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A Capitated Payment System For Involuntary Mental Health Clients
by Bentson H. McFarland, Douglas A. Bigelow, Jay C. Smith, Mark C. Hornbrook, Ala Mofidi, and Patrick Payton

Abstract: This DataWatch examines an outpatient capitated payment system, in the state of Oregon, designed to enhance community services for persons with chronic mental illness who had repeatedly been hospitalized involuntarily. Special state funds and Medicaid dollars were used to pay providers prospectively on a risk-adjusted basis for the delivery of outpatient mental health services. During the three-year study period clients were able to be discharged from the state hospital. Although the data are not straightforward, capitated clients' use of the state mental hospital seems to have declined somewhat more than that of comparison subjects. Outpatient service use was modest and appeared to have little relationship to a client's level of illness severity. Indeed, it was not possible to predict prospectively these clients' outpatient mental health services expenditures.

Public mental health systems are undergoing radical changes in organization and financing as older payment mechanisms are replaced by capitation.1 Indeed, Charles Ray and Monica Oss state that “fee-for-service arrangements will, for all practical purposes, vanish in this decade. Community mental health organizations must be able to participate in new reimbursement systems focusing on partial or full risk sharing.”2 Capitation differs in several important ways from the older grant-in-aid or fee-for-service approaches. First, capitated funds are (at least conceptually) linked with an identified person. Second, there may be different payment rates for different classes of patients. Third, providers may have more opportunity for creativity than under fee-for-service. Fourth, capitated providers may have a greater financial incentive to minimize services than under fee-for-service.

Especially challenging to public mental health systems is the notion of

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capitated payment systems that will serve persons who are frequently committed involuntarily to state mental hospitals. By definition, these persons are high users of mental health services who may need considerable assistance to live in the community. Funding agencies might wish to link enhanced capitated payments to such persons in the hope that providers would deliver expanded services. Furthermore, the fact that treatment for this population is sometimes involuntary may introduce additional uncertainty into predictions of use.

This DataWatch reports the findings of an early attempt at devising a prepaid outpatient mental health financing system focused on persons who are frequent users of involuntary mental health services.

**Oregon’s Mental Health System**

**Involuntary mental health care in Oregon.** In 1987 the Oregon legislature expanded the state’s civil commitment laws to facilitate treatment of persons who frequently use involuntary services. The new law stated that persons who had been committed involuntarily to a state mental hospital twice during the previous three years under the preexisting criteria (posing danger to self or others because of mental illness) could now be committed to treatment (inpatient or outpatient) if they were in an episode of clinical deterioration that was likely to result in yet another commitment if treatment was not provided. The state mental health agency and many family members of such persons hoped that this new “deterioration” standard for civil commitment would help to facilitate early treatment for exacerbations of psychosis. The idea was to reduce hospitalization and family disruption by early use of outpatient care (involuntarily if need be).

The new criteria created a “class” of some 600 persons in the state for whom the legislature appropriated additional funds that were intended to develop specialized community services, to minimize state hospital use by this population. The use of outpatient commitment was strongly encouraged. The state mental health agency asked county mental health departments to devise programs that would use the new funds for the benefit of persons in this “class.”

**Outpatient capitation for high-risk clients.** Oregon’s largest county (the greater Portland area) adopted a capitated payment system as its approach to serving this so-called risk pool population. At the beginning of 1988, 200 risk pool clients were assigned to Multnomah County. These were involuntary state hospital inpatients who were unable to be discharged because of the limited availability of needed services (such as case management) in the community.

Also, seven agencies within the county were authorized to provide men-
tal health services to these clients. Each agency is a private, nonprofit community mental health program that contracts with Multnomah County to provide a “package” of services including case management, day treatment, crisis services, and so forth.

County mental health administrators hoped to accomplish several goals. First, the county wished to stimulate provision of outpatient care (for example, case management) aimed at a challenging population of involuntary state hospital patients. The idea was to reduce state hospital use by linking additional funds to identified, severely mentally ill persons.

Second, the county wanted to introduce its contractors to the notion of prepayment. Heretofore, the local community mental health agencies had been paid chiefly on a fee-for-service basis, along with a variety of grants. County administrators believed that fee-for-service would eventually be replaced by capitation (especially for Medicaid clients).

Third, the county hoped that capitation would stimulate innovation by its contractors, who would be freed from many of the restrictions associated with the Medicaid fee-for-service system. It was thought that some agencies might even specialize in serving subpopulations (for example, older or minority clients) within the risk pool. The county also wished to learn if linking higher prospective payment rates to more severely disabled persons would stimulate greater service provision for them. In addition, county staff were interested in examining the administrative complexities of operating a capitated system involving Medicaid clients.

Subcapitation, Before capitation was implemented, there was much discussion (chiefly within the county mental health department but also with the state mental health agency and the providers) about the extent of financial risk to be assumed by the community mental health programs. Given the novelty of capitation for this population, the county determined that providers would be at risk only for clients’ outpatient expenditures. The state mental health and Medicaid agencies paid for residential services. The county was the “payer of last resort” for local involuntary hospital services, and Medicaid was the most common payer. Providers were not at risk for state hospital services per se but would have capitated payments terminated if a client’s length-of-stay exceeded sixty days. In other words, the county adopted a “subcapitation” payment mechanism designed nonetheless to reduce state hospital use by the targeted population.

Risk-adjusted rate setting. Under the capitated payment system a provider was prepaid for agreeing to work with a given client. Initially, the payment was either $6,544, $4,908, or $3,272 (per year), depending on a client’s clinical characteristics as measured by state hospital length-of-stay (during the two years prior to enrollment) and by the seventeen-item Multnomah Community Ability Scale. The scale is a reliable, well-
validated instrument designed to be completed by public mental health program staff. It measures clients’ ability to live in the community and predicts involuntary use of state hospital services. County and agency staff evaluated clients (virtually all of whom were state hospital inpatients) prior to enrollment in the capitated system and assigned capitation rates.

**Capitated payment system operations.** The risk pool clients became eligible for the capitated payment system throughout the 1988-1990 study period. Providers enrolled persons when the capitated payment system began operation or at the time of hospital discharge. The vast majority of clients were enrolled with the provider closest to their place of residence prior to hospitalization. However, clients could switch providers if they so chose. Indeed, the county encouraged the contracting agencies to develop special programs (for example, focusing on older clients) that might be attractive to subpopulations within the risk pool. Enrollment in the capitated payment system implied that the provider agency would receive the monthly payment rate for that client. The system provided for “termination” of clients who spent more than a month continuously in the state mental hospital subsequent to enrollment. Providers ceased receiving capitated payments for these clients. Providers also were required to perform “shadow billing” so that the county could collect Medicaid reimbursement.

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### Evaluation Of The Oregon Program

**Evaluation design.** The state and county mental health departments agreed on an evaluation design prior to the start of the program. The state was chiefly interested in reducing use of the state hospital. Accordingly, the evaluation design included groups of more or less “similar” clients who were not enrolled in the capitated system. The state was also interested in “disruption,” which would be measured by contacts with the involuntary treatment system. The county, too, was concerned with state hospital use but felt that duration of enrollment in capitation would be a more meaningful outcome measure signifying engagement in treatment. Also, the county had a considerable interest in the relationship between community mental health agency expenditures and the capitated payment rates.

There were three groups of study subjects. Capitated subjects (n = 239) were clients who enrolled in the system at some time during the program’s first three years (1 February 1988 through 31 December 1990). Anyone enrolled in the capitated payment system during the study period was included in the capitated group. Noncapitated subjects (n = 72) were eligible but not enrolled (chiefly because they could not be discharged from the state hospital). The noncapitated group comprised all risk pool subjects who were never enrolled in the capitated system during the study years.
Comparison subjects (n = 36) were persons who would have met the new commitment criteria had the law gone into effect one year earlier. These clients had (by definition) had two or more civil commitments to a state hospital during 1983-1985. Data were obtained from a variety of sources, including the provider agencies, the county mental health department, the state mental health agency, and a local general hospital. Provider agencies made available detailed accounting data and staff activity logs. Data were analyzed on a per person basis.

Dynamics of client enrollment. When the capitated payment system in Multnomah County began operation 1 February 1988, 130 of 200 eligible clients were enrolled. The chief reason for nonenrollment was that the client remained in the state hospital with little prospect of discharge.

Enrollment, disenrollment, and reenrollment in the capitated payment system continued through the three-year study period as persons became eligible for the program, entered, terminated, and reentered. The fiscal year 1 July 1989 through 30 June 1990 provided a “snapshot” of this dynamic system. During that twelve-month period 168 clients had at least thirty days of enrollment in the program. By the end of that period 132 (79 percent) remained enrolled.

Taking another snapshot view, this time of the provider agencies, the enrollment of clients with the agencies as of 1 April 1990 was zero, four, nine, twenty-eight, twenty-nine, thirty, and thirty clients, respectively. By the end of the study period (31 December 1990) one agency had not enrolled any eligible clients. For the six actively participating agencies, capitated payment system clients represented about 5 to 10 percent of each agency’s active caseload.

Study clients. The study group contained 114 Group A (“most severe”), 109 Group B, and 16 Group C (“least severe”) capitated clients. These persons were mostly males (57 percent), with an average age in 1989 of thirty-nine years. Subjects were mainly white (82 percent) or African American (14 percent) and had never married (59 percent). The chief diagnosis was schizophrenia (66 percent), and many (25 percent) had had substance abuse noted in their records. These persons were clearly disabled, as evidenced by the fact that 59 percent received Supplemental Security Income (SSI), 19 percent received Social Security Disability Income (SSDI), and 9 percent received General Assistance (welfare). Also, 53 percent of the enrollees were Medicaid recipients at some time during the study period. There were the expected differences in prior service use but rather few demographic differences among the risk groups as well as between capitated clients and the other study subjects.

Enrollment duration and service use. For the 239 clients enrolled in the capitated system at any time during the three-year study period, the
average enrollment per person was 14.9 months. This average enrollment time varied among the three risk groups, with Group A having the shortest enrollment duration (12.4 months per person), Group B the intermediate duration at 16.5 months per person, and Group C the longest duration at 22.2 months per person.\textsuperscript{14}

There was little local hospital involuntary use for all subjects, declining state hospital use for capitated subjects, and constant residential use for all subjects.\textsuperscript{15} Capitated clients had more “disruptions” (as measured by pre-commitment investigations) than the other subjects had, but their involuntary system use declined at a faster rate.\textsuperscript{16} There was little or no use of the new civil commitment criteria.\textsuperscript{17}

**Expenditures.** Exhibit 1 gives a picture of the expenses incurred in delivering the services used by clients who were enrolled in the capitated payment system. The exhibit is constructed from a provider’s perspective.\textsuperscript{18}

| Exhibit 1 | Expenditures For Services Per Client Per Month In Oregon’s Capitated Payment System |
|-------------------|--------------------|-------------------|-------------------|-------------------|
|                   | Group A            | Group B            | Group C            | Overall           |
| Number of enrollees | 75                 | 92                | 14                | 181               |
| Months enrolled    | 12.6               | 13.8              | 15.6              | 13.4              |
| Services           |                    |                   |                   |                   |
| Individual hours   | 2.86               | 2.41              | 1.93              | 2.56              |
| Group hours        | 4.18               | 5.06              | 2.29              | 4.48              |
| Medical hours      | 0.60               | 0.62              | 0.37              | 0.59              |
| Residential days   | 2.94               | 2.90              | 2.81              | 2.91              |
| Local hospital days| 0.19               | 0.12              | 0.30              | 0.17              |
| State hospital days| 2.30               | 1.20              | 2.06              | 1.72              |
| Separated expenditures |                |                   |                   |                   |
| Individual         | $255.40            | $223.87           | $181.04           | $233.62           |
| Group              | 44.24              | 39.40             | 16.56             | 39.64             |
| Medical            | 67.56              | 72.81             | 49.53             | 68.83             |
| Residential        | 52.21              | 51.08             | 48.90             | 51.38             |
| Local hospital     | 132.04             | 86.25             | 211.46            | 114.91            |
| State hospital     | 419.38             | 218.67            | 375.56            | 313.97            |
| Aggregated expenditures \(^{a}\) |                    |                   |                   |                   |
| Outpatient         | $367.20            | $336.08           | $247.12           | $342.10           |
| Ambulatory         | 419.41             | 387.16            | 296.02            | 393.47            |
| Local              | 551.45             | 473.41            | 507.48            | 508.38            |
| Inclusive          | 970.83             | 692.08            | 883.04            | 822.35            |

**Source:** Multnomah County, Oregon.

**Note:** Based on data from 1 July 1989 through 31 December 1990. There are no statistically significant differences among the three groups by one-way analysis of variance.

\(^{a}\) Outpatient = medical + group + individual expenditures. Ambulatory = medical + group + individual + residential expenditures. Local = medical + group + individual + residential + local hospital expenditures. Inclusive = medical + group + individual + residential + local hospital + state hospital expenditures.
Although the community mental health agencies delivered a variety of services, we have lumped them into “individual,” “group,” and “medical” for discussion purposes. The exhibit is based on data from the 181 clients who were enrolled between 1 July 1989 and 31 December 1990, when the capitated payment system had become fully operational.

The exhibit is calculated based on payment per client per month of enrollment in the capitated payment system. In contrast to the preceding discussion on service use, the tabulated expenditures (such as for using the state hospital) are counted only for those months the subject was enrolled in the program.

Looking at the amounts of services delivered, we can see that there were no significant differences among the risk groups in the hours of community mental health services delivered (per person per month enrolled). There were also no differences in residential or hospital days (per person per month enrolled).

These utilization data then are translated into agency expenditures. Individual, group, and medical hours of service were transformed into dollar figures. Days of hospital and residential care were multiplied by the per diem charges or reimbursements (respectively) to obtain dollar figures. Again, there were no statistically significant differences among the three risk groups.

The bottom portion of the exhibit combines the different types of expenditures. Here “outpatient” expenses are those for which the provider agencies were responsible. In other words, outpatient expenses consist of individual plus group plus medical expenditures. Again, there were no significant differences among the three risk groups in outpatient expenditures per person per month of enrollment. Similar patterns are found for “ambulatory” (nonhospital) expenditures, “local” (excluding the state hospital) expenditures, and “inclusive” expenditures.

Risk adjustment modeling. We examined a number of stepwise multiple regression models using the outpatient, ambulatory, local, and inclusive expenditure figures from the bottom of the exhibit as dependent variables. We were unable to predict more than about 5 percent of the variance.

Discussion

This study suffers from many of the difficulties that Mark Schlesinger noted in his commentary on earlier evaluations of capitated payment systems. Specifically, the sample size was small; the project was not a randomized trial; we were not able to capture use of services other than those delivered by the mental health sector; we did not interview clients; and we could not measure family burden. Also, it is possible that some
subjects might have left the Portland area unbeknownst to program staff. On the other hand, we do have comprehensive data on providers' service delivery and the associated expenditures.

Despite these limitations, it appears that at least some of the program's objectives were accomplished. For example, the vast majority (77 percent) of eligible clients were enrolled in the capitated system. The implication here is that the providers were able to locate and serve these challenging clients while, perhaps, expediting their discharge from the state hospital.

State hospital and involuntary treatment system utilization data are more difficult to interpret. During the three-year study period there was a clear downward trend in enrolled clients' numbers of admissions to the state hospital and in their use of the involuntary treatment system. Trends were not so clear for clients who were eligible but not enrolled nor for the comparison group. Of course, the enrolled clients' downward trends in state hospital use and precommitment investigations could represent a "regression to the mean." However, a detailed time series analysis of the capitated clients suggests that enrollment in the system was causally related to reductions in state hospital use.\(^{22}\)

Conclusions about the outpatient aspects of the program are more straightforward. Clients enrolled in the capitated payment system received about the same (modest) amount of community mental health services regardless of the severity level of their condition. On average, a client received three hours of individual treatment, four hours of group treatment, and a half-hour of medical services during each month of enrollment. Agency expenditures for these services were less than the capitated payment rates. Similarly, Phyllis Marshall reported that providers in the Rochester capitation project also were able to accumulate surplus revenues.\(^{23}\) Interestingly, provider "profit" was one factor in the New York State mental health agency's decision to terminate the Rochester project.\(^{24}\)

It was not possible to predict outpatient service use within our population. This finding is similar to that of Mary Smith and Patricia Loftus-Rueckheim.\(^{25}\) It may well be that these severely disabled clients are relatively homogeneous. On the other hand, service delivery could depend more on the characteristics of the provider and less on the needs of the client. Based on a process evaluation of the capitated payment system that included interviews with agency staff, county officials, and state personnel, Audrey Block concluded that the impact of capitation on provider behavior may have been blunted by the dual funding mechanism in which providers had to deal with Medicaid regulations in addition to capitation, by limited consultation between county officials and providers when the program was being planned, and by insufficient data on clients and their use of services for managers to use to make decisions about program direc-
Although some agencies did develop special programs for this target population, it is possible that staff activities (for example, developing specialized programs so as to “compete” for clients) might have been more influenced by the capitated payment system if the agencies and their workers had had a greater financial stake in the program. 

Policymakers learned several lessons during the course of this project. First, the requirements for Medicaid “shadow billing” greatly complicated program operations. A simplified payment system is needed for capitation. Second, from a financial accounting perspective, these data suggest that providers’ responsibilities could be expanded to include (at least) residential and possibly local hospital services. Of course, the limited service delivery we found may have been insufficient to meet client needs. Outcome measures based on consumer and family surveys may be needed to determine whether or not services are appropriate and adequate.

Third, it appears that the financial incentives presented here were not sufficient to stimulate innovation (for example, specialization) among provider agencies. Specific problems included (1) small numbers of enrollees (and, therefore, small financial impact) at some agencies; (2) political and territorial conflicts among state, county, and provider agencies; and (3) limited involvement of consumers and line staff in the design and operation of the payment system. Restricting the provider pool to the current contractors also may have limited innovation.

Fourth, rate setting for capitated payment systems remains a challenge. Targeting identified persons for special services (and, therefore, special payments to providers) has the advantage of focusing attention on particular, often quite disabled, persons. These persons typically will be high users of services. With respect to rate setting, however, this selection process tends to identify a relatively small group of people. Given the limited relationship (if any) found here between client illness severity and service use, it may not be advisable to consider prior utilization when setting rates for a prospective payment system aimed at such a small target population. Indeed, Schlesinger has noted that inappropriate financial incentives (such as those to minimize service delivery) may be created if risk pools are too small. Furthermore, the regression-to-the-mean phenomenon raises the possibility that providers may accumulate surplus revenues if rates are based on prior high use. Methodology (perhaps based on some form of competition) is needed so that policymakers can use the financing mechanism as a tool to improve consumer outcomes.

Finally, this project indicates the need for sophisticated experimental design (such as randomization) with adequate sample sizes and consumer-level outcome measures if firm conclusions are to be drawn from evaluations of capitated financing programs.
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NOTES


2. C. Ray and M. Oss, “Community Mental Health and Managed Care,” in Managed Mental Health Care, ed. W. Goldman and S. Feldman, New Directions for Mental Health Services Monograph 59 (San Francisco: Jossey-Bass, 1993), 89-98.


4. There are some analogies here to the “limited purpose health maintenance organization” described in Schlesinger, “Striking a Balance.”

5. Some of the Multnomah County capitation policies were based on early impressions from the Rochester, New York, capitation program. See S. K. Reed and H. M. Babigian, “Postmortem of the Rochester Capitation Experiment,” Hospital and Community Psychiatry 45 (1994): 761-764.


7. The highest payment rate (A) was assigned to clients with a rating less (that is, less “healthy”) than 41.1 and any amount of hospitalization, or a rating of less than 56.1 and at least 251 days of hospitalization. The middle payment (B) was for a rating between 41.1 and 56.1 and less than 250.1 days of hospitalization; or hospitalization greater than 250.1 days with a rating higher than 56.1. The lowest payment (C) was for a rating higher (that is, “healthier”) than 56.1 and hospitalization less than 250.1 days. This classification scheme was, in effect, a risk adjustment model based on the county staffs best intuitive judgment of the amount of services (and, therefore, the cost) required to achieve the objective of continuous community living for these clients. The payment rates were increased by 4 percent in July 1989.

8. Other reasons for termination included the following: client declines to participate (despite active outreach for more than sixty days); client disenrolls (in writing); death; client transfers to another service program; and client moves out of the county.

9. Reed and Babigian, “Postmortem of the Rochester Capitation Experiment.”

10. The accounting methodology is described by B.H. McFarland et al., “Unit Costs of Community Mental Health Services,” Administration and Policy in Mental Health 23 (1995): 27-42. Involuntary treatment system use was measured by examining records of “precommitment investigations.” See L.R. Faulkner et al., “A Method for Quantifying and Comparing Civil Commitment Processes,” American Journal of Psychiatry 143 (1986): 65-77. State hospital bed day expenditures were calculated annually by the state and averaged $182 per day during the study period. Local hospitals’ daily charges and physicians’ fees were obtained from the facility that provided the plurality of general
hospital psychiatric services to these clients and averaged $694 per day. The state mental health agency spent an average of $17.25 per client per day on residential services during the study years. Further information on residential care is given by M.A. Brown et al., “Comparisons of Outcomes for Clients Seeking and Assigned to Supported Housing Services,” Hospital and Community Psychiatry 42 (1991): 1150-1153.


12. Reasons for termination were as follows: client returned to hospital with no prospect of reenrollment (6 percent); client moved out of county (4 percent); client transferred to another program (4 percent); client refused services (2 percent); unable to locate client (2 percent); death (1 percent); and other or unknown (1 percent).

13. There were no statistically significant demographic differences among risk groups, with the exception that the majority (63 percent) of Group C (“least severe”) had a bipolar disorder diagnosis. The capitated subjects had had about ten state mental hospital admissions per person with about three in the years 1985 through 1987 (prior to capitation). As expected, the “most severe” group (A) had had about twice as many admissions as the “least severe” group (C). Capitated subjects averaged about six months of state hospital time during the three years prior to capitation. The seventy-two noncapitated subjects had similar demographic characteristics and diagnoses to those of the capitated subjects, as did the thirty-six comparison subjects (with the exceptions that only 36 percent of comparison subjects had never married and that the comparison subjects averaged forty-five years of age in 1989). These groups of subjects were also similar in their number of lifetime state hospital admissions and state hospital days. However, the comparison subjects had only about one-third the state hospital admissions as the other subjects had during the 1985-1987 precapitation years.

14. These differences are statistically significant (p < 0.001). Although there were no significant differences among the risk groups’ enrollment time in the first year of the study period, by the second year the less disabled clients (risk groups B and C) had more months of enrollment than the most disabled clients (risk group A) had.

15. The 347 subjects averaged one local hospital involuntary admission per person over the three-year study period, with total local hospital involuntary days averaging eight per person (about 2.7 per year). The capitated group had more local hospital admissions than the other two groups had during the first two study years but not in the third year. Among enrollees in the capitated payment system there were no differences among risk groups in local hospital involuntary admissions. During the three study years the capitated subjects had twice as many state hospital admissions (two per person) as the other subjects had. However, all subjects had about the same state hospital days (about eight months over the three years). Interestingly, the capitated subjects’ state hospital use decreased over time, while that of the noncapitated group remained unchanged. These differences in trends over time were highly statistically significant (p < .001). Looking within the group of capitation system enrollees, there were no differences among the risk groups’ state hospital admissions during the three study years. However, there were differences in numbers of state hospital days, with the most severe group averaging 314 days in the state hospital (over three years) versus 169 for the intermediate group and 118 for the least severe group. There were no differences in trends over
time for the three risk groups. Regarding residential services (measured as used or not used each year), there were no differences among the capitated, noncapitated, and comparison groups, nor were there differences in trends over time.

16. Capitation enrollees had more precommitment investigations than the noncapitated enrollees and comparison subjects had prior to and during the study period (about one per person during 1985-1987 and two per person during 1988-1990 versus about one-half per person for the other subjects during each three-year period). However, the rate of decline in investigations for the capitated group was much greater than that in the other two groups (p < .002). Within the group of capitation system enrollees, the rate of decline was about the same in all three risk groups.

17. During fiscal year 1989-1990 there were 2,388 precommitment investigations for all county residents (including study subjects). Of these, only thirty-seven (2 percent) were conducted under the new civil commitment criteria. These investigations yielded only one commitment (under the new criteria) out of 367 total commitments (0.3 percent). Anecdotally, providers reported that they had little knowledge of the new criteria and that they found judges reluctant to use the new law.


19. See McFarland et al., “Unit Costs of Community Mental Health Services,” which also includes more information about the various types of services provided.

20. Potential predictor variables included demographic factors (age, gender, Medicaid enrollment); diagnosis (bipolar versus other, presence of substance abuse, presence of secondary diagnosis); prior state hospital use (number of days, 1985-1987); risk group membership; and Multnomah Community Ability Scale rating. There were no statistically significant predictors of outpatient or local expenditures. Only Medicaid enrollment predicted (increased) ambulatory expenses (p = 0.008) and accounted for about 4 percent of the variance. Only the presence of substance abuse predicted (increased) inclusive expenditures (p = .002) and accounted for about 5 percent of the variance.


22. A. Mofidi et al., “The Dynamics of a Capitated Payment System for Mental Health Care” (Mimeo, Department of Psychiatry, Oregon Health Sciences University, Portland, Oregon, 1995).


24. Reed and Babigian, “Postmortem of the Rochester Capitation Experiment.”


27. Indeed, we found little evidence of “specialization” or the hoped-for “competition” among providers to enroll capitated clients. For example, only 11 of 168 clients (7 percent) enrolled during fiscal year 1989-1990 made use of more than one provider.
