

Costs And Incentives In A Behavioral Health Carve-Out

Massachusetts saw a drop in mental health/substance abuse care costs for state employees when it entered into a contract to pay for this care separately. What was behind these changes?

by Ching-to Albert Ma and Thomas G. McGuire

PROLOGUE: Evidence continues to accumulate that mental health/substance abuse (MH/SA) care can be covered at much lower rates under managed care than under indemnity insurance. One way to achieve these savings is by use of carve-outs, whereby MH/SA services are provided by a specialty provider. Use of such providers has grown over the past decade, so that more than 100 million Americans received services through them in 1996, by one estimate. As state Medicaid programs switch to managed care, several of them, including Tennessee through its TennCare program, have added a managed behavioral health carve-out for their constituents. TennCare's carve-out has drawn recent criticism for quality lapses on the part of its two behavioral health care contractors.

By one recent estimate, legislation mandating parity, or comparable coverage for mental and physical health, had been passed at the federal level and introduced in more than thirty states as of mid-1997. As more states attempt to craft benefits for their employees and the beneficiaries of their public programs, data and models will be useful in guiding them through the complexities and suggesting pitfalls to avoid. In this paper Ching-to Albert Ma and Tom McGuire present the results of their study of the Commonwealth of Massachusetts, as it added a behavioral health carve-out for state employees.

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ABSTRACT: A carve-out of mental health and substance abuse services initiated in 1993 by the Group Insurance Commission (GIC) of the Commonwealth of Massachusetts resulted in changes in the costs of those services. Those changes were related to incentives in the contract between the GIC and its managed behavioral health vendor. Total and plan costs were reduced by 30–40 percent after adjusting for trends. Incentives to produce savings of this magnitude not only were a consequence of the payer/vendor contract but, we speculate, derive from the growth potential facing companies in the managed behavioral health care market.

MANY BIG EMPLOYERS and other payers have contracted with specialty management firms to administer the delivery of mental health and substance abuse (MH/SA) care to their enrollees. This so-called MH/SA carve-out has led to a new “managed behavioral health care” industry consisting of firms specializing in this service. It has been estimated that in 1996 more than 100 million Americans were enrolled in one of these companies.¹ Risk-based contracts, in which the specialty vendor (usually a for-profit corporation) bears some or all of the financial risk associated with MH/SA services, are used in about half of all carve-out programs. The rapidly growing use of separate carve-out contracts has been stimulated by reports of very favorable cost experience for many payers, with some savings reported to be in the range of 40 percent or more.²

From an employer's or other payer's point of view, a carve-out contract addresses the long-standing issues of moral hazard and adverse selection associated with insurance for mental health services.³ Moral hazard is constrained by the techniques associated with managed care—price negotiations, provider network selection and monitoring, prior authorization, and utilization review. Adverse selection can be addressed if the financial risks associated with mental health are unified within a single contract; having all persons in one contract means that plans do not compete to avoid costly MH/SA service users.

Although the carve-out approach offers these potential advantages in principle, the practical importance of this new form of insurance contract remains to be established. Favorable experiences of employers or public programs first choosing this approach may not be a good predictor of what happens to the typical plan. First, if payers who first adopt carve-outs are those with inefficient MH/SA management in their former plan (“low-hanging fruit,” in the language of the industry), then the effectiveness of carve-outs may be much less for payers with less inefficient plans. Second, the experience of a particular payer and population is influenced by many specific factors, some of which may not apply to other payers. There-

fore, it appears important to study carefully the diversity of payer and population characteristics, vendors' management techniques, and the actual contracts between payers and vendors before generalizations are made. Studying the contract, and the relationship between contract features and vendors' behavior, is particularly important for public and private payers, which must use the contract to attempt to "control" that behavior.

This paper contributes to the accumulating evidence on carve-outs and managed care by reporting on the experience of the MH/SA carve-out of a major employer in Massachusetts: the commonwealth itself. Our findings on cost will be relevant to other carve-out programs and to the managed behavioral health care industry overall, which uses many of the same techniques of fee setting, networks, and utilization review. In this first paper in a continuing project on this case, we relate the incentives in the contract to the aggregate experience. First, we describe the MH/SA carve-out contract between the Commonwealth of Massachusetts and the vendor, and we identify its incentive implications. Second, we analyze insurance claims data for two-year periods before and after the carve-out. We examine the association between the contract incentives and the actual cost outcomes, using the period before the carve-out as a benchmark for comparison. Before-and-after comparisons can be problematic because the underlying population can change. Therefore, we selected for detailed analysis a group of enrollees who were continuously covered for the entire four-year data period and examined the actual use and cost experience for them before and after the carve-out.

The Effect Of Carve-Outs

The trade press contains many favorable reports of the experience of employers with carve-out plans. Monica Battagliola summarized for *Business and Health* the experience of a behavioral health carve-out at IBM in 1991.⁴ In 1989 IBM was spending \$106 million on MH/SA benefits for its employees and dependents, an amount going up by 10 percent per year and consuming 15 percent of all health benefit costs. The carve-out (with Value Behavioral Health, or VBH) consisted of a preferred provider organization (PPO), with differential in-network and out-of-network cost sharing, expansion of alternative treatments, strengthening of an employee assistance plan (EAP), and utilization review. By 1993 IBM's mental health expenditure had fallen to \$59 million and only 10 percent of health benefit costs. Full understanding of the effects of this carve-out is difficult because the author provides no information on rates of use of a comparable population, the nature of the contract between IBM and

VBH, or the composition of the expenditure changes. Finally, it is worth mentioning that IBM began the initiative with a very generous plan and spending per employee—approximately \$660 per employee per year on MH/SA, which is more than double the national average for the period. Reducing costs by 30 percent (in real terms) still left IBM far above average rates of spending.⁵

The formal research literature on carve-outs is just emerging. Kyle Grazier and her colleagues examine outpatient utilization data one year before and one year after implementation of a point-of-service (POS) plan with a benefit change for 4,220 continuously enrolled, active employees.⁶ Overall, the rate of outpatient use went up slightly, but the number of visits per user fell slightly. The contract between employer and vendor was “administrative services only” (ASO), so the vendor bore no explicit financial risk associated with utilization.

Richard Frank and Thomas McGuire describe the experience of an MH/SA carve-out plan in Massachusetts Medicaid with aggregate data from one year before and three and a half years after institution of a behavioral health care carve-out.⁷ Price reductions for inpatient care and the virtual elimination of inpatient treatment for substance abuse were mainly responsible for savings of approximately 25 percent per enrollee in real terms. The yearly contracts between the state and the vendor, Mental Health Management of America (MHMA), imposed very little financial risk on MHMA, the form of the contract being far from a “capitation contract.” In the Medicaid case, large savings were generated with low-powered incentives. Using five years of claims data, William Goldman and his colleagues studied the experience of a set of workers in a large West Coast-based company in connection with a carve-out program to United Behavioral Health (UBH) in 1991.⁸ Their results are reported elsewhere in this volume.

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The Contract Between The GIC And Options

The largest payer in Massachusetts, having an enrollment base of about 120,000 persons, the GIC is responsible for providing health insurance to state and some local employees, their dependents, and retirees. The GIC has contracted with a combination of traditional indemnity insurers as well as health maintenance organizations (HMOs) since the mid-1970s. Between fiscal years 1989 and 1992 the State Hancock Plan, administered by John Hancock Mutual Life Insurance Company, was the indemnity plan for GIC enrollees. This fee-for-service plan included such managed care features as preadmission certification, utilization and concurrent reviews of inpatient treatment, second opinions, discharge planning, and

pharmacy provider networks. These provisions applied to all areas of medical care, including MH/SA services. In addition, the GIC contracted with fourteen HMOs (staff/group and network models) and offered them as enrollment options to employees.

The GIC voted to change its health benefit plans in late 1991. The stated goal was to improve the value of services to employees without increasing expenditures, increase enrollment in managed care, and reduce risk fragmentation and adverse selection problems.⁹ To achieve this, the GIC retained the services of a management consulting firm to assist with the evaluation of its existing benefits program and propose alternative benefit designs. One of the consultants' recommendations adopted by the GIC was the development of a separate MH/SA carve-out.

In the request for proposals (RFP) issued by the GIC, each potential bidder was provided with a summary of the plan enrollment, costs, and utilization data for the two years before the RFP was released. The data included hospital admission and outpatient visit rates per thousand enrollees, number of hospital days per thousand enrollees, costs per hospital admission and outpatient visit, and costs per employee for each of the two years. These data were supplied for MH/SA services, both separate and combined, for all employee groups. Utilization pattern data, such as distribution of admissions by diagnosis and outpatient visits, readmission rates, and patterns of large claims, also were provided.

The GIC and its consultants first used the data to establish a set of benchmark projections of costs and savings under managed care. Each potential vendor was asked to provide its own set of projections, and the two sets of projections were compared and evaluated. Potential vendors also bid on management fees and provided details on proposed programs. Options was selected as the winner from among five applicants, and the details of the MH/SA contract were made final.

The initial two-year contract between the GIC and Options began in July 1993. Here we briefly describe the benefit and coverage design, followed by detailed descriptions of the financial arrangements between the two organizations.

■ **Benefit design.** The GIC stipulated important dimensions of the new benefit plan for MH/SA in the RFP. The MH/SA carve-out would be a managed care plan, nominally similar to that in the previous Hancock plan but expected to be more aggressive. The GIC specified the in-network and out-of-network benefits, goals for provider networks, and even the utilization levels at which the vendor should intervene in the care process. Implementation of these features was to be left to the vendor. Benefits to enrollees choosing

in-network care in the POS plan were expanded from coverage before the carve-out. Providers were to be precertified by Options before being admitted to the network. Whether an enrollee received care from a network provider or not, precertification had to be obtained from Options by calling a toll-free telephone number before care began (except for emergencies). A clinical case manager was responsible for precertification. Options had to be notified within twenty-four hours of any hospitalization, whether emergency (life-threatening), urgent, or routine. Complaints and grievances were to be reviewed by Options representatives, as were disagreements with clinical determinations.

Generally, in-network coverage for inpatient services was complete with no deductibles; out-of-network inpatient coverage was 80 percent of allowed charges, with a sixty-day limit per year and a two-admission or two-episode lifetime limit on substance abuse treatments. In-network outpatient visits were free for the first four, subject to a \$20 copayment for the fifth to twenty-fifth, and subject to a \$40 copayment thereafter. Out-of-network outpatient coverage was 50 percent of allowed charges, subject to a maximum of fifteen visits per year. In-network out-of-pocket expenses were limited to \$1,000 per individual and \$2,000 per family. Finally, the lifetime benefit maximum was \$1 million.

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Benefits and cost sharing in the MH/SA carve-out program were substantially better than in the previous plan. Before the carve-out, mental health inpatient coverage at a general hospital was complete for 120 days (after a \$150 deductible), then 96 percent after an annual deductible. But mental health coverage at a psychiatric hospital was complete for only sixty days and covered at 80 percent thereafter with a limit of 300 days. Before the carve-out, substance abuse treatment at a substance abuse facility was covered at 80 percent and only up to \$10,000 a year after the deductible. Outpatient mental health and substance abuse coverages were respectively at 50 percent and 80 percent of allowed charges, with respective limits of \$1,500 and \$2,500 per year after the deductible. The annual benefit limit was \$500,000; lifetime, \$1 million. The benefits after the MH/SA carve-out were significantly better for in-network care.

■ **Financial arrangements.** The contract between the GIC and Options was based on the number of primary insured participants (PIPs). Employees, retirees, students over age twenty-four, and persons covered under some continuation provision counted as PIPs; spouses and dependents did not.¹⁰ Over the study period the ratio of PIPs to total enrollees was roughly two to three. The GIC/Options contract, denoted in PIPs, thus can be readily converted into the more familiar per-member-per-month denomination by multiplying

“Coverage for in-network outpatient care was greatly improved after the carve-out; this will tend to increase use.”

dollar amounts by two-thirds. For the fiscal year beginning July 1993, each month Options received from the GIC a fee (the ASO fee), which was calculated by multiplying the number of PIPs by \$3.43. This rate would be adjusted upward by 5 percent in the second year unless otherwise agreed upon by the GIC and Options.

The contract for FY 1994 specified a target claims cost of \$20.72 per month per PIP. This corresponds to about \$14 per member per month. This served as a benchmark to evaluate Options' effectiveness in containing costs; also, financial performance relative to this target would be used to adjust the ASO fee. The \$20.72 refers to the portion of costs paid by the GIC (that is, plan costs) and does not include enrollee cost sharing. At the end of the fiscal year the actual claims costs would be compared with the aggregate claims target (aggregate, because the rate was stated in terms of per month per PIP), and the ASO fee would be reduced by an amount equal to 20 percent of the excess of actual claims over the target. However, this reduction could not exceed 20 percent of the ASO fee for the contract year (or \$4.14, 20 percent of \$20.72). For example, if claims costs turned out to be \$21.72 per month per PIP, then the ASO fee would be reduced by \$0.20 (20 percent of \$21.72-\$20.72) per month per PIP.

In the actual implementation, for the fiscal year beginning July 1994 (the second year of the carve-out), the ASO fee was revised to \$3.17 per month per PIP and the target level lowered to \$15.39 per month per PIP, because of unanticipated cost reductions. For FY 1995-1996, the target was further reduced to \$11.19 per month per enrollee, but the ASO fee was raised to \$5.18 per enrollee per month. Below we demonstrate why these dramatic downward revisions in the claims target occurred. The rules by which the ASO fee would be adjusted according to the excess of claims costs over target remained unchanged over the period. Besides the adjustment of the ASO fee according to the discrepancy between actual claims cost and the target, Options was required to satisfy performance targets. During the first year the set of performance guarantees consisted of five items but grew to sixteen in the second.

It is important to keep in mind that the overall benefits package was greatly expanded after the carve-out. In particular, coverage for in-network outpatient care was greatly improved. This coverage improvement, by itself, will tend to increase use. Furthermore, even

if use did not increase as a result of the benefit expansion, the improvement in coverage for in-network care would tend to shift costs to the GIC from other payers that have contracts with GIC enrollees. Thus, Options would have to implement some cost-saving measures simply to be able to maintain the GIC's costs at existing levels. Indeed, the initial claims target of \$20.72 per month per PIP was set at a level anticipating that savings by Options would merely offset any cost-increasing effects of the benefit expansion.

Incentives In The Carve-Out Contract

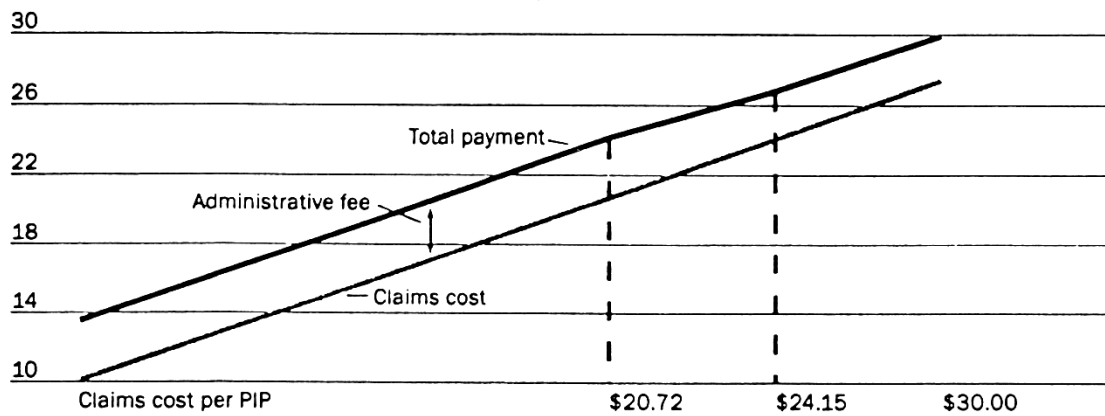
First we consider the explicit incentives in the first year of the contract and focus on the financial penalty and rewards associated with the claims target. Up to 20 percent of the ASO fee could be refunded to the GIC if the actual cost was higher than the target. The ASO fee to Options was the result of negotiations and was paid regardless of the administration costs actually incurred; thus, it was a type of prospective payment. The ASO fee included a profit allowance, but the actual profit or loss might be higher or lower depending on the claims costs that Options actually incurred.

Clearly, Options has an incentive to economize on its own administrative expenses. If controlling MH/SA service costs requires Options' resources, such resources will be provided only if Options is properly motivated. Indeed, the carve-out contract does contain explicit incentives for Options to control MH/SA service costs: the possible loss of 20 percent of the ASO fee. To such a small company at the time (this was Options' second major contract), this probably represented a significant amount of potential earnings. Nevertheless, in spite of the fact that the contract is written in terms of a payment per PIP per month, the contract is far from being a "capitation" contract in which risk is shifted largely to the vendor. Most of the financial risk in the contract remains with the GIC.

Payment by the GIC to Options is made up of two parts: the claims costs and the administrative fee. These are summed in Exhibit 1, which shows how the total payment by the GIC varies with the level of claims costs per PIP in FY 1994. There is only a small range, from \$20.72 to \$24.15, over which Options loses some fee as the claims cost increases. Options faces some risk, but this is small in comparison with the possible cost variations faced by the GIC. Given the different sizes of Options and the Commonwealth of Massachusetts, the risk-sharing arrangement appears to be sensible. For a small company such as Options, the total risk may have been significant. With an ASO fee of \$3.43 per month per enrollee, for a population of 70,000 PIPs, Options' potential penalty in a year could have been more than \$560,000.

EXHIBIT 1**Claims Costs And Payments In The GIC/Options Contract, Fiscal Year 1994**

Payment per PIP (dollars)

**SOURCE:** Authors' calculations.**NOTES:** GIC is Group Insurance Commission. PIP is primary insured participant. Total payment = administrative fee plus claims cost.

The contract provided Options no explicit incentive to reduce costs below the target of \$20.72: The "asymmetric" contract did not allow the ASO fee to increase when Options was able to lower costs below the target level. Indeed, if the use of aggressive managed care to reduce claims costs meant higher administrative expenses, the incentives established by the ASO fee adjustment mechanism would imply that costs should not be expected to fall significantly below the target level. To the extent that bringing claims costs below \$20.72 required administrative expenses, doing so would lower Options' profits.

In addition to incentives explicitly included in the contract, other forces may have been at work, having to do with the effect of Options' performance during the first contract year on its future. Options might have anticipated two effects from significant cost savings in the first year. First, its superior performance might prompt the GIC to raise its expectation about cost-savings potential. A likely consequence was that the GIC would lower the target rate. This phenomenon of superior contract performance resulting in more demanding terms in the future is well recognized in the literature as the "ratchet effect."¹¹

Second, Options might think that it could convince the GIC that its value to the behavioral mental health care carve-out was high by demonstrating excellent performance in the first fiscal year. This could enhance Options' bargaining power at later negotiation and competitive renewals: Options might be able to bargain for a higher administrative fee (out of which profits may be taken), or be more likely to have its contract renewed. It also might be a good signal to the outside market, thereby improving Options' prospects of win-

ning new contracts. We call this second effect the "reputation effect." Clearly, the ratchet and reputation effects act against each other: The former induces Options to lower its performance (tending to increase costs), but the latter provides the opposite inducement.

Data: Eligibility And Claims Files

Data for this project come from eligibility and health claims files, covering the period July 1991 through June 1995, provided to us by MEDSTAT. Identifying information about the contract holder was scrambled so that claims data could be merged with eligibility information without identifying contract holders. The eligibility data allow us to calculate the average number of PIPs for each month. Payments from the GIC to Options were based on a monthly count of the number of covered PIPs. Family contracts may cover more than one person; we use information on relationship, sex, and date of birth to identify individuals.

For some analyses we use a subsample of PIPs consisting of those covered by the GIC in the indemnity plan for the entire four-year sample period, defined operationally as contracts with forty-six or more months of enrollment of a possible forty-eight months. The purpose of identifying this "continuously covered" population was to control sample characteristics. All of these persons were covered by the GIC before and after the carve-out. Cost outcomes of the continuously covered subsample of 40,000 persons are compared with those of the entire sample. Creation of a PPO option for general health care for enrollees at the time of the carve-out drew a number of enrollees out of HMOs into the indemnity Hancock Plan and brought their MH/SA care under Options' management. In light of this plan switch, following a continuously eligible sample helps to avoid contaminating pre/post findings with selection effects.

For the post-carve-out period beginning July 1993 we sought information about any MH/SA claim that would be covered by the carve-out contract. Inpatient and other residential MH/SA care was included in the sample. For outpatient care we extracted any claim with an MH/SA diagnosis. The same selection criteria were used for the period before the carve-out as well, to make utilization throughout the sample periods comparable. Some cost shifting between MH/SA and general medical care is possible. For instance, inpatient treatment for alcohol abuse could be reclassified by a clinician as treatment for gastrointestinal problems and paid for under the general health insurance benefit. We are not in a position to evaluate to what extent such cost shifting occurred.

The claims data contain several fields related to costs. The contract between the GIC and Options is driven by the amount that the

GIC has to pay, so some of our analysis will be based on the payments by GIC reported on the claim. Claims also contain information about payment amounts that are the responsibility of the beneficiary, such as copayments and deductibles. Finally, covered charges represent the total negotiated price that Options has arrived at with the provider. Normally, the sum of GIC payments, beneficiary payments, and other payer obligations (if any) will be covered charges. Providers also report charges, but we do not use this information here. Units of services such as length-of-stay and visits on some outpatient claims are also reported on claims. Price per unit is calculated by dividing covered charges by the appropriate units.

Claims data for the last two months in the sample period appear to be incomplete, apparently because of delays in the submission and processing of claims. We requested data as of November 1995, allowing three months past the final service date, but this was not long enough to accumulate almost all claims for the last quarter of data. For this reason, we discarded the claims data for the last three months in the sample period and instead base the last year's figures on seasonally adjusted nine-month data.

Results

By any standard, the data show a very significant cost reduction after the carve-out. Exhibit 2 summarizes the findings for the entire enrolled population, with all costs reported in current-year dollars. In the first year of the carve-out the total payment from the GIC for all MH/SA services was \$9.32 million for FY 1994 and \$7.29 million for FY 1995. Average GIC payments per PIP per month fell from

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EXHIBIT 2

Plan And Total Mental Health And Substance Abuse Costs In Current-Year Dollars, For All Enrollees, Fiscal Years 1992-1995

	Before carve-out		After carve-out		Percent change
	FY 92	FY 93	FY 94	FY 95	
Enrollment					
PIPs	69,212	69,212	81,571	81,082	17.50%
Enrollees	101,373	101,012	128,495	127,486	26.48
Plan costs					
Total (millions)	\$16.93	\$14.82	\$ 9.32	\$7.29	-47.69
Per PIP per month	20.38	17.84	9.52	7.49	-55.50
Per enrollee per month	13.92	12.22	6.04	4.77	-58.66
Total costs					
Total (millions)	22.35	20.00	12.43	9.71	-47.72
Per PIP per month	26.90	24.08	12.70	9.98	-55.52
Per enrollee per month	18.37	16.50	8.06	6.35	-58.68

SOURCE: Authors' calculations.

NOTES: PIP is primary insured participant.

\$13.92 in FY 1992 to \$4.77 in FY 1995. Similar large reductions took place for total costs (total of plan and employee), which indicates that GIC payment reductions were not the result of cost shifting to employees. Overall, payments and costs fell 50–60 percent from the period before the carve-out to that after.

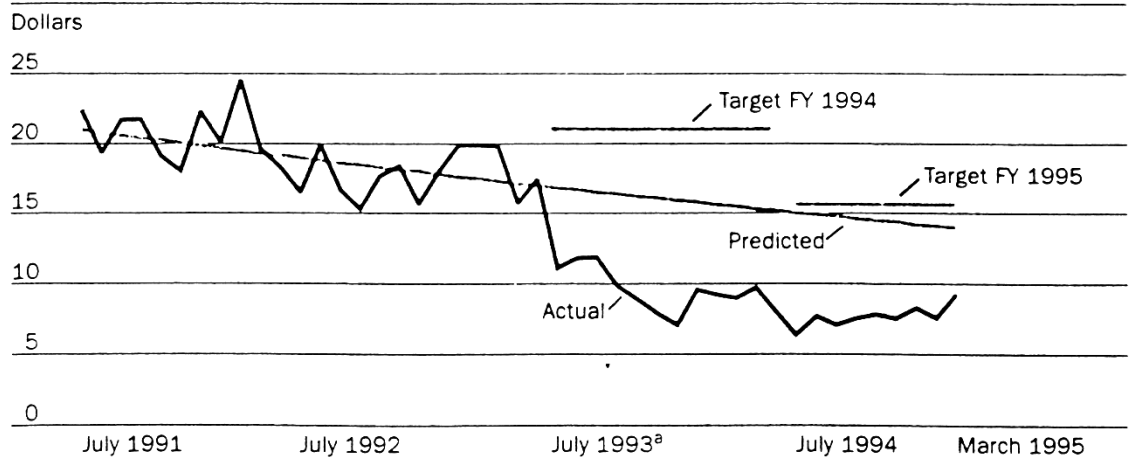
Exhibit 3 shows the spending reduction in terms of GIC payments per PIP per month, the cost element on which the contractual relation between the GIC and Options was based. Payments are presented monthly, clearly showing that a large fall in payments occurred at the beginning of the carve-out. The exhibit also shows the contract target payment amounts. In FY 1994 the target was \$20.72, set approximately at the level of payments in the era before the carve-out. The target rate for FY 1995 was renegotiated to \$15.39 following the precipitous fall in GIC payments.

The 50–60 percent fall in payments documented in Exhibits 2 and 3 summarizes the cost experience for the four years in the sample period. But this cost reduction cannot simply be attributed to the effects of the carve-out management alone. First, case-mix of enrollees might have shifted, especially because of the plan switching into the indemnity plan and away from HMOs. Second, medical prices were rising over this period, which implies that the real change in use might be even greater than the nominal amounts shown. Third, general trends in use of MH/SA services might have been at work independent of managed care. Indeed, a modest downward trend in costs is evident from Exhibit 3—a downward drift in monthly costs existed before and after the carve-out. We deal with the case-mix considerations by selecting a continuously enrolled

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EXHIBIT 3

Plan Payments Per Primary Insured Person Per Month, July 1991–March 1995



SOURCE: Authors' calculations.

^a Beginning of carve-out.

population. We use the medical care component of the Consumer Price Index (CPI) and transform costs at constant 1995 dollars. Finally, we estimate constant downward trends for both the plan and total costs in our sample period.¹²

After price adjustment, we find that, for the continuously enrolled population, GIC payments and total costs (per month) fell by 57 percent. We estimated downward trends to be 14.4 percent and 8.79 percent in real costs for plan and total payments, respectively. The ideal adjustment should be based on the trends in use in this population over the period if the carve-out had not been initiated. This of course is counterfactual and the adjustment unavailable. We could attempt to identify trends in other populations over this period in the same region. Nevertheless, because rates of change as well as levels of use of MH/SA services are likely to be population-specific, we prefer to use data on trends from this population. The rate of use in the GIC population was high prior to the carve-out, so a downward trend is plausible. Nevertheless, it seems unlikely that these downward trends would have been sustained over an extended period of time. Therefore, we judge that the extrapolation of the trend from the period before the carve-out to that after is an aggressive adjustment. We thus conclude that the 30–40 percent reduction is a minimum estimate of the impact of the managed care carve-out. Decomposing the contribution of these forces is a subject of ongoing research.

Options had a number of instruments to effect these cost reductions. It created networks of inpatient and outpatient providers. Prices for some services were set considerably lower than those that the providers had been paid previously. Providers also had to agree to accept Options' utilization review protocols. The authority to approve use at various checkpoints for inpatient and outpatient care gave Options the opportunity to affect rates of use directly. Working against these forces that were reducing use and prices was the benefit expansion for in-network care that would tend to increase demand.

Exhibit 4 contains a basic description of the components of cost for the continuously enrolled sample. Our classification includes the major areas of care, along with prices and quantities. Inpatient and outpatient care for both mental health and substance abuse experienced large cost reductions. The exhibit has not been adjusted for price changes or trends, since our interest here is in the relative impact across service areas.

The rate of facility-based care for both mental health and substance abuse changed little throughout the four years of the study period. Although the rate of admissions stayed roughly the same,

EXHIBIT 4

Decomposition Of Effects Before And After The Carve-Out

	Before	After	Percent change
Total cost per enrollee per month	\$27.42	\$11.62	-57.61%
Mental health inpatient			
Cost per enrollee per month	\$10.58	\$3.36	-68.22
Admissions per thousand per year	6.97	7.69	10.34
Cost per admission	\$18,129	\$5,300	-70.77
Average length-of-stay (days)	14.44	13.72	-4.97
Price per day	\$1,257	\$384	-69.45
Substance abuse inpatient			
Cost per enrollee per month	\$2.46	\$0.78	-68.17
Admissions per thousand per year	3.34	3.16	-5.39
Cost per admission	\$8,816	\$3,076	-65.11
Average length-of-stay (days)	9.53	9.71	1.89
Price per day	\$925	\$315	-65.95
Mental health outpatient			
Cost per enrollee per month	\$13.86	\$7.22	-47.90
Number of users per thousand per year	123.87	92.80	-25.08
Number of visits per user	14.32	10.71	-25.21
Price per visit	\$93.74	\$86.90	-7.30
Substance abuse outpatient			
Cost per enrollee per month	\$0.52	\$0.26	-50.80
Number of users per thousand per year	5.49	3.67	-33.15
Number of visits per user	12.35	10.30	-16.60
Price per visit	\$91.95	\$81.17	-11.72

SOURCE: Authors' calculations.

Options began using less intensive settings, partly as a substitute for an inpatient admission and partly as a site to transfer patients following a shorter inpatient stay. Our preliminary data analysis suggests that about one-third of the "days" of inpatient care following the carve-out are not inpatient residential care. This shift is reflected in a much lower average payment per day. In ongoing work, we are investigating how much of this lower average payment is due to a price reduction by a given facility and how much to a shift in the site of care.

Outpatient care costs were reduced by a combination of a reduction in the number of persons treated, a reduction in the number of visits per user, and a reduction in the price per visit. Mental health and substance abuse care were both affected substantially. More research at the level of the individual user is necessary for a better understanding of the changes in the patterns of care that occurred as a result of the carve-out.¹³

THE FINANCIAL INCENTIVE embedded in the MH/SA carve-out contract initiated by the Massachusetts Group Insurance Commission are explicit. The existence of a cost target and the adjustment of administrative fees contingent on the difference between the actual and target costs form a framework for evaluating the effectiveness of the carve-out's contracting mechanism. By all common measures, significant cost savings have been generated, even after applying an aggressive adjustment for trends in MH/SA service use.

The anticipated cost shifting from enrollees to the plan as a result of enhanced benefits is offset by a decrease in prices. Because of the improved MH/SA coverage and benefits for enrollees, expenses for the plan should tend to increase. But in the GIC experience, this increase was overcome by the decrease in prices that the GIC had to pay providers as well as by the effect of managed care on quantity of services. Both outpatient and inpatient costs decreased. Despite the general view that managed care will tend to shift the demand for MH/SA services from inpatient to outpatient, the GIC experience shows a mixed result. For mental health services, the decrease in outpatient costs between fiscal years 1992 and 1995 was less than that in inpatient costs, while substance abuse service costs decreased by almost the same percentage. Both mental health and substance abuse service quantities decreased uniformly.

The target level in the contract must be understood in relation to the penalty. From the perspective of incentives, the existence of a penalty for cost levels above the target does not necessarily imply that the target level will be achieved. In fact, Options might optimally choose to violate the target, incurring some penalty while saving administrative expenses. Nevertheless, the contract did not provide any incentive for Options to lower costs below the target level, since Options was unable to keep any savings.

As we have shown from the data analysis, even when Options faced no financial gains (and thus no contract incentives) from reducing costs below the target, in fact that was what happened. Thus, the very large cost reduction needs to be explained. Our hypothesis is that reputation has been the dominant consideration. Meeting a target exactly or beating it by a considerable amount is insignificant when a contract is viewed in isolation but may have repercussions when contract renewals and bidding for new contracts are considered part of a firm's incentive. As in many other industries, a good reputation is a very valuable asset: A firm that has demonstrated its capability to achieve a significant cost reduction, regardless of what the target level is, will more likely gain new

customers and profits. Our finding is consistent with this "long-term" perspective of contracting.

We recognize that our hypothesis of the "reputation effect" is just that, a hypothesis, and other potential explanations for the cost fall below the target can be considered. Options may have had a standard operating procedure to be applied to management of mental health costs, and the application of this method to this population simply resulted in the cost realization. This goes against the promise of Options (and other companies) to customize the review protocols to the client's desires. Also, since Options was such a young company at the time of this contract, it probably could not have been regarded as having such a procedure quite yet. Another possibility is that Options may simply have wanted to make sure that it did not go above the cost target; to do so, it had to put on the cost brakes very firmly. The GIC certainly did what it could in the contract language to prevent this management behavior, but it may yet be part of the explanation.

If the reputation effect does matter, a payer can use that to its advantage in contract negotiation. Because a vendor that wins the contract also wins the opportunity to build its reputation, a payer can be aggressive in contract negotiations. The ASO fee is prospective in nature and contains a profit margin. The potential for future profits may make a vendor willing to offer services at a discount. On the other hand, there is a down side to the presence of reputation efforts (or the alternatives just noted). A payer must be aware that the specific incentives provided by a contract generally will not be sufficient to predict a vendor's behavior. In fact, even when incentives are weak, vendors may achieve cost savings if this outcome happens to be the norm in the industry. A careful analysis of the interaction between contract and market incentives is necessary if a payer is to achieve its objectives in a carve-out contract.

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**COSTS &
INCENTIVES**

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