

Competitive bidding for home care under the channeling demonstration

by Jon B. Christianson

Competitive bidding is a relatively new strategy for setting rates and choosing providers for public medical care programs. In this article, the experience in competitive bidding by home health care providers and homemaker agencies in the National Long-Term Care Channeling Demonstration is described.

Particular attention is paid to contrasting approaches that select a single winning bidder with those that select multiple winning bidders for the same service. Results are discussed with respect to bid prices, characteristics of winning bidders, administrative demands, and service delivery.

Introduction

Competitive bidding is currently receiving attention as one strategy for setting rates and containing cost increases in Government medical care programs. In this regard, the Health Care Financing Administration has funded separate contracts to design competitive bidding demonstrations for home health care, clinical laboratory services, and durable medical equipment. For the most part, these design efforts have had to rely on past experiences with competitive bidding systems in such diverse areas as natural resource leasing, construction, and defense. However, some highly relevant evidence is now accumulating concerning competitive bidding for medical and social services as well (Christianson and Hillman, 1986; Iglehart, 1984; Melia et al., 1983; Paris, 1976; Schlesinger, Dorwart, and Pulice, 1986; Wedel, 1979). The purpose of this article is to describe one such experience—competitive bidding by home health care providers and homemaker agencies in the National Long-Term Care Channeling Demonstration.

Background

In September 1980, the National Long-Term Care Channeling Demonstration were initiated jointly by the Health Care Financing Administration, the Administration on Aging, and the Office of the Assistant Secretary for Planning and Evaluation of the Department of Health and Human Services (DHHS).¹ The demonstration, which took place over a period of 5 years, was intended to provide a rigorous test of comprehensive case management of community care as a way to contain the rapidly increasing costs of long-term care for the elderly while providing adequate care to those in need. Ten sites in 10 different States were selected to participate in channeling. Each of the channeling projects at the 10 sites was established as a department within an existing human service organization (typically an area

agency on aging or a private nonprofit service provider).

Five of the 10 projects employed what became known as the "basic case-management" model of channeling. Under this model, the channeling project assumed responsibility for helping clients gain access to needed services and for coordinating the services of multiple providers. A small amount of additional funding was made available to projects to fill gaps in existing programs. However, the basic model relied primarily on what was already available in each community, thus testing the premise that the major difficulties in the current system were problems of information and coordination and that they could therefore be solved largely through client-centered case management.

The remaining five projects adopted the case-management features of the basic model, but they also had access to pooled funds that allowed services to be allocated to elderly clients on the basis of need and appropriateness without being constrained by the eligibility requirements of specific categorical programs. Under this approach (the "financial control" model), case managers could authorize the amount, duration, and scope of services paid out of the funds pool, making available to clients a full range of community services. There were, however, limits imposed on average client expenditures as well as on expenditures for individual clients.

There usually were multiple providers available for most of the services required by channeling clients (e.g., home health agencies, homemaker and/or personal care agencies, delivered meals programs, and transportation companies). However, the majority of channeling projects adopted formal or informal procedures to designate a subset of these providers as channeling service providers, eligible to receive the funds controlled by channeling case managers.² Two basic projects (Baltimore, Md., and Middlesex County, N.J.) and three financial control projects (Miami, Fla., Cleveland, Ohio, and Philadelphia, Pa.) used some type of formal competitive bidding to select channeling service providers and to determine per-unit reimbursement rates. In general, there was

¹The description of the channeling demonstration that follows is taken largely from Kemper et al. (1986).

Reprint requests: Jon B. Christianson, Ph.D., Professor, Division of Health Services Research and Policy, School of Public Health, University of Minnesota, 420 Delaware Street SE., Box 729, Minneapolis, Minnesota 55455.

²Although two sites are contrasted in detail in this article, a complete description of the procedures used in all of the sites can be found in Chapter 9 of Carcagno et al. (1986).

relatively little published information on competitive bidding available to guide the channeling projects in the design and implementation of their bidding systems (Drew, 1984). As Hatry (1983) has observed, “. . . in the social services, most contracts are with nonprofit agencies, and there appears to be little competitive bidding.” Therefore, the channeling projects either adopted competitive procurement practices developed for quite different uses or incorporated various practices from other community agencies in developing their own approaches.

Typically, channeling project competitive bidding processes were initiated with a request for proposal (RFP) distributed to potential service providers in the community. Each RFP included a description of the channeling project, client characteristics, service category definitions, geographic boundaries for service delivery, and contract period to be covered by the bid. The elements of the contract pertaining to provider performance and monitoring, as well as provider reporting requirements, were described in varying detail. The RFP's usually contained quite specific descriptions of the format of the bid to be submitted, sometimes with accompanying bid sheets to be completed by the provider. Finally, RFP's described the considerations that would be important in selecting winning providers. At several of the sites, a bidders' conference was held following distribution of the RFP. At this conference, project representatives further clarified bidding procedures and responded to provider questions.

Some type of formal evaluation process followed bid submission at the sites. The first step in this process usually involved a prescreening of proposals for the purpose of rejecting bids that did not adhere to the specifications contained in the RFP. Accepted bids were reviewed, most often, by a committee using explicit criteria for the selection of winning bidders. This step in the bidding process was relatively straightforward in Cleveland and Baltimore, where the channeling projects were located in local government agencies and procurement regulations stipulated that the lowest acceptable bid be awarded a contract. It involved more complex trade-offs in Miami, Philadelphia, and Middlesex County, where reviewers also considered such bidder characteristics as past performance, quality of care, capacity to deliver services, and financial stability. In all five sites, the selection of winning bidders simultaneously determined reimbursement rates for services, because winning bidders were all reimbursed at the prices submitted in their bids.

The final step in the selection procedure was the signing of contracts with winning bidders. Specified in the contracts were the responsibilities of the channeling agency and of the provider in such areas as payment procedures, service delivery, and reporting. Also included were the penalties for contract noncompliance and, frequently, the requirement that the provider post a performance bond subject to forfeiture should noncompliance be established.

The exact nature of the bidding processes employed by the channeling projects, as well as the experiences of the projects with competitive bidding as a means of selecting providers and setting rates, varied. An appreciation of the reasons for these varying experiences can be obtained by contrasting in greater detail the use of competitive bidding procedures by the Cleveland and Miami financial control channeling projects.³

Cleveland channeling project

In Cleveland, the channeling project was a component of the Western Reserve Area Agency on Aging (WRAAA), a part of Cuyahoga County government. The WRAAA had existing contracts with private sector providers of some services (e.g., day maintenance care and home-delivered meals), and the County Welfare Department functioned as a service provider for others (e.g., adult foster care, companion services, emergency lodging, homemaker services, and transportation). The channeling project, because of its location in the WRAAA and the county government system, had access to these WRAAA and Welfare Department services. In fact, Title III providers (those under contract to the WRAAA) were encouraged by the WRAAA to provide services to channeling clients on a priority basis. However, the WRAAA did not have existing provider contracts for such important services as home health aides, skilled nursing care, physical therapy, occupational therapy, speech therapy, housekeeping, and chore services. Therefore, to establish contracts with providers of these services, the project conducted three rounds of competitive bidding defined over three different service groupings: (group 1) skilled nursing services, home health aides, and physical therapy; (group 2) occupational and speech therapy; and (group 3) homemaker and/or personal care, chore, and housekeeping services. The results are summarized in Tables 1-3, which contain a listing of bidding organizations and their bid prices.

In the first round, providers were selected for an initial 90-day period.⁴ The selection of group 1 and group 2 providers—skilled nursing care, home health aides, physical therapy, occupational therapy, and

³The information pertaining to competitive bidding in Miami and Cleveland was collected as part of the overall evaluation of the implementation and operation of the channeling demonstration projects (Carcagno et al., 1986). Interviews were conducted at both sites at two points in time during the demonstration. Respondents included channeling project staff, provider agency staff, local government officials, and host agency personnel. Copies of requests for proposals, submitted bids, bid evaluation instruments, and contracts were provided by the channeling projects. Monthly management reports submitted to the Department of Health and Human Services by the channeling projects also were used in the analysis.

⁴This limitation on the initial contract period was mandated by the Federal Government for all contracts with formal service providers at financial control sites.

speech therapy—was accomplished through a relatively informal proposal process. The advantage of this process to the channeling project was that its procedures were less rigid than a formal bidding process and it allowed the selection of more than one provider for each type of service. Using this flexibility, the project selected the Cleveland Visiting Nurses Association (VNA), a large, well-known nonprofit agency, to provide all types of skilled care, and the Medical Personnel Pool, a for-profit agency, to be an additional provider of skilled nursing care, home health aides, and physical therapy. The VNA contract was intended to provide reassurance to local nonprofit home health agencies concerned about the project's ultimate impact on home health care providers and the recent growth in the number of for-profit home health care agencies in the community. It also gave channeling case managers and their clients access to services generally regarded as high quality. The Medical Personnel Pool contract offered skilled nursing care and home health aides at a considerably lower price than the VNA. Thus, it provided an opportunity for the channeling project to evaluate its experience with a lower cost, for-profit provider over a limited time period.

In contrast to the informal process for skilled services procurement for the initial 90-day period, the county required a formal bidding process for group 3—homemaker and/or personal care, chore, and housekeeping services. In the first round of bidding, six organizations submitted bids for one or more of these services; the low bidder and contract awardee in all three categories was Medox, Inc., a for-profit firm. There was considerable variation in submitted bid prices, but the Medox bid was approximately \$1 less per hour for each service. The winning bidders served the entire channeling project catchment area.

The next round of bidding was to be carried out in September 1982, with contracts to begin on October 1 and to extend for 1 year. County government officials ruled that skilled nursing care, home health aide, and physical therapy contracts (group 1) would also have to be awarded through a formal bidding process at that time. This delayed development of bid specifications, and it necessitated an extension of initial provider contracts for 30 days. Bids were ultimately submitted on October 13 for the three different service groups. The channeling site was divided into three geographic areas for bidding purposes, and providers were permitted to bid on any combination of services and areas within each bid package. Five bidders submitted bids for group 1 services, with three bidding for all services (Table 1). VNA successfully retained its contract for physical therapy, and Medical Personnel Pool retained contracts for skilled nursing and home health care in all three geographic areas.

The selection of winning bidders from group 2 proved much more complicated (Table 2). The bid specifications prepared by the County Office of Budget and Management allowed providers to choose in-home or outpatient provision of therapy, but they

did not require that transportation costs for in-home provision be reported separately. As a result, the channeling project found it difficult to compare the different bid prices submitted by outpatient and in-home providers, and requested that the county reject all four bids and initiate a rebidding process. The existing contracts were extended while this was being accomplished. In the subsequent rebidding process, only one provider submitted a bid and that bid covered only speech therapy. A contract was awarded for 1 year, to begin on March 1, 1983. Another bidding process was initiated, this time for occupational therapy only. Two for-profit service providers participated, with a contract awarded to Staff Builders for 1 year to begin on April 1, 1983.

Although the problems in the bidding process for group 2 services caused some delays, the process as a whole was much less controversial than the awarding of contracts for group 3 (Table 3). The focal point of the group 3 bidding controversy involved whether or not the county's Minority Business Enterprise (MBE) requirement should be applied to the bidding process. This requirement, which was instituted in December 1981 and revised in August 1982, mandated that at least 15 percent of all county funds used to purchase services had to be dispensed to minority-owned businesses. Thus, if the bidding organizations were not 51-percent owned or controlled by minorities, they were required to subcontract with a minority business and pass through at least 15 percent of the funds received from the channeling contract to that business. The county maintained a list of approved minority contractors for a variety of services, but only one was approved for the categories of services covered by the channeling bidding process. (The channeling project had no input in determining which minority businesses were approved by the county.)

Although the MBE requirement technically was in effect for the first round of bidding, it was not enforced, and many providers believed that it would remain unenforced during the second round of bidding. This was not the case. In reviewing the bids for technical acceptability, county officials disqualified the three lowest bidders as unresponsive to the MBE requirement. Staff Builders was declared the lowest responsive bidder, because it had included in its bid submission an agreement with the lone certified MBE firm. Two of the losing bidders jointly filed suit against the county to prohibit the awarding of the contracts to Staff Builders. In a meeting with the County Board of Commissioners on October 25, they presented their case, arguing that the certified MBE firm was not certified as a health care provider and, therefore, was not qualified to deliver services; and that the MBE firm was essentially in a monopoly position and the county action therefore represented unfair "steering."

Because of the questions raised at this meeting, the awards were withdrawn and the channeling project was given the responsibility to determine if the MBE firm met the technical specifications for participation. The project found that the firm did have previous

experience in the provision of chore and housekeeping services, but not in the provision of personal care. However, Staff Builders assured the channeling project that it would provide supervision and training for MBE employees engaged in personal care. With these assurances, the project recommended to the board that awards be made to Staff Builders in all three categories. The board accepted this recommendation, and the suit filed by the losing bidders, although upheld by the Ohio State Supreme Court, was ultimately overturned in Federal court. The resolution of this controversy necessitated that contract initiation be delayed further until December 1, 1982, with contracts to expire at the end of 1 year.

The third round of bidding (October 1983) took place with little controversy for groups 1 and 2, but again with some complications for group 3. With respect to group 1 services, there were no nonprofit bidders. VNA declined to participate in the bidding process because it believed, based on the bid prices of the second round, that it would not be able to submit a competitive bid price. Medical Personnel Pool retained its contract for home health aides but lost its skilled nursing contract to Staff Builders, which also won the channeling contract for physical therapy. Interestingly, contracts were not awarded to the lowest bidder in the categories of skilled nursing and

home health aides. Superior Care submitted the lowest priced bids in both categories, but did not meet contractual provisions for supervision of aides and, therefore, did not pass the county's technical review.

For group 3 services, Superior Care was the lowest bidder for homemaker/personal care, but again it failed to pass the technical review of bids. In this instance, the county held that Superior Care erred in its calculation of the dollars it proposed to pass through to an MBE subcontractor and, consequently, it was short of the required 15-percent figure. Superior Care filed a formal complaint with the County Board of Commissioners concerning its rejected bid, but the Board ruled against the complaint. The contracts for chore and housekeeping services in the third round were awarded to a new bidder, Jones Janitorial, which was a 100-percent minority-owned firm.

From the standpoint of channeling project administrators, the county-mandated competitive bidding process produced decidedly mixed results. The advantages of the process were several. It did appear to keep unit prices at low levels, particularly in comparison with the rates charged by nonprofit agencies. For-profit providers competed aggressively for channeling contracts, ultimately driving out the

Table 1

Outcomes of the competitive bidding process in Cleveland's bidding organizations and bid prices, by date of bidding round, providers, and group 1 services

Provider and group 1 service	June-October 1982 ¹	November 1982-September 1983	October 1983-September 1984
		Bid price	
Visiting Nurses Association			
Skilled nursing service	\$32.00(W)	\$30.00	No bid
Home health aide	13.92(W)	13.92	No bid
Physical therapy	32.00(W)	30.00(W)	No bid
Medical Personnel Pool			
Skilled nursing service	15.45(W)	17.75(W)	\$23.98
Home health aide	7.60(W)	8.60(W)	7.98(W)
Physical therapy	29.00(W)	37.50	No bid
Staff Builders			
Skilled nursing service	50.00	27.95	17.33(W)
Home health aide	20.00	8.96	8.19
Physical therapy	No bid	No bid	29.57(W)
Comcare			
Skilled nursing service	No bid	55.51	No bid
Home health aide	No bid	8.68	No bid
Physical therapy	No bid	54.37	No bid
Lemar Associates			
Skilled nursing service	No bid	No bid	No bid
Home health aide	No bid	No bid	No bid
Physical therapy	No bid	36.00	No bid
Superior Care			
Skilled nursing service	No bid	No bid	15.50
Home health aide	No bid	No bid	6.50
Physical therapy	No bid	No bid	No bid

¹In the first round, for skilled services, a proposal process was used rather than a formal bidding process, so that multiple contract awards could be made.
NOTE: (W) indicates a winning bid.

Table 2

Outcomes of the competitive bidding process in Cleveland's bidding organizations and bid prices, by date of bidding round, providers, and group 2 services

Provider and group 2 service	June 1982 ¹	October 1982 ²	February 1983	April 1983 ³
	Bid price			
Visiting Nurses Association				
Occupational therapy	\$52.00(W)	No bid	No bid	No bid
Speech therapy	52.00(W)	No bid	No bid	No bid
Comcare				
Occupational therapy	No bid	\$55.42	No bid	No bid
Speech therapy	No bid	No bid	No bid	No bid
Medical Personnel Pool				
Occupational therapy	No bid	39.00	No bid	\$41.35
Speech therapy	No bid	No bid	No bid	No bid
Cleveland Metro General/Highland View Hospital				
Occupational therapy	No bid	No bid	No bid	No bid
Speech therapy	No bid	20.00(NR)	No bid	No bid
Cleveland Hearing and Speech Center				
Occupational therapy	No bid	No bid	No bid	No bid
Speech therapy	No bid	36.00	\$30.00(W)	No bid
Staff Builders				
Occupational therapy	No bid	No bid	No bid	38.88(W)
Speech therapy	No bid	No bid	No bid	No bid

¹A proposal process was used rather than a formal bidding process.

²All bids on this round were rejected because of the noncomparability of the bids submitted by in-home and outpatient providers.

³Bids were solicited for occupational therapy only.

⁴Bidder did not submit bid prices in all three geographical areas.

NOTE: (W) indicates a winning bid, and (NR) indicates a bid that was judged nonresponsive to equal employment opportunity requirements.

seemingly more expensive nonprofits.⁵ Although submitted bid prices showed substantial variation in all areas except occupational and speech therapy during the first two rounds of bidding, much of this variation had been eliminated by the third round. In part, this reflects learning by the bidders. For instance, one agency indicated that, in the first round, it was concerned that its Medicare reimbursement rate might be affected by its channeling bid and, consequently, it simply submitted its Medicare rate. When it saw the other bids, it realized that it would have to ignore this possibility in order to compete effectively in subsequent rounds of bidding. In addition, the bidders learned the range of bid prices that stood a reasonable chance of being successful from the initial rounds of bidding. Agencies that could not compete profitably at these levels simply did not bother to submit bids in the third round.

There were accusations on the part of nonprofit providers that the intense competition among for-profit providers resulted in bids that were below actual costs, particularly in the case of local agencies that were part of national firms. It was argued that these local agencies were being subsidized by national headquarters to assure that they would win channeling contracts. These contracts presumably would be useful

in providing visibility and a track record for the for-profits as participants in a prestigious national demonstration. In essence, such losses could be viewed as advertising that would pay off in future contracts with other government bodies. Although the local agencies affiliated with national for-profit firms denied that their bids were subsidized, many admitted to being under pressure from national headquarters to secure channeling contracts. Whatever the motivation of these for-profit firms, they clearly were able to underbid the nonprofit firms.

The selection of only one winning bidder, as required by the county, also proved to have some advantages in day-to-day provider relations. Because they worked with the same provider representatives on a continuous basis, channeling administrators and case managers were able, in many cases, to develop effective relationships that facilitated the timely resolution of mutual problems. Because channeling dollars were concentrated on relatively few service providers, channeling contracts usually constituted a major portion of provider revenues. This also created incentives for provider cooperation with case managers and responsiveness to channeling project concerns about performance. Finally, the bidding process required that providers post a performance bond when signing their contracts; they risked losing this money if they were not able to perform to contract specifications. This also enhanced the responsiveness of winning bidders, according to Cleveland project personnel.

⁵The nonprofit firms argued that direct price comparisons were not really appropriate. They believed that their personnel were more experienced and better trained and supervised and that, therefore, they delivered a substantially different and largely superior product than their for-profit competitors.

Table 3

Outcomes of the competitive bidding process in Cleveland's bidding organizations and bid prices, by date of bidding round, providers, and group 3 services

Provider and group 3 service	June-October 1982	November 1982-September 1983	October 1983-September 1984
		Bid price	
Medox			
Homemaker and/or personal care	\$5.42W(NR)	\$5.33(NR)	\$5.80
Chore	5.41W(NR)	5.30(NR)	6.00
Housekeeping	5.33W(NR)	5.30(NR)	6.00
Center for Human Services			
Homemaker and/or personal care	13.92	No bid	No bid
Chore	13.92	No bid	No bid
Housekeeping	12.30	No bid	No bid
Quality Care			
Homemaker and/or personal care	6.40	5.75	5.75
Chore	6.40	5.75	6.40
Housekeeping	6.40	5.75	5.25
Upjohn			
Homemaker and/or personal care	3.84	No bid	No bid
Chore	No bid	No bid	No bid
Housekeeping	23.84	No bid	No bid
Medical Personnel Pool¹			
Homemaker and/or personal care	6.95	7.30	5.88
Chore	No bid	No bid	No bid
Housekeeping	6.95	7.01	No bid
Eastside Social and Vocational Center			
Homemaker and/or personal care	No bid	No bid	No bid
Chore	13.50	No bid	No bid
Housekeeping	10.05	No bid	No bid
Murtis H. Taylor Multi-service Center¹			
Homemaker and/or personal care	No bid	11.69	No bid
Chore	No bid	11.69	No bid
Housekeeping	No bid	11.69	No bid
Staff Builders			
Homemaker and/or personal care	No bid	5.83(W)	5.39(W)
Chore	No bid	6.48(W)	6.02
Housekeeping	No bid	5.70(W)	5.22
Olsen Health Care Services			
Homemaker and/or personal care	No bid	5.75	5.89
Chore	No bid	No bid	6.48
Housekeeping	No bid	No bid	5.79
Comcare¹			
Homemaker and/or personal care	No bid	6.95(NR)	No bid
Chore	No bid	No bid	No bid
Housekeeping	No bid	No bid	No bid
Quality Care			
Homemaker and/or personal care	No bid	5.75(NR)	5.75
Chore	No bid	5.75(NR)	6.40
Housekeeping	No bid	5.75(NR)	5.25
Hughes Janitorial²			
Homemaker and/or personal care	No bid	No bid	No bid
Chore	No bid	\$13.00	No bid
Housekeeping	No bid	No bid	No bid
Kelly Health Care			
Homemaker and/or personal care	No bid	No bid	\$5.86
Chore	No bid	No bid	5.86
Housekeeping	No bid	No bid	5.86
Superior Care			
Homemaker and/or personal care	No bid	No bid	5.38
Chore	No bid	No bid	6.14
Housekeeping	No bid	No bid	6.14

See footnotes at end of table.

Table 3—Continued

Outcomes of the competitive bidding process in Cleveland's bidding organizations and bid prices, by date of bidding round, providers, and group 3 services

Provider and group 3 service	June-October 1982	November 1982-September 1983	October 1983-September 1984
	Bid price		
Durah Realty and Development			
Homemaker and/or personal care	No bid	No bid	6.80
Chore	No bid	No bid	8.00
Housekeeping	No bid	No bid	7.00
Jones Janitorial			
Homemaker and/or personal care	No bid	No bid	No bid
Chore	No bid	No bid	4.65(W)
Housekeeping	No bid	No bid	4.65(W)
Sar-Louis Health Care Services			
Homemaker and/or personal care	No bid	No bid	5.75
Chore	No bid	No bid	5.95
Housekeeping	No bid	No bid	5.60

¹Indicates bidders that did not submit bids in all three geographic areas. Where bids were submitted in only two areas and bid prices differed, the average of the two bid prices was entered in the table. This occurred for the Medical Personnel Pool homemaker bid in the third round of bidding.

²Hughes submitted bids of \$14.00 for area A, \$13.00 for area B, and \$12.00 for area C.

NOTE: (W) indicates a winning bid, and (NR) indicates a bid that was judged nonresponsive to equal employment opportunity requirements.

Several disadvantages to the county-mandated bidding process in Cleveland were also reported. For instance, channeling project personnel would have preferred a bidding process where criteria other than price were used in selecting winning bidders. In principle, this would have allowed the project to avoid contracting with specific bidders who were believed to provide inferior quality services. It could also have stimulated stronger bidder competition in the service provision and service quality dimensions. A second problem associated with the bidding process in Cleveland was the delay that it imposed on the project in contracting with providers. In part, this resulted from the relatively formal and inflexible structure of the selection process imposed on the project by the county. This process limited the ability of the project to respond to disgruntled losing bidders in an informal way and it invited formal provider protests, either through the courts or through local political channels. The time required by the county to respond to these protests delayed the contracting process.

A third drawback was related to the problems encountered in accomplishing the transition from an existing contractor to a new winning bidder. Because only one winning bidder was allowed for home health aides, for instance, all channeling clients using Provider A's services needed to be transferred to Provider B on the day that Provider A's contract expired. This caused severe logistical problems for all parties. The cooperation of Provider A, the losing bidder, both with the project and with the winning bidder, Provider B, in supplying current, accurate information on clients was crucial in accomplishing a smooth transition. Provider B faced the difficult challenge of recruiting enough staff to serve an influx of channeling clients that sometimes doubled or tripled existing agency caseloads. In Cleveland, this recruitment needed to be accomplished in a 2- to 4-

week period. Finally, the transition period placed a burden on channeling project staff. Because all written service orders for clients served by Provider A needed to be rewritten for Provider B, project staff were forced to work long hours on evenings and weekends prior to the transition.

Miami channeling project

The host agency for the Miami channeling project was Miami Jewish Home and Hospital for the Aged (MJHHA), a private, nonprofit organization. MJHHA was not a major provider of community-based services, nor did it have existing contracts with providers of these services. Because of its location in a private agency, the Miami channeling project, unlike Cleveland, was able to implement a competitive bidding system of its own design.

With the assistance of host agency staff and the project's advisory committee, personnel began developing provider contracts and a strategy for selecting providers in December 1981. By April 1982, contracts had been drafted, service specifications and proposal formats developed, and an evaluation team recruited. Notice of the initial bidding process was placed in local newspapers, and more than 200 providers were contacted through direct mailing, with 125 proposal packages distributed and 72 completed proposals returned. The channeling project staff did an initial review of all proposals for completeness and adherence to the provisions of the RFP. A recommendation packet was prepared for the proposal review committee that contained, among other items, a comparative bid price sheet for each service. The final evaluation of the bids then was completed by the evaluation team. The evaluation protocol took into account the geographic coverage, service capacity, and perceived quality of providers as well as the submitted

bid price. (The RFP and evaluation processes were repeated in each subsequent round of bidding.)

Provider participation in the bidding process during the initial round varied across services. For example, in the area of day health care and day maintenance care there were only two bidders, and both bids were accepted in order to meet the project's geographical coverage and service capacity needs. Only providers receiving Title III dollars were invited to bid for home-delivered meals, and all their bids were accepted. (By instituting this policy, the channeling project guaranteed that the meals received by clients would meet Title III standards.) There were also few bidders in the areas of transportation and adaptive and/or assistive equipment.

However, for the services purchased most frequently by channeling (skilled care, homemaker and/or personal care, housekeeping), there were multiple bidders competing for channeling contracts. Seven providers submitted bids in four of the five skilled care areas. All were Medicare certified and had sufficient capacity to accept channeling clients, so the two lowest bid prices were accepted (Table 4). Two bidders out of eight in the area of homemaker and/or personal care (Table 5) and two out of nine in housekeeping (Table 6) were chosen; these were also the organizations submitting the lowest rates. The submitted rates varied considerably for these less skilled services, ranging from \$5.42 to \$15.50 for homemaker and/or personal care (Table 5). There was much less variation, in percentage terms, for skilled nursing and therapy bids. According to the MJHHA agency and channeling project staff, providers of skilled care tended to submit bids near their prevailing Medicare rates. All bidders were concerned that submission of substantially lower bid prices would jeopardize the continuation of these rates.

The second round of bidding was accomplished during August and September 1982 and was distinguished by two decisions on the part of the channeling project. First, the project offered existing contract holders the option of renewing their contracts at the same price, rather than participating in the bidding process again. If they chose to renew, however, they were required to participate in the May 1983 bidding process, assuming they wished to continue their channeling contracts at that time. Of the initial 22 contractors, 21 renewed their contracts rather than participate in the September 1982 bidding process. As a result, there were far fewer bids submitted in the second round. New contractors were added when their bid prices were significantly lower than those of renewal contractors. Also, in the case of homemaker and/or personal care, new providers were added because the two first-round providers could not supply enough personnel to serve Spanish-speaking clients.

A second important aspect of the September 1982 round of bidding was a decision by the channeling project to play an active technical assistance role in the development of bids, in part to encourage nonprofit providers to participate in the bidding

process. One result was that a nonprofit agency was added to the group of channeling service providers, after submitting the lowest priced bid in the areas of physical, occupational, and speech therapy (Table 5).

A third round of bidding took place in May 1983 for contracts to begin on July 1 and extend for 1 year. A new provider of skilled care was awarded a contract on the basis of its low bid for skilled nursing services, and the original contractors, who rebid at this time, were also awarded contracts. Two new providers were added in the areas of homemaker and/or personal care and housekeeping. The new bidders receiving contracts usually offered lower prices than at least some of the previous contractors. In June 1984, negotiations took place to extend all third-round contracts through March 31, 1985, with the objective of keeping rate increases consistent with increases in the level of the local consumer price index. Negotiations were successfully completed with all but one contracting provider agency.

The design of the Miami channeling project bidding process differed from the bidding system mandated by county government for the Cleveland project in many respects; however, one difference seems particularly important. In Cleveland, the county required that the channeling project contract with only the lowest priced bidder, thus restricting competition among providers to the bidding period. Once it had awarded a contract to a winning provider, the Cleveland channeling project was forced to depend on formal contract enforcement activities and the threat that poor performance would influence provider selection in subsequent rounds of bidding to maintain adequate levels of performance. In Miami, competition among bidders occurred at two points: during the submission of bids and at the time that services were initiated at the client level. In effect, the bidding process in Miami was only the first step in the ultimate selection of the providers to be used by channeling clients. It was employed to screen out providers that submitted rates significantly higher than those of their competitors or that were perceived as incapable of delivering adequate services to channeling clients. Case managers were then permitted to choose among the remaining bidders on a client-by-client basis. Their choice depended not only on price but also on the geographic availability of services and the experience of the case manager with the provider. Channeling case managers could, and often did, simply stop using a winning bidder when unhappy with the services it had provided in the past to their clients. Thus, winning bidders were forced to continue to compete for clients after rates had been established through the bidding process, with the competition occurring most frequently over the quality and timeliness of service delivery.

This approach also minimized the discontinuity in service delivery that occurred when new winning bidders were chosen in Cleveland and clients needed to be switched from one provider to another in a very short time period. In Miami, existing contractors whose rates or services were not competitive with new

Table 4

Outcomes of the competitive bidding process in Miami's bidding organizations and bid prices, by date of bidding round, providers, and type of service

Provider and type of service	May-September 1982	October 1982-June 1983	July 1983-June 1984	July 1984-March 1985 [†]
	Bid price			
Florida Home Health Services				
Skilled nursing service	\$36.94	\$36.94(R)	\$39.00(W)	\$39.00
Home health aide	17.74(W)	17.74(R)	18.00(W)	18.00
Physical therapy	43.94(W)	43.94(R)	45.00(W)	45.00
Occupational therapy	No bid	40.29(W)	42.00(W)	No bid
Speech therapy	40.35(W)	40.35(R)	42.00(W)	No bid
Complete Care				
Skilled nursing service	33.50(W)	33.50(R)	35.00(W)	36.75
Home health aide	14.00(W)	14.00(R)	17.50(W)	18.35
Physical therapy	38.50(W)	38.50(R)	43.00(W)	45.00
Occupational therapy	No bid	36.00(W)	43.00(W)	45.00
Speech therapy	No bid	36.00(W)	43.00(W)	45.00
Visiting Nurses Association				
Skilled nursing service	No bid	34.69(W)	34.69(R)	36.39
Home health aide	No bid	No bid	10.10(R)	No bid
Physical therapy	No bid	29.91(W)	29.91(R)	31.41
Occupational therapy	No bid	29.92(W)	29.92(R)	No bid
Speech therapy	No bid	29.92(W)	29.92(R)	No bid
Upjohn				
Skilled nursing service	44.00	No bid	No bid	NA
Home health aide	35.00	No bid	No bid	NA
Physical therapy	50.00	No bid	No bid	NA
Occupational therapy	49.00	No bid	No bid	NA
Speech therapy	47.00	No bid	No bid	NA
Total Care				
Skilled nursing service	No bid	No bid	33.50(W)	33.50
Home health aide	No bid	No bid	19.00(W)	10.00
Physical therapy	No bid	No bid	42.00(W)	42.00
Occupational therapy	No bid	No bid	42.00(W)	42.00
Speech therapy	No bid	No bid	42.00(W)	No bid
Florida Health Professional Services				
Skilled nursing service	44.00	No bid	No bid	NA
Home health aide	38.00	No bid	No bid	NA
Physical therapy	45.00	No bid	No bid	NA
Occupational therapy	45.00	No bid	No bid	NA
Speech therapy	45.00	No bid	No bid	NA
South Dade Home Health Services				
Skilled nursing service	38.74	No bid	No bid	NA
Home health aide	No bid	No bid	No bid	NA
Physical therapy	41.64	No bid	No bid	NA
Occupational therapy	41.64	No bid	No bid	NA
Speech therapy	41.64	No bid	No bid	NA
Suncoast Home Health Agency				
Skilled nursing service	45.00	No bid	No bid	NA
Home health aide	40.00	No bid	No bid	NA
Physical therapy	50.00	No bid	No bid	NA
Occupational therapy	50.00	No bid	No bid	NA
Speech therapy	50.00	No bid	No bid	NA
Home Medical Services				
Skilled nursing service	\$42.00	No bid	No bid	NA
Home health aide	42.00	No bid	No bid	NA
Physical therapy	42.00	No bid	No bid	NA
Occupational therapy	42.00	No bid	No bid	NA
Speech therapy	42.00	No bid	No bid	NA
Westland Physical Therapy				
Skilled nursing service	No bid	No bid	No bid	NA
Home health aide	No bid	No bid	No bid	NA
Physical therapy	35.00	No bid	No bid	NA
Occupational therapy	No bid	No bid	No bid	NA
Speech therapy	No bid	No bid	No bid	NA

See footnote at end of table.

Table 4—Continued

Outcomes of the competitive bidding process in Miami's bidding organizations and bid prices, by date of bidding round, providers, and type of service

Provider and type of service	May-September 1982	October 1982-June 1983	July 1983-June 1984	July 1984-March 1985 ¹
	Bid price			
American Health Care				
Skilled nursing service	No bid	No bid	\$34.50	NA
Home health aide	No bid	No bid	15.50	NA
Physical therapy	No bid	No bid	No bid	NA
Occupational therapy	No bid	No bid	No bid	NA
Speech therapy	No bid	No bid	No bid	NA

¹ Rates were negotiated with existing contract providers for the last part of the channeling demonstration. No bidding process was held for new providers.
NOTE: (W) indicates a winning bid, and (R) indicates a contract renewal.

Table 5

Outcomes of the competitive bidding process in Miami's bidding organizations and bid prices, by date of bidding round and providers of homemaker and/or personal care

Provider	May-September 1982	October 1982-June 1983	July 1983-June 1984	July 1984-March 1985 ¹
	Bid price			
Superior Care	\$5.95(W)	\$5.95(R)	\$5.95(W)	\$5.95(W)
Medox	5.42(W)	5.42(R)	5.75(W)	5.75(W)
Upjohn	9.90	6.50(W)	6.50(R)	6.50(W)
All Dade Home Care	6.50	5.75(W)	5.75(R)	6.04(W)
Florida's Complete Home Services	6.85	No bid	No bid	NA
Temporary Nursing Service	6.75	No bid	6.50	NA
Dade County Elderly Services	8.87	No bid	No bid	NA
Home Medical Services, Inc.	15.50	No bid	No bid	NA
Olsten	No bid	6.05(W)	6.05(R)	6.20(W)
Staff Builders	No bid	No bid	6.27(W)	6.27(W)
Best Care	No bid	No bid	6.15(W)	Nonrenewal
At Home Nursing Services	No bid	No bid	6.45	NA
Western Medical	No bid	No bid	6.45	NA
Kimberly Nurses	No bid	No bid	6.70	NA
Efficient Registry	No bid	No bid	6.25	NA
Medical Personnel Pool	No bid	No bid	5.63	NA

¹ Rates were negotiated with existing contract providers for the last part of the channeling demonstration. No bidding process was held for new providers.
NOTE: (W) indicates a winning bid, and (R) indicates a contract renewal.

Table 6

Outcomes of the competitive bidding process in Miami's bidding organizations and bid prices, by date of bidding round and provider of housekeeping services

Provider	May-September 1982	October 1982-June 1983	July 1983-June 1984	July 1984-March 1985 ¹
	Bid price			
Superior Care	\$5.95(W)	\$5.95(R)	\$5.95(W)	\$5.95(W)
Medox	5.42(W)	5.42(R)	5.75(W)	5.75(W)
Upjohn	9.90	6.50(W)	6.50(R)	6.50(W)
All Dade Home Care	6.50	5.75(W)	5.75(R)	6.04(W)
Kimberly Nurses	7.75	No bid	6.42	—
Cimplex Cleaning	7.97	No bid	No bid	NA
Dade County Elderly Services	8.87	No bid	No bid	NA
Ace Maids, Inc.	7.00	No bid	No bid	NA
Medical Personnel Pool	15.50	No bid	5.63	NA
Staff Builders	No bid	No bid	6.27(W)	6.27(R)
Best Care	No bid	No bid	6.15(W)	Nonrenewal
Western Medical	No bid	No bid	6.45	NA
Temporary Nursing Service	No bid	No bid	6.25	NA
At Home Nursing Services	No bid	No bid	6.45	NA

¹ Rates were negotiated with existing contract providers for the last part of the channeling demonstration. No bidding process was held for new providers.
NOTE: (W) indicates a winning bid, and (R) indicates a contract renewal.

winning bidders could be phased out over time by directing new service orders to other providers. The flexibility that this aspect of bidding system design gave case managers was viewed favorably by them and by administrators of the Miami channeling project.

On the negative side, the Miami approach to bidding may have resulted in a somewhat less price-competitive bidding process than existed in Cleveland. Miami providers were competing for the chance to provide services to some unknown number of channeling clients, whereas in Cleveland the winning bidder received all the channeling project service orders. The guaranteed service volume in Cleveland may have been one factor leading skilled care providers to bid below their Medicare rates, whereas providers of the same services in Miami were willing to offer only marginal discounts from Medicare prices.

Finally, the dispersal of channeling clients among a number of providers in Miami may have reduced the incentives for contract compliance on the part of providers because each individual provider received fewer clients. This was particularly true for skilled care, where channeling clients typically represented a relatively small portion of the total number of Medicare clients for a given agency. However, channeling clients sometimes did represent a significant portion of the caseloads of winning bidders for other types of care. For example, All Dade Home Care, a contractor for homemaker and/or personal care and housekeeping services, reported that its channeling clients constituted about one-quarter of its total caseload. It seems likely that this is a large enough portion of a provider's total caseload to ensure responsiveness to channeling project concerns.

Discussion

The contrast in channeling project bidding experiences as described in this article raises several interesting issues. For instance, were lower service prices associated with particular bidding system characteristics? Did different approaches lead to variation in the characteristics of provider agencies selected as winning contractors? Were different demands placed on project case managers and administrative personnel? How did the characteristics of bidding systems affect subsequent service delivery?

Drawing inferences about a possible causal relationship between elements of bidding system design and channeling project payments for services is fraught with pitfalls. In particular, differences in general price levels and in market conditions for community-based long-term care can cause variations in average payments across channeling projects that are impossible to disentangle, in any statistically rigorous sense for a sample this small, from variation induced by payment approaches. However, there are some data available that do help to place channeling project payment levels in a market context.

The Bureau of Labor Statistics collected data on hourly wage rates in major metropolitan areas for a variety of hospital employment classifications in October 1981. These data are presented in Table 7 for selected classifications that correspond roughly to the categories of services reimbursed by financial control channeling projects. As indicated in Table 7, at the time the channeling demonstration was initiated, Cleveland was a relatively high hospital wage area for most relevant personnel classifications (and, particularly, skilled care) and Rensselaer County was a relatively low wage area. Miami was a low wage site for homemaker and home health aide services, but it paid relatively high wages for physical therapy and skilled nursing care. Greater Lynn and Philadelphia experienced similar wage levels in many of the categories in Table 7.

The data in Table 7 provide a perspective for examining the average payment rates in the financial control channeling projects, as abstracted from their monthly automated reports (Table 8). These data suggest that the use of "competitive bidding" per se was not necessarily associated with below average rates at financial control sites. The Miami and Philadelphia projects employed competitive bidding systems, but they paid the highest average amounts for skilled nursing services and physical therapy from April 1982 through April 1984. Miami also paid substantially higher average rates for home health aides during this period.

The financial control channeling projects, where rates were established by a regulatory authority, purchased skilled nursing services, physical therapy, and home health aides at or below the average prices paid by the Miami and Philadelphia projects. In Rensselaer County, where the channeling projects were paid rates established by Medicaid, relatively low prices were paid for homemakers as well. In contrast, the Cleveland channeling project, which utilized competitive bidding, paid the lowest average prices for home health aides, homemakers, and skilled nursing services, and the second lowest for physical therapy. Furthermore, the average price paid in all four categories declined in Cleveland during the second year, but it increased in the other four sites.

The data in Table 7 do not suggest that relatively low wage levels in Cleveland were an important factor in explaining the low rates generated by Cleveland's competitive bidding system relative to the rates obtained through the Miami and Philadelphia systems. However, as noted previously, there are important differences in the design of the bidding systems used by Cleveland, compared with those used by Miami and Philadelphia, that could explain the direction of the observed differences in average payments. In particular, the Cleveland channeling project was mandated to accept the lowest priced, technically acceptable bid. In Miami and Philadelphia, multiple winning bidders were possible, and the channeling projects had greater latitude to consider nonprice features in awarding contracts.

Table 7
Average hourly earnings of hospital employees in sites with regulated rates and sites with competitively bid rates, by selected employment classifications: October 1981

Employment classification	Sites with regulated rates		Sites with competitively bid rates		
	Rensselaer County, ¹ N.Y.	Greater Lynn, ¹ Mass.	Miami, ² Fla.	Phila- delphia, Pa.	Cleve- land, Ohio
Average hourly earnings					
Homemaker					
Cleaner	\$4.43 (4.18)	\$5.37 (4.94)	\$4.35 NA	\$5.95 (5.41)	\$5.48 (5.14)
Food service helper	4.42 (4.13)	5.36 (4.63)	4.29 NA	5.87 (5.55)	5.33 (5.07)
Laundry worker	4.45 (4.26)	5.49 (4.66)	4.44 NA	5.90 (5.36)	5.83 (4.66)
Home health aides					
Nursing aide	4.56 (4.48)	5.73 (5.36)	4.76 NA	6.02 (5.81)	5.83 (5.49)
Licensed practical nurse	5.95 (5.83)	7.33 (7.21)	6.90 NA	6.88 (6.84)	7.24 (6.87)
Physical therapy	8.48 (8.85)	8.44 (9.02)	9.80 NA	9.10 (10.66)	9.75 (9.45)
Skilled nursing services					
General duty nurse	7.69 (7.74)	9.09 (9.31)	9.59 NA	9.07 (8.97)	10.05 (9.84)

¹Data provided for Buffalo, New York, are used as a proxy for Rensselaer County; Boston data are used as a proxy for Greater Lynn.

²No data were reported for averages for all hospitals (public and private) in Miami for other full-time or part-time employees.

NOTES: Primary entries in the table pertain to average hourly rates for full-time employees in private hospitals. In parentheses, rates are provided for part-time employees in all hospitals (public and private). Comparable data were not available for part-time employees in private hospitals only. Employment classifications shown are comparable hospital classifications.

SOURCE: Bureau of Labor Statistics: *Industry Wage Survey: Hospitals*, Bulletin 2204. U.S. Department of Labor, Aug. 1984.

Table 8
Average payments per hour in the financial control model sites with regulated rates and those with competitively bid rates, by site and type of service: April 1982-April 1984

Type of service and period ¹	Sites with regulated rates		Sites with competitively bid rates			Average ²
	Rensselaer County, N.Y.	Greater Lynn, Mass.	Miami, Fla.	Phila- delphia, Pa.	Cleve- land, Ohio	
Average payments per hour						
Homemaker						
April 1982-83	\$6.10	\$6.45	\$5.82	\$6.27	\$5.87	\$6.14
April 1983-84	6.82	7.27	6.03	6.35	5.20	6.26
April 1982-84	6.68	7.03	5.98	6.32	5.72	6.25
Home health aide						
April 1982-83	10.83	10.69	14.04	10.51	8.92	9.48
April 1983-84	12.13	10.76	17.88	11.48	7.47	9.06
April 1982-84	11.47	10.75	15.96	11.19	7.94	9.19
Physical therapy						
April 1982-83	36.13	25.04	36.32	41.50	30.15	36.31
April 1983-84	36.32	28.79	40.07	42.94	29.68	38.14
April 1982-84	36.26	27.95	39.10	42.43	29.94	37.56
Skilled nursing services						
April 1982-83	27.05	26.73	29.92	36.02	20.80	30.42
April 1983-84	30.82	32.13	35.36	40.36	18.64	33.65
April 1982-84	29.58	30.93	35.22	39.25	19.44	32.79

¹ Because of differences in the implementation of automated data reporting, Cleveland channeling project figures for the second period pertain to August 1983 rather than April 1983 and May 1984 rather than April 1984.

² Averages are calculated by weighting by the number of units of service provided at each site. All average payments per unit were calculated based on data provided in the Services Fixed Budget Report filed monthly by financial control projects.

Under these circumstances, it seems reasonable to hypothesize that stronger incentives for price competition existed in the Cleveland bidding approach, and these incentives contributed to the relatively low per-unit payments there.⁶ Conversely, providers in Miami and Philadelphia were competing for a smaller number of clients and therefore had somewhat weaker incentives to be price competitive, given the existing uncertainty about how their bids would affect Medicare reimbursement rates. The resulting data on payment rates (Table 8) strongly suggest that the use of competitive bidding is not enough by itself to guarantee lower than average prices.

Based on the reports of both channeling project staff and providers, the channeling experience with competitive bidding can shed some light on the relationship between provider selection procedures and the characteristics of providers who are selected as winning bidders. For-profit home health and homemaker agencies tended to be successful in competitive bidding processes when price was the dominant selection criterion. At the beginning of the demonstration, both the Cleveland and Baltimore projects negotiated agreements with well-known, established nonprofit providers of care. When they instituted their competitive bidding systems, for-profit providers replaced these prior contract holders. In some cases, the winning for-profit agencies were relatively unknown to channeling project staff. In Cleveland, the number of nonprofit agencies participating in the bidding process dwindled in each round of bidding, reportedly because the higher costs of these agencies restricted their ability to compete effectively on the basis of price. For-profit firms affiliated with national organizations seemed to be particularly successful in securing contracts in Cleveland. In sites where multiple winning bidders were possible (Philadelphia, Miami, Middlesex County) the set of winning bidders included at least some of the larger, nonprofit providers of care with historical roots in their communities.

It is also possible to draw conclusions concerning the relationship between the nature of the bidding system employed and the resource demands placed on channeling project staff. It is recognized in the literature on formal contracting for services that "contracting entails substantial administrative costs" and that "the size of these costs has seldom been identified" (Hatry, 1983) when considering bidding system options. This general observation seems well supported by the experience of all of the channeling projects that used competitive bidding. Managing a formal bidding process proved an extremely time-intensive activity, requiring substantial ongoing input

from senior channeling project management. At some sites, legal complications arose with respect to contract awards that demanded further project resources to resolve. Administrative demands were greatest, however, at sites where single winning bidders were selected. At these sites, case managers and clerical staff were required to revise care plans, rewrite service orders, and establish new client monitoring procedures when providers changed. The shifting of clients en masse to the new winning firm also risked adverse impacts on patients because of potential disruption in service delivery. These complications were largely avoided by channeling projects that chose multiple winning bidders.

Finally, there is little that can be said, based on the experience of the channeling projects with competitive bidding, about the characteristics of bidding systems as they relate to the subsequent performance of providers. Although the Cleveland and Miami projects used different mixes of for-profit and nonprofit providers, both experienced similar problems. These problems typically included late arrivals, no-shows, and inadequate completion of assigned duties on the part of provider personnel (Carcagno et al., 1986). Also, both projects saw strengths and limitations in their own competitive bidding procedures as they related to the enforcement of contracts with providers. As noted previously, the Cleveland staff felt that concentrating channeling clients with a single winning bidder gave them leverage in improving provider performance. The Miami staff saw the flexibility provided by the selection of multiple winning bidders as important in permitting case managers to continually evaluate the performance of providers and direct patients away from agencies with poor records of performance.

Acknowledgments

The author is grateful for the comments and support of Peter Kemper, principal investigator in the National Long-Term Care Channeling Demonstration evaluation, and fellow research investigators Robert Applebaum and George Carcagno. The willingness of the channeling project staff and, particularly, of the administrative staff of the Cleveland and Miami channeling projects to supply data and interviewer information is also acknowledged with sincere appreciation.

The research reported in this article was conducted as part of the overall evaluation of the National Long-Term Care Channeling Demonstration under Contract Number HHS-100-80-0157 with Mathematica Policy Research.

⁶One basic case-management site also used a competitive bidding system similar to the Cleveland approach to select providers. In Baltimore, city contracting procedures required a single contract be awarded to the lowest technically acceptable bid. As in Cleveland, this process resulted in the award of relatively low-priced hourly contracts: for home health aides (\$4.59), homemaker and/or personal care (\$4.09), and homemakers (\$4.99).

References

- Carcagno, G., Applebaum, R., Christianson, J., et al.: *The Evaluation of the National Long-Term Care Demonstration: The Planning and Operational Experience of the Channeling Projects*, Vols. 1 and 2. Contract No. HHS-100-80-0157. Prepared for the Department of Health and Human Services. Princeton, N.J. Mathematica Policy Research, July 1986.
- Christianson, J., and Hillman, D.: *Health Care for the Indigent and Competitive Contracts: The Arizona Experience*. Ann Arbor, Mich. Health Administration Press, 1986.
- Christianson, J., Smith, K., and Hillman, D.: A comparison of existing and alternative competitive bidding systems for indigent medical care. *Soc Sci Med* 18(7):599-604, 1984.
- Drew, J.: The dynamics of human services subcontracting: Service delivery in Chicago, Detroit, and Philadelphia. *Pol Stud J* 13(1):67-89, Sept. 1984.
- Hatry, H.: *A Review of Private Approaches for Delivery of Public Services*. Washington, D.C. Urban Institute Press, 1983.
- Inglehart, J.: Cutting costs of health care for the poor in California: A two-year followup. *N Engl J Med* 311(11):745-748, Sept. 1984.
- Kemper, P., Brown, R. S., Carcagno, G., et al.: *The Evaluation of the National Long-Term Care Demonstration: Final Report*. Contract No. HHS-100-80-0157. Prepared for the Department of Health and Human Services. Princeton, N.J. Mathematica Policy Research, July 1986.
- Melia, E., Ancom, L., Duhl, L., and Kurokawa, P.: Competition in the health care marketplace: A beginning in California. *N Engl J Med* 308(13):788-792, Mar. 1983.
- Paris, M.: Cost and quality control of laboratory services: The New York City Medicaid centralized laboratory proposal. *Med Care* 14(90):777-793, Sept. 1976.
- Schlesinger, M., Dorwart, R., and Pulice, R.: Competitive bidding and States' purchase of services: The case of mental health care in Massachusetts. *J Pol Anal Management* 5(2):245-263, Winter 1986.
- Wedel, K.: Purchase of service contracting: A state of the art review. In Wedel, K., Katz, A., and Weick, A., eds., *Social Services by Government Contract*. New York. Praeger Publishers, 1979.