Commentaries

The National Channeling Demonstration: What We Knew, Know Now, and Still Need To Know

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By the time of its completion, the National Long Term Care Demonstration project (the "channeling demonstration") was the 27th experiment or quasi experiment undertaken on the costs and effects of home and community care. A recent review of findings from all 27 studies shows that they came to remarkably similar conclusions: home care is not a cost-saving substitute for nursing home care because few patients are at risk of institutionalization; reductions in institutionalization are small; home care costs exceed the small reductions in institutional costs; and patient outcome benefits are extremely limited, and sometimes even negative (Weissert, Cready, and Pawelak, in press).

Indeed, by the time channeling was funded, most of these conclusions were already suggested by earlier studies, but results were not regarded as definitive (Weissert et al., 1980a,b; Applebaum, Seidl, and Austin, 1980; Hodgson and Quinn, 1980; Papsidero et al., 1979; Skellie, Coan, and Austin, 1980; and Skellie, 1979). As originally conceived, channeling was to have been the definitive study on long-term care case management cost-effectiveness. Budget cuts altered the scope, as they typically do, however; and as time passed between original conception of the idea and its ultimate funding, the field also came to know more about the subject than it had when the channeling idea emerged. Given the research that had already been done, did channeling offer the potential to teach us anything new? Was anything learned from it? And what do we still need to find out?

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WHAT WAS ALREADY KNOWN

Before channeling got started, some of us thought we already knew several things about the cost-effectiveness of home and community care (Weissert, 1981):

- Cost-effectiveness of home and community care depends on serving patients at high risk of institutionalization.
- Such patients are hard to find in the community, and even harder to select accurately from among those who seek community care—even from among the subset nominally eligible for nursing home placement.
- Reductions in nursing home and hospital admissions and length of stay are very hard to produce, even among those at high risk. Effects tend to be small.
- Expenses of delivering home and community-based care can be quite high and need to be capped in some relation to potential savings on institutional care.
- Physical and mental functioning in the elderly is very difficult to maintain or bring back. Even slowing the rate of decline has to date proved beyond the capability of most studies. Indeed, some patients apparently become even more dependent as a result of home care.
- Contentment, on the other hand, has sometimes been positively affected, but results in studies before channeling were uneven and fraught with potential bias.

POTENTIAL ANSWERS

Given this background knowledge, despite what we knew, channeling clearly did have the potential to teach us several things.

First of all, channeling needed to test the ability of researchers and practitioners working together to improve the targeting of services to patients at risk of institutionalization. Consequently, a major goal of channeling was better targeting.

Likewise, channeling needed to test practitioners' abilities to hold down the costs of home care. For that reason, channeling included a cap on home care expenditures, setting limits of no more than 60 percent of the cost of a year in a nursing home as the maximum amount that could be spent on a patient's home care services, including

case management. This idea came from the New York Nursing Home Without Walls project, which was already underway. Channeling's 60 percent figure was somewhat lower than the New York project's 75 percent cap.

Since patient functional capacity had proved to be intractable in earlier studies, channeling sought to expand the measures of patient outcome to several new domains, including caregiver burden and satisfaction.

Because earlier studies had typically delivered differing varieties of new services, channeling was designed to compare both an exhaustive array of new services and case management with case management plus very limited "gap-filling" discretionary dollars.

Because of channeling's larger sample size, multiple demonstration sites, and the fact that it benefited from the experience of earlier studies, it has been argued that channeling had the potential to provide results that could engender greater confidence than those of any earlier study, and data that could be analyzed at the subgroup level with some degree of confidence in the statistical power of the subgroup sample sizes.

Finally, channeling was intended to test whether or not informal caregivers would reduce their efforts when formal help was provided—a critical question to which agency staff had exhaustively sought answers in existing literature and had come up wanting.

What Was Learned

Channeling's results showed that targeting failed to produce high rates of control group institutionalization. Effects on nursing home and hospital use were negligible (Wooldridge and Schore, this issue). Expenses for home care and case management fell below the 60 percent cap but would have exceeded potential institutional savings even if effects on nursing home use had been greater. Physical functioning was unaffected or worsened; morale, self-perceived health, social interactions, and contentment were unaffected (Applebaum et al., this issue). And although overall life satisfaction was unequivocally held at a higher level in the treatment group, effects were small and transient. Only 6 percent more of the participants than the controls in the two models experienced significantly higher life satisfaction. Results did not differ by subgroup and were gone after 6 months in the basic model and 12 months in the financial model, despite continued participation in channeling.

More treatment than control group members in both models had greater confidence about receiving household and personal care, and unmet needs were reduced; but these benefits were unaccompanied by any additional measured health status or psychosocial benefit beyond the small and transient improvement, already noted, in overall life satisfaction.

Caregivers liked channeling. From 19 to 23 percent more treatment than control group caregivers in the financial model were "very or somewhat satisfied" with their care arrangements, and about 9 percent were more satisfied with their lives (Applebaum et al., this issue). Although treatment group caregivers in the basic model were no more likely to be satisfied with care arrangements than their control group counterparts, more were satisfied with life, at least initially.

But increased caregiver satisfaction did not translate into decreased caregiver burden. Channeling's caregivers did not differ from control caregivers in their perceptions of the emotional, physical, or financial strain of caregiving, or in their feelings that the caregiving role limited their employment and personal activities. Nor did they feel that their care recipients were any less likely to manifest stressful behavior problems as a result of channeling participation.

To justify public subsidy of substantial expansion of the home and community care industry on the basis of satisfaction benefits alone would mean placing a very high value on quite small increments for very few patients who would enjoy them only a rather short time. Many are likely to argue that scarce resources can be better spent in other ways to benefit the long-term care population or other desperately needy groups. Alternatively, direct cash grants might produce some (probably not all) of the same benefits at lower costs, although they would be even more seriously plagued by targeting problems.

The substitution effects of formal for informal care were systematically studied, and an important finding was reached: family caregivers did not stop giving care when formal care was added. Substitution effects were minimal. Informal caregiving dropped among participants in the financial model by only about 4–7 percent when formal care was provided, and most of this drop was in care provided by friends and neighbors, not in care from families (Christianson, this issue). For participants in channeling's basic model, the drop was insignificant. From this it can be concluded that adoption of a formal care support program in this country would not drive out the informal care system, especially care rendered by family members.

UNIQUE CONTRIBUTIONS

While we already knew many of the answers that channeling has provided, channeling's sample size and its consistency with so many other studies offers substantial confidence in the validity and generalizability of its results. Its three unique contributions may have been (1) to show no difference between case management plus a few "gap-filling" dollars versus case management plus a long list of services; (2) its surprisingly limited benefits to caregivers; and (3) its measurement of the magnitude of the formal for informal care substitution effect.

The finding of no difference between case management and a few gap-filling dollars versus case management plus a broad array of services is particularly interesting because it suggests that reduced treatment costs do not necessarily lead to reduced treatment effects—offering the possibility that more rigorous control of treatment costs may be one option for moving home and community care toward cost-effectiveness.

The small benefit result found among caregivers is very important. Much larger and longer-lasting effects on their perceived burden, stress, and life satisfaction seemed more likely. Had major effects been found on patient and caregiver contentment, stress, or burden relief, a new rationale would have replaced the original notion that home care would save money by providing a substitute for institutional care. But channeling's lackluster life satisfaction and caregiver findings mean the search must continue—or the focus must shift to more efficiently delivered home care.

The substitution finding is very important because it opens the door to adoption of a formal national policy of caregiver relief, having removed the fear that we will drive out the informal system.

CONTRIBUTIONS TO POLICY

Each of these findings represents a very important contribution to public policy formulation. Home and community care must become more cost-effective if it is to achieve major public subsidy, and reduced treatment costs are an important performance goal to pursue. Caregiver relief is already on the national agenda. Eventually we can expect to see debate over including it as a service under Medicare and as a service eligibility criterion for Medicaid coverage. Taken together, the channeling results seem to suggest that caregiver relief does not greatly reduce caregiver stress or burden, but part of the explanation may lie

in the fact that the burden is not simply shucked off in the face of some relief. The fear that it might be has now been removed as a barrier to policy.

QUESTIONS REMAIN

Yet the book is not closed, nor has the policy process been arrested on home- and community-based care. Because of the funding cuts, companion surveys, which would have allowed channeling to produce other answers, were not undertaken. These might have included the effects of need, supply, and various policy and contextual variables on the demand for home care; the benefits and costs of home care versus vouchers or cash grants; and the effects of capitating home care financing. Moreover, three questions which were very much on the reduced channeling agenda were nonetheless left hanging:

- —Could channeling have done a better job of targeting those at risk of institutionalization?
- —Could it have done a better job of capping treatment costs?
- —Could it have produced larger outcome effects by better tailoring treatments and measurements to selected subgroups?

No doubt the ability to raise these questions betrays a degree of hindsight sharply focused only by the channeling results. This is to channeling's credit—but the questions nag, nonetheless.

Specifically, on the targeting issue, channeling's selection criteria included application of some very demanding dependency screens. And, as one of the articles reports, many patients manifesting various severe deficits were admitted and served. Yet, to be cost-effective, it is not enough to admit some patients who are severely in deficit. A program must also exclude patients who are not in severe deficit. For all their rigor, channeling's admission criteria included one loophole: dependency in three IADLs. Likewise, although *many patients* manifested deficits, the reports do not show the size of the subgroup that manifested *many deficits*. Patients who enter nursing homes as long stayers are likely to manifest multiple system breakdowns. They tend to lack resources in all domains: physical, mental, social, psychological, and often economic. What has repeatedly distinguished home and community care populations from long-stay nursing home populations is that community care populations suffer problems in two or three domains while long-stay nursing home patients suffer problems in five

or six domains. Channeling's high death rates, noted as evidence of the population's frailty, have been seen before in the very same studies that produced low rates of control group institutionalization.

In short, despite channeling's claim that it served a frail population, evidence from the control group that it served a population at low risk leaves unanswered the important question: Could targeting have been improved by use in the admission screen process of a multivariate risk score reflecting the totality of breakdown across several domains typical of nursing home patients? While such risk scores are available, they were not used by channeling. Certainly no one would want them to substitute for clinical judgment, because our ability to predict institutionalization accurately using statistical methods is extremely limited (Cohen, Tell, and Wallack, 1986; Branch and Jette, 1982). But they could have been used to better inform clinical judgment. Channeling's disappointing results on the issue of targeting suggest the need for something more. If not a summary risk score, what about coupling home and community care admission with nursing home preadmission screening as South Carolina did? That project, which produced very high rates of control group nursing home admission, used its nursing home preadmission screening mechanism to subject home and community care applications to review by the same reviewers who screened applicants for Medicaid nursing home placement (Brown et al., 1985). No one can be sure that first-time results such as South Carolina's will be sustained even if replicated, but the targeting problem calls for use of every promising strategy available to avoid the common pitfall of offsetting savings on the small subgroup of patients at risk by serving too many patients not at risk.

More regrettable is the use of a cap on home care costs set at 60 percent of the costs of a year in a nursing home. Ever since prepublication release of results of the 1977 National Nursing Home Survey, anyone familiar with the basic literature of the field should have known that only the smallest minority of nursing home admissions stay 12 months or longer. One-third of admissions are gone within one month (many within a week) of admission; one-half within three months; two-thirds within six months. To be sure, only 25 percent go back to their own homes. Most others die. But how it could be concluded that 60 percent of channeling's control population would experience stays averaging one year is beyond imagination. Nor was an institutionalization rate in the control group of 60 percent warranted, given that past studies had yet to top the 25 percent mark. Poor targeting should have been expected. Likewise, lengths of treatment in channeling's treatment group should have been a major cause for concern when the

average channeling treatment group admission stayed longer than would have been expected for a similar cohort of nursing home admissions.

While actual operating expenses of channeling's home and community care services fell well below 60 percent of the cost of a year in a nursing home—they ranged from 30 to 47 percent in the financial control model (Kemper, this issue)—actual nursing home expenses by the control group were substantially below even this lower amount. This should have been expected, and it gives rise to a nagging concern. A cap of 60 percent and spending for community care services of only half to two-thirds of that must lead to the assumption that, even though the channeling project staffs reportedly felt continuous pressure to contain costs, the pressure perhaps should in fact have been for even greater containment, especially in terms of length-of-stay review. Nonetheless, the basic model did raise total costs by only 6 percent. Suppose a more realistic budget cap had been set, one that assumed poor targeting, resulting in few control group nursing home admissions—most of those for stays of typically less than one year—and small savings produced by reducing nursing home use. The cost cap would need to have been set at much less than 60 percent of a year's nursing home stay for all patients. A tighter, more realistic cost cap based upon more realistic targeting, length of stay, and substitution-effects expectations might have brought the basic model projects to the break-even level or close enough to be justified by the slightly higher life satisfaction results experienced by patients and caregivers. The glass that now looks pretty empty would have looked close to full.

The most likely way, perhaps, to have brought down those costs might have been with length of stay review for channeling participants. All indications are that home care benefits occur in the initial period of home care utilization. Had practitioners been better informed about their budget's break-even requirements, they might have reduced length of participation or the intensity or skill mix of services in a way that might have reduced cost without impairing outcome benefits. Until we have a study operating under much more realistic cost caps, we will not know whether or not the basic channeling model—or other community care services—can become cost-effective by operating more efficiently. That seems like a pretty important thread to find hanging at the close of a study of the magnitude and importance of channeling.

Yet the outcome benefit question remains the most troubling. If they get so little out of it, why do patients keep using home and community care, and why do they love it so? It would be convenient to

hide behind the false premise that more sensitive measures would capture benefits that our too crude measures have missed. But it would be not very useful. Taken together, the more than two dozen community care studies done over the past three decades have measured just about everything anybody can think of, and yet findings of "no difference" have dominated results. Indeed, negative signs are nearly as frequent as positive signs, particularly in the most rigorous studies. Likewise, channeling measured morale, self-perceived health, social interactions, contentment, life satisfaction, unmet needs, and anxiety over care arrangements in patients and stress, burden, financial strain, limitations on personal and employment activities, and satisfaction in caregivers. For most of those measures, it found nothing. For satisfaction, very little. Unmet needs were met, but to what health status end? Even if more sensitive measures were developed, would their results be of interest to policymakers?

Better use of existing measures shows more promise. The next study might want to try targeting specific outcome subgroups. Patients in home and community care are a heterogeneous lot. Some are at risk of institutionalization, others face death in a short time, still others may have potential for physical or mental functioning rehabilitation or stabilization, while others may be candidates for improved contentment or caregiver relief or satisfaction. To measure each patient against every one of these domains suggests that each is equally likely to benefit in every one of them. Yet, in reality, very few are good candidates for any one domain. Consequently, samples of those with potential to benefit in any given domain are much smaller than the total study sample, and unless the treatment is 100 percent effective, populations actually benefiting in any one domain may be so tiny that their benefits are lost against the variance introduced by the heterogeneity of the study population.

Preferably, care planning would define a limited number of specific outcome goals on which improvement or reduced rate of decline is expected. Treatments would then be directed toward achieving those specific goals, and analysis of treatment effects on any given outcome would be limited to the subpopulation for whom the specific goal was prespecified. That we may not yet be ready to effectively prespecify treatment and outcome subgroups may suggest the need for more small-scale clinical studies of well-defined interventions in limited, homogeneous populations prior to major model testing.

Fortunately, channeling did some of this subgroup analysis on a post hoc basis, and more can be done by analysts working with the channeling data tapes which have recently become available

(Wooldridge et al., 1987). In the same vein, channeling's data tapes will be useful to researchers studying determinants of nursing home and hospital admission and length of stay, and utilization of home and community care and informal services. While none of the results will be generalizable beyond populations which have self-selected into home and community care, information even on that limited population will be welcomed for a variety of planning and cost estimation purposes. Availability of the channeling data tapes will be a boon to many researchers in long-term care.

CONCLUSIONS

Before channeling was undertaken, community care was hard to target and expensive, and it showed few outcome benefits; but channeling looked like it might be warranted on the basis of improvement in patient contentment and caregiver burden relief. After channeling, community care is still hard to target and expensive—and it does not appear to do much for contentment, life satisfaction, or caregivers that isn't very expensive and couldn't arguably be done less expensively through other means. Better strategies for targeting appear to exist and must still be tested. Although they are likely to produce small rather than large increments of improvement, they represent the application of epidemiologic and microcomputer methodologies to home care much as these methodologies have come to other aspects of the health care system. Cost-effectiveness still looms as a slight possibility if realistic cost caps can be implemented with effective utilization control. More creative ways of enhancing the likelihood of producing and measuring outcome benefits still need to be found. Outcome subgroups need to be better specified and their care plans more individually tailored to outcome goals.

If, as is appropriate, the policy focus must now shift to decisions on who is to get home care, for what purpose, and at what cost, much still needs to be done technically in deciding how to make home care more effective and efficient. And political decisions must be made that specify where the money will come from and what must be sacrificed to provide it.

Channeling helped clarify many of these issues. And, because channeling had large sample sizes and multiple demonstration sites, and was conducted as an excellent model of how to carry out complex social experimentation, we can agree more comfortably on what we know now. If channeling had to be done, the taxpayers can be thankful

that it was done by a group of federal officials and researchers who made the most of their mandate. That they were not able to answer all our questions—and indeed helped raise some new ones—is entirely to be expected and should not be held against them. In the tradition of the RAND National Health Insurance Experiment (funded by the same agency, the Department of Health and Human Services, Assistant Secretary for Planning and Evaluation), a group of high-quality researchers was competitively selected, well supported, and protected from the biasing taint of political or practitioner control over results. Liberal use was made of advisers from the research and practitioner communities. Critics were welcomed and listened to. Findings are being published in peer-reviewed scholarly journals and presented at national forums to avoid the problems of unreviewed and unused research findings.

If more can be expected of a research project, it may be—as the former project director has himself mused—that a midcourse correction perhaps should have been taken. Options for such a correction remain debatable. Most useful would have been methods of improved targeting together with major emphasis on length of stay review and other cost-cutting measures. But project staff argue that they could gauge the problem only too late to correct it or too late to wrestle the site staffs into accepting more stringent operating rules. This left only termination of the demonstration or a refocusing of the evaluation once it became clear that results were heading down deeply rutted paths. The evaluation did refocus to some extent (putting more emphasis on psychosocial outcomes, for example), but within the limits of a fixed intervention.

Realistically, midcourse correction is a lot to ask. Keeping a major social experiment on track is hard enough without being asked to change destinations halfway along the line.

The real tragedy will come if channeling's disappointing effects on institutionalization, outcome, and cost questions tempt policymakers to simply ignore the eggheads and go ahead and fund home and community care without better defining its appropriate mission, target population, and most efficient service packages. Indeed, the Medicaid home and community care waiver program passed in 1981 did just that, although the Health Care Financing Administration has kept the program tiny. If politicians make up their minds that their constituents want home and community care despite its limited measured benefits, they may indulge no further research—perhaps not wishing to be confused by the facts. But a substantial research agenda remains: demand for home care; efficient delivery; controlled utilization; improved

effectiveness; better targeting of patients at risk of institutionalization and with potential for improvement among carefully specified outcome subgroups; comparison of costs with alternative ways of producing equivalent benefits; effects of capitation; and systematic efforts to place a value on the small measured benefits of home care.

In the same sense that good research always leads to new questions, channeling, despite its contributions, has left an important agenda of unfinished research.

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