Management Received by the Control Group

The extent and comprehensiveness of the case management received by control group members defines what observed treatment/control differences actually will have measured. If the existing service environment lacked comprehensive case management, then the channeling demonstration, as intended, will have tested the effects of adding comprehensive case management to a fragmented service system. If, in contrast, the existing service environment already contained comprehensive case management services, the demonstration will have tested only the effects of adding more comprehensive case management to that already in place. If the control group were to receive as much comprehensive case management as the treatment group under channeling, adding channeling's comprehensive case management to the existing service system would have no effect at all. (The channeling direct-service expansion component, of course, could nonetheless have an effect.)

In this section we describe the major kinds of case management available in the basic case management and financial control sites. Then we estimate the prevalence of receipt of comprehensive case management by the control group.

Case management is certainly not a new concept; virtually all providers of direct services report managing their cases. Thus, there is a great deal of case management in the existing system of care. That type of case management is, however, service-centered in that it is largely triggered by and provided in conjunction with some direct service or services. Such service-centered case management differs in three dimensions from comprehensive case management under channeling: (1) the intensity of client-case manager interaction, (2) the breadth of services encompassed, and (3) duration of the case management. Intensity is determined by the amount of time the case manager has to spend with each client, which is largely determined, in turn, by the case manager's case load. The breadth of services encompassed refers to how broadly the case manager views the problems of the clients and the services to be arranged in responding to them. Breadth of services is encouraged by the structure and thoroughness of the assessment and care planning process and by careful supervisory review. The duration of involvement refers to the length of time the case manager is involved with the client. Indications of longer-term involvement are formalized, scheduled reassessments and regular monitoring of client condition.

Because most case management in the existing system is derivative of the provision of direct services, these dimensions of intensity, breadth, and duration tend to be determined primarily by the nature of the direct services provided or paid for by the agency providing the case management. Several illustrations of the type of case management that was part of the existing system in the channeling sites will highlight some of these differences.

Hospital discharge planners, for example, provided patient assessment, care planning, and services arrangement for the posthospital care of their patients. The thoroughness of the assessment and care planning typically were heavily constrained by work loads and pressure to discharge patients quickly. The care plans typically encompassed medical and personal care needs, but stopped short of addressing other social problems (housing quality, respite care for informal caregivers, and nonmedical transportation, for example). There was no accountability for posthospital care and little follow-up, except that in some cases limited telephone follow-up was undertaken immediately after discharge to ensure that the services in the care plan were in place.

Thus, although a relatively broad range of services was encompassed by hospital discharge planners, involvement with the patient was of very limited duration.

County and city social services departments provided case management as an integral part of a specific service or services, frequently homemaker services. Orientation toward services available through their departments, plus staff training, made these case managers less prepared to deal with medical needs than were hospital discharge units. Case loads tended to be high and contact intermittent, and typically no provision was made for regular reassessment other than for reevaluation of income eligibility requirements. Thus, although the involvement of county or city social services departments was in many cases long term, the intensity was generally very low and the breadth of services limited.

Certified home health agencies provided assessment, care planning, service arrangement, and monitoring. Case management typically was provided as part of a direct service (usually a skilled service such as nursing or therapy). It tended to be medically oriented, rather than including the full range of social services needs, although personal care needs would typically be addressed. The direct services provided as part of the care plan were also tailored to the requirements of funding programs (particularly Medicare). Cases were frequently closed when the need for skilled care ended. A typical case would be a patient covered by Medicare following an acute hospital episode, whose care was terminated when Medicare coverage ran out. Thus, home health agencies' case management had many of the elements of comprehensive case management, but the services included in care plans centered around home health, and the duration of involvement was limited to the period when home health care was provided. In general, home health agencies offered only slightly more comprehensive case management than the hospital discharge units and most city and county social services departments.

These types of case management were present in all ten channeling sites and undoubtedly would have been received by the vast majority of clients even in the absence of channeling. Almost half of the clients had been admitted to a hospital in the two months prior to channeling, and many of these would have received hospital discharge planning. About 60 percent of clients were receiving some formal in-home care, and many of these would have received case management from the providers of home health or other in-home services. The widespread availability of such service-centered case management was expected. Indeed, one of the things channeling sought to test was the

addition of comprehensive case management to the existing system of limited, uncoordinated case management associated with specific services.

In addition to the expected service-centered case management, some comprehensive case management was already available to some people in the sites in which channeling was tested. Although relatively few agencies provided case management as comprehensive as that of channeling, a number of agencies approached it. As part of the evaluation, we conducted site visits during which we documented the availability of such comprehensive case management. We categorized these agencies into four groups: mental health/counseling agencies, integrated social services agencies, state home care programs, and special home health programs.

In two sites (one basic and one financial), *mental health/counseling agencies* provided case management with elements of comprehensive case management. Although they took a relatively broad approach to services included and the case loads were not high, the relatively short duration of their involvement distinguished them from channeling.

In two sites (both basic), *integrated social services agencies* were able to provide relatively comprehensive case management, encompassing a broader range of services for somewhat lower case loads than many social service agencies.

In five of the sites (two basic and three financial), *state home care programs* were much closer to channeling in the comprehensiveness of case management. These programs combined funding from several sources (such as Title III of the Older Americans Act, social services block grants, and special state funds) to provide home care to the elderly with long-term care needs. Case management was an important component of all of these programs, although some differences existed between these state home care programs and channeling with respect to case load, thoroughness of the assessment and care plans, and breadth of services encompassed. They typically did not integrate health services (such as nurses and home health aides) into their care plans, which emphasized social services (such as homemakers, meals, and transportation).

Finally, in two sites (both financial), *special home health programs* combined provision of nursing or home health aide services with case management at least as comprehensive as that of channeling.

To provide an indication of the extent of comprehensive case management available in the channeling sites, we asked sample members if they had received a visit from any of the agencies that fell into the four categories just described. Table 2 presents the percent of the control

Table 2: Control Group Receipt of Visit from Comprehensive Case Management Agency during Months 1-6 (percent)

	*Basic Case Management Model**	*Financial Control Model**
Mental health/Counseling agency	0.3	1.5
Integrated social service agency	6.0	0.0
State home care program	7.7	14.9
Special home health program	0.0	2.1
Total	14.0	18.5

Source: Carcagno et al., 1986, Table XV.3.

Sample Sizes: Basic model, 834; financial model, 2,498.

*In one site, there were two comprehensive case management programs, creating the possibility that some clients may have received services from both. Such cases were assigned to the more comprehensive category.

group reporting such a visit during the first six months after randomization. In basic sites 14 percent, and in financial sites 18.5 percent of the control group had received a visit from such an agency. Thus, the demonstration tested the addition of channeling to a long-term care system that already contained some comprehensive case management.

Some model differences are noteworthy. Overall, the financial model control group had somewhat greater reported receipt of comprehensive case management than did the basic model. Importantly, almost all of it fell in the most comprehensive categories, state home care programs and special home health programs; nearly half the receipt of case management reported in basic sites was in the less comprehensive category of integrated social services agencies. Thus, not only did the financial sites have a higher reported receipt of comprehensive case management, but it was from agencies providing case management closer to channeling in comprehensiveness than that provided in the basic sites.

The greater prevalence of comprehensive case management in the financial control sites is a direct consequence of an early demonstration decision to assign models to sites explicitly on the basis of the relative richness of their service environments (see Applebaum, Brown, and Kemper, 1986). It was recognized that such assignment would weaken the demonstration's ability to test the effects of the financial control model as applied to a system with little or no comprehensive case management and to compare the effects of the two models. But the risk that the basic model would not show effects if implemented in environments with extensive public financing for community services and with

some comprehensive case management was considered an even greater risk.

CONCLUSIONS

The most important conclusion of this analysis is that both models of channeling substantially increased the receipt of comprehensive case management. Channeling's comprehensive case management was implemented largely according to plan and uniformly across sites; assessment and care planning were completed and direct services initiated for about 80 percent of clients in each model. The great majority of these clients continued to participate in channeling for at least 12 months or until their deaths or institutionalization. Although control group receipt of service-centered case management (for example, from hospital discharge planners and home health agencies) was substantial, receipt of comprehensive case management similar to channeling was well below channeling participation rates. Under the basic model, according to project records, 78 percent of initial enrollees completed the care planning and service initiation process compared to 14 percent of the control group who reported a visit from a comprehensive case management agency; the corresponding figures for the financial model were 82 percent and 18 percent. (While the data sources for these estimates are not strictly comparable, they represent the best available evidence for the treatment and the control groups, respectively, and indicate the extent of the intervention.) Furthermore, separate analysis (Grannemann, Grossman, and Dunstan, 1986; Applebaum, Brown, and Kemper, 1986) indicated that large treatment/control differences in receipt of case management existed for all types of sample members (for example, the most severely disabled) and all sites.

The second conclusion is that, despite this large increase in receipt of comprehensive case management by treatment group members as a consequence of channeling, some of the control group received case management approaching or equaling that of channeling. Thus, the demonstration was not a pure test of the addition of channeling's case management to a system with only service-centered case management.

Third, the incremental increase in comprehensive case management provided by channeling over the existing system was somewhat greater under basic-model case management than under the financial control model. The proportions of the treatment group receiving channeling case management were similar under the two models, but a higher proportion of controls in financial sites received case manage-

ment from state home care programs or special home health programs that were similar to channeling in their comprehensiveness.

Finally, although far from conclusive, some limited evidence suggests that basic model case managers may have had more direct client contact and may have taken a broader approach to meeting a wide spectrum of client and informal caregiver service, support, and counseling needs than did financial model case managers.

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