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# Managed Behavioral Health Care and Supply-Side Economics

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## Abstract

**Background:** Within the past decade, the mental health care system in the United States has undergone a significant transformation in terms of delivery, financing and work force configuration. Contracting between managed care organizations (MCOs) and providers has become increasingly prevalent, paralleling the trend in health care in general. These managed care carve-outs in behavioral health depend on networks of providers who agree to capitated rates or discounted fees for service for those patients covered by the carve-out contracts. Moreover, the carve-outs use a broader array of mental health providers than is typically found in traditional indemnity plans, encourage time-limited versus long-term treatments and favor providers who are engaged in outpatient care.

This phenomenal growth in managed behavioral health care over the past decade includes the rapid growth and quick consolidation of mental health MCOs. The period 1992–1998 shows steady and substantial annual increases in the number of enrollees in mental health MCOs, the figure more than doubling from 78.1 million people in 1992 to a projected 156.6 million in 1998, or 70% of insured lives. Moreover, these vast numbers of enrollees are becoming increasingly consolidated into a smaller number of firms. In 1997, 12 companies controlled nearly 85% of the managed behavioral health care market, with 60% of the market held by the three largest firms.

**Study Aims:** This article reviews empirical data and draws policy implications from the literature on managed behavioral health care in the United States. Starting with spending and spending trend estimates that show the average annual growth rate of mental health expenditures to be lower than that of health care expenditures in general over the past decade, the author examines utilization and price factors that may account for managed-care-induced cost reductions in behavioral health care, with special attention to hospital use patterns, fee discounting and the supply and earnings patterns of various types of mental health provider. In addition, data on staffing ratios and provider mixes of health maintenance organizations and mental health MCOs are reviewed as they reveal at least part of the dynamics of reconfiguration of the mental health work force in this era of managed care.

**Conclusions:** As measured by changes in utilization and price, widespread application of 'classic' managed care techniques such as preadmission review (gatekeeping), concurrent review, case management, standardized clinical guidelines and protocols, volume purchase of services and fee discounting appears to have led to significant cost reductions for providers of both impatient and outpatient mental health services. However, amidst a complex flux of market variables such as risk shifting, changing financial incentives and intensity of competition, not all of the reduction or slowdown in spending can be clearly and purely attributed to managed care. The data on the ongoing reconfiguration of the mental health work force are clearer in their implications: with an oversupply of all types of mental health providers, managed care has significant potential to increase the incidence of provider substitutions and spur the growth of integrated group practices.

**Implications for Further Research:** The current body of empirical and policy literature in mental health economics suggests several salient areas of follow-up. Is the proportionately greater impact of managed care on the annual growth rate of mental health care spending a temporary phenomenon or does it signal an enduring difference in the rates of increase between behavioral health care and health care in general? Beyond industry downsizing, what are the substitutions among mental health providers that are going on, and will go on, to produce cost-effective practices? What are the new financial or risk-sharing arrangements between providers and MCOs that will produce appropriate and high-quality mental health services? 

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## Introduction

Within the past decade, the mental health care system in the United States has undergone a significant transformation in terms of delivery, financing and work force configuration. Contracting between managed care organizations (MCOs) and providers has become increasingly prevalent, paralleling the trend in health care in general. For example, in 1990 the percentage of psychiatrists with MCO contracts was 45%; by 1995 that figure had increased to 68%.[1] Mental health benefits are increasingly being delivered in plans known as carve-outs, in which mental health services are contracted as a separate item from other health services rather than as an integrated part of medical services. These managed care carve-outs in behavioral health depend on a network of providers who agree to capitated rates or discounted fees for service for those patients covered by

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the carve-out contracts. Moreover, the carve-outs use a broader array of mental health providers than is typically found in traditional indemnity plans. Whereas indemnity plans cover allopathic physicians and Ph.D. psychologists for outpatient care, managed care carve-outs also cover licensed clinical social workers; master's-level pastoral, marriage and family counselors; family practitioners and 'midlevel' providers such as nurse practitioners and certified nurse specialists in psychiatry. In addition, the delivery of mental health services has increasingly shifted from inpatient to outpatient settings. This trend has been accomplished by decreases in third-party reimbursement for long-term psychoanalytic treatments in favor of time-limited psychotherapeutic and cognitive–behavioral treatments. Both of these trends favor providers who are engaged in outpatient care and who utilize or are willing to adopt short-term therapeutic approaches.

The phenomenal growth in managed behavioral health care over the past decade includes the rapid growth and quick consolidation of mental health MCOs. As indicated in **Table 1**, based on industry survey data collected by the newsletter *Open Minds*, the period 1992–1998 showed steady and substantial annual increases in the number of enrollees in mental health MCOs, the figure more than doubling from 78.1 million people in 1992 to a projected 156.6 million in 1998. The latter figure translates to managed behavioral health care coverage for 70% of insured lives. Moreover, these vast numbers of enrollees are becoming increasingly consolidated into a smaller number of firms. According to the industry's own self-reported enrolment data, by the end of all the mergers and acquisitions in 1997, 12 companies controlled nearly 85% of the managed behavioral health care market, with 60% of the market held by the three largest firms. According to *Psychotherapy Finances Online*, as many as 80 million lives are now in the hands of just two industry giants, Magellan Behavioral Health and FHC Health Systems. These facts and figures on enrolments are important not only for what they reveal about the degree of market penetration of MCOs but also—and potentially more ominously—for how they inform industry practices under the control of a relatively small number of large firms. Indeed, a good case in point of the curious effects of industry consolidation is provided later here in reference to psychiatrists' discounted fees.

Table 1. Enrolment in specialty managed behavioral health programs, 1992–1998

| Year | Enrolment (in millions) |
|---|---|
| 1992 | 78.1 |
| 1993 | 86.3 |
| 1994 | 102.5 |
| 1995 | 110.9 |
| 1996 | 124.7 |
| 1997 | 149.0 |
| 1998 | 156.6 (projected) |

*Source: Open Minds* annual industry surveys.

Amidst the proliferation of variants in organizational structure of managed care plans or networks over the past two decades, and the considerable confusion and controversy engendered by the practices of MCOs for stakeholders and health care analysts alike, there is consensus at least on what can be termed the *managed care philosophy*. On this, the Institute of Medicine has provided a good rough-and-ready definition: 'to control costs through improved efficiency and coordination, to reduce unnecessary or inappropriate utilization, to increase access to preventive care, and to maintain or improve the quality of care' [2] (pp. 1–2). This goal-oriented definition of managed care underpins the review and empirical documentation here of where widespread and enduring application of the managed care philosophy has actually led us to date with respect to the cost and work force configuration of mental health services. In this exercise, two central themes are of interest: (i) Managed care has effected a significant slowdown in the rate of increases in mental health expenditures over the past decade due to changes in utilization and price. Some of the cost reduction can be attributed to managed care, but it is important to consider other potential sources as well, such as changing financial incentives and market pressures. (ii) With an oversupply of mental health care professionals, managed care has significant potential to increase the incidence of provider substitutions and spur the growth of integrated group practices.

## Impact of Managed Care on the Cost of Mental Health Services

To set the stage for my review of utilization and price factors that may account for managed-care-induced cost reductions in behavioral health care, I begin with some of the mental health/substance abuse (MH/SA) expenditures data collected by David McKusick and his colleagues for the 1986–1996 period.[3] My aim in citing their data is, for the moment, simply 'neutral' reporting of spending and spending trend estimates that once linked to particular cost-containment methods give us a basis for implicating managed care in cost reductions and/or slowed rates of growth in spending.

McKusick *et al*. estimate that $79.3 billion was spent on diagnosis and treatment in 1996 (roughly 8.1% of the total health care spending that year), the largest proportion of which, $66.7 billion, went to treating mental illness. Whether we look at mental health spending alone or the total MH/SA spending, most of the dollars were for specialty providers, as opposed to general service providers. Among all types of providers, community and psychiatric hospitals combined accounted for the largest proportion of MH/SA expenditures. Among individual practitioners, spending on specialty providers (psychologists and social workers) exceeded that of both physicians and psychiatrists.

Total MH/SA expenditures grew from $39.5 billion in 1986 to $79.3 billion in 1996, an annual average growth rate of 7.2%. The data of McKusick *et al*. on average annual growth rates by type of provider indicate that

spending for community hospitals increased annually by 8.1% over the ten-year period, whereas spending for psychiatric hospitals grew by only 3.8% annually. The slower growth rate for psychiatric hospitals can be attributed to their declining average daily census over that period, from 130 000 in 1986 to 90 000 in 1996. The largest annual growth rate was for home health care providers. Among health professionals who bill independently, such as counselors, social workers and psychologists, the annual growth rate was 8.5%. As McKusick *et al*. note, part of this growth may be attributable to increases in the numbers of those providers. Indeed, with co-investigators Susan Ivey and James Zazzali, I documented those provider increases in earlier research on managed care and the supply dynamics of the mental health work force.[4]

The final set of data from McKusick and colleagues that is of special interest here concerns MH/SA expenditures in relation to national health spending in total over the 1986–1996 period. *The* point to make here is that the average annual growth rate of mental health spending was lower than that for health care spending in general, 7.2% versus 8.3%. As McKusick and colleagues observe, 'This difference may indicate that national trends that are affecting much of the health care sector, such as the growth of managed care and the increasing capacity of health plans to negotiate discounts from providers, are having a proportionately greater impact on MH/SA services'[3] (p. 155).

On the utilization side of the cost-reduction equation, hospital-based mental health services are fertile terrain for attempts at assessing the impact of managed care on spending. A growing number of hospitals have established contractual or financial relationships with managed care plans, or otherwise have adopted the 'classic' managed care techniques to control benefits and utilization. These techniques, used by providers of both outpatient and inpatient mental health services, include preadmission review or gatekeeping, concurrent review, case management and clinical guidelines and protocols to standardize reviewing practices. These techniques are often implemented differently and some are more aggressively enforced than others, thus the effectiveness of each mechanism in a global sense is difficult to assess. Moreover, the impact of hospital managed care procedures on the overall mental health costs for a MCO or a company is difficult to isolate since the overall reduction in expenditures also depends largely on managed care mechanisms in outpatient settings.

With these assessment difficulties in mind, I recently examined five published studies[5–9] on the impact of managed care on hospital utilization patterns, based on the outcomes indicators of admission rate, average length of stay and cost per admission.[10] The managed care techniques employed by the hospitals/MCOs in the studies were utilization review, concurrent review and case management. In order to assess aggregately the overall impact of these techniques on utilization, I categorized the organizations according to three levels of managed care 'strategy': level 3 organizations employed all three managed care techniques, level 2 employed two of the three techniques and level 1 employed only one of the techniques or managed care through a carve-out. Because I had no way of knowing whether organizations categorized at the same level applied the techniques, or technique, in the same way or at the same level of intensity, my categorizations are of course not absolute measures of 'the *manage* in managed care' but rather only rough equivalents, so my 'meta-research' is only preliminary in terms of gauging the impact of managed care on the three outcomes measures. However, as summarized in **Table 2**, the findings are noteworthy: the level 3 commercial insurance company of Wickizer *et al*. achieved a 33% reduction in admissions and a 28.5% reduction in average length of stay. The level 2 Kaiser Foundation health plan of Strumwasser *et al*. found that a 38.2% reduction in admissions would be possible (that is, 38.2% of incurred inpatient days were found to be unnecessary) and that a 39.9% reduction is average length of stay would be possible (that is, 39.9% of hospital stay days were found to be unnecessary). The level 2 Blue Cross/Blue Shield plan and fee-for-service inpatient psychiatric unit of Olden and Johnson achieved a 47% cost-per-admission reduction. The level 1 state hospital of Rapp and Moore achieved a 29% reduction in admissions and a 15% reduction in average length of stay using only preadmission review. Finally, the level 1 Medicaid with a managed behavioral health plan of Stroup and Dorwat achieved a 20.8% reduction in admissions, a 10.1% reduction in average length of stay and a 30% reduction in cost per admission.

The study of Olden and Johnson warrants special attention because utilization review was not one of the managed care techniques used by the hospital. Rather, the cost reductions were achieved through improvements in management and the use of less-expensive mental health workers (i.e., nonpsychiatrists). Also, the managed care model emphasized rapid identification of problems that can prolong length of stay. So the realized cost reductions were likely derived in part by the reductions in length of stay, which were not reported. This 'facilitated' model resulted in high-quality and cost-effective inpatient psychiatric care, suggesting that even a less-comprehensive approach to managing inpatient mental health can produce significant reductions in length of stay and, in turn, reductions in the cost per admission.

Overall, that these managed care techniques had an impact on utilization and thereby reduced costs for the mental health service providers seems clear. But we also know from other research[11] that hospital characteristics—in particular, ownership status (for-profit versus nonprofit) and level of competition within the market—can confound access and admission rate, both utilization measures that are responsive to managed care cost-containment techniques. Moreover, my own work on the effects of decentralization on mental health services costs in California shows that shifting risk and changing financial incentives can also lead to cost reductions.[12] Quite briefly, in 1991, the California legislature passed a bill called 'Program Realignment', designed to reform the state's mental health system by decentralizing its administration and financing to each of the state's 59 county mental health authorities. The legislation gave



 

Table 2. Five-study assessment of the impact of managed care on hospital utilization patterns

| Study | Managed care level | Total number of hospital admissions | Total inpatient days | Admission reduction (%) | Length of stay reduction (%) | Cost per admission reduction (%) |
|---|---|---|---|---|---|---|
| Wickizer *et al.*[5] | 3 | 2 265 | | 33.0 | 28.5 | |
| Strumwasser *et al.*[6] | 2 | 539 | 6 377 | 38.2 | 39.9 | |
| Olden and Johnson[7] | 2 | 4 945 | | | | 47.0 |
| Rapp and Moore[8] | 1 | 73 462 | 75 853 | 29.0 | 15.0 | |
| Stroup and Dorwat[9] | 1 | 616 | | 20.8 | 10.1 | 30.0 |

significantly greater power and flexibility over local service production choices to the county authorities in return for acceptance of a comprehensive, fixed-block, grant-funding approach removed from the state's annual budget process. This restructuring of financial and programmatic responsibilities was expected to provide both risks and incentives to the local authorities to produce mental health services in a more cost-efficient and effective manner. Overall, the effort has proved successful. The county mental health authorities increased their efficiency of service production and realized significant cost savings or cost containment by reducing use of all inpatient-related services and increasing use of outpatient and supported housing services—in effect, substitution of care settings with no managed care techniques.

In short, my point is that we must always practice caution when attempting to tease out the effects of managed care in the face of apparent cost reductions achieved through changes in utilization. The possibility of epiphenomenal effects in managed care environments is real. So too is the possibility of 'subterranean' service usage, hidden as a consequence of deductibles and other patient out-of-pocket spending that goes uncounted by our traditional methods of health care industry surveying, all of which could be artificially inflating the cost-savings data from managed care settings.

On the price side of the cost-reduction equation, the emergence and rapid growth of mental health carve-outs has created a field day for volume discounts, fee discounts and provider substitutions in outpatient care. The volume purchase of services at negotiated rates is straightforward price reduction and a keystone of carve-out contracts' use of economies of scale, as Frank *et al.*,[13] Ma and McGuire[14] and Vogelsang[15] have detailed. Many of the success stories of decreases in the quantity and price of services can be found in the mental health economics literature, documenting cost reductions in the range of 25–40%.[14,16–19]

In my own research, I have concentrated on fee discounting, particularly among psychiatrists, and the supply and earnings patterns of the various types of mental health providers that together suggest a scenario ripe for economic substitution. In a recently completed study of the scope of managed care and the level of fee discounting in psychiatric practice,[20] my colleagues and I collected survey data in 1996 from a sample of 970 psychiatrists nationwide who responded to our queries about the percentage of their patients for whom professional fees were discounted and the average discount rate that was applied to their fees. In our sample, on average 70% of the psychiatrists had patients who were enrolled in managed care plans. The percentages varied significantly across different primary practice settings: group office, 90%; private hospital, 87%; solo office, 57%; public clinic, 43%; and public hospital, 27%. Narrowing our focus to behavioral health care plans, or carve-outs, we found that on average 53% of the sample had patients covered by such contracts. The percentages also varied by practice setting in accord with the just-enumerated pattern.

In the area of fee discounting, on average 35% of the psychiatrists offered such discounts to their patients. Psychiatrists who practiced in private settings (group and solo practices and private hospitals) offered discounts to a larger proportion of patients than the respondents who practiced in public settings (public clinics and hospitals). Overall, the average rate of discounts was 25%, with little variation across practice settings.

There are at least three main reasons for psychiatrists to discount their fees. First, many of these providers adjust their fees according to their patients' ability to pay, that is, a sliding-scale arrangement. Second, psychiatrists who work in public clinics or hospitals may routinely charge at a lower rate than office-based psychiatrists, which highlights an important difference between 'fixed' discounts and 'discretionary' sliding-scale fees. Third, MCOs typically negotiate reduced fees from their contracted providers.

Indeed, in our sample, in practices with a higher percentage of patients in managed behavioral health care plans, a higher percentage of patients were offered discounted fees. As summarized in **Table 3**, the percentage of patients receiving discounts on fees increased significantly from 29% for psychiatrists with no patients in managed behavioral health care plans to 47% for psychiatrists with a high percentage of patients in these plans. Clearly, this pattern is consistent with the role of managed care firms in obtaining discounts from providers, which is presumably one of their avenues for achievement of cost savings.

The 'kicker' in our data, however, is found in the second row of **Table 3**, on the average level of discounts for patients who received discounts on fees. Note that there is no significant variation in average rate of fee discounts across the different levels of patient enrollment in managed behavioral health care plans. The discount rates are nearly uniform—about 25%! In light of my earlier discussion of the phenomenally high degree of market penetration of

Table 3. Percentage distribution of patients receiving discounted fees and level of discounts by percentage of patients covered by a managed behavioral health care plan

| | | Percentage of patients covered by a managed behavioral health care plan | | | |
|---|---|---|---|---|---|
| | All | None | Low (1–24%) | Medium (25–49%) | High (50–100%) |
| Percentage of patients receiving discounted fees | 35%<br>(1.3)<br>$N = 705$ | 29%<br>(1.9)<br>$n = 287$ | 34%*<br>(2.3)<br>$n = 201$ | 40%**<br>(3.2)<br>$n = 124$ | 47%<br>(4.0)<br>$n = 93$ |
| Average level of discount for patients receiving discounted fees | 25%<br>(10.6)<br>$N = 619$ | 24%<br>(1.1)<br>$n = 236$ | 25%<br>(1.1)<br>$n = 183$ | 24%<br>(1.1)<br>$n = 118$ | 25%<br>(1.1)<br>$n = 82$ |

*Note*: Reported percentages are weighted. Standard errors are in parentheses and are adjusted for weighting and sampling design effects. The total $N$ for each row reflects reductions in the number of observations containing missing data.
*Statistically different from psychiatrists with no patients covered by managed behavioral health care plan, $p < .05$.
**Statistically different from psychiatrists with no patients covered by managed behavioral health care plan, $p < .01$.

mental health MCOs and the rapid rate of firm consolidation in the industry, it is worthwhile to note that precisely such uniformity in fee discount rates would be expected if the comparatively small number of large firms controlling the market had a standard discount they obtained from providers. These data give us pause to consider just how competitive the managed behavioral health care market really is, and what future price increases we might expect from this concentrated industry.

The earnings patterns of the mental health work force provide another fertile area for research on the price side of cost reductions under managed care. That work force currently consists, mostly, of psychiatrists (physician specialists), Ph.D. psychologists, licensed clinical social workers, nurse practitioners and certified nurse specialists in psychiatry and master's-level pastoral, marriage and family counselors. In a competitive marketplace such as managed behavioral health care, the demand is presumably for the cost-effective provider. Examination of changes in relative earnings across provider types is one way of assessing demand. This is in fact the approach that I have taken in my efforts to understand the supply dynamics of the mental health work force and the use of nonphysician providers as economic substitutes for physicians. Here I share a portion of the income data, collected from professional association surveys as well as federal government sources over the period 1984–1996, that colleagues and I have analyzed.[21]

The patterns of earnings for sample psychiatrists and Ph.D. psychologists, measured as net income after practice costs, show that, in 1984, the mean yearly income of psychiatrists was $85 100. From 1984 to 1995, psychiatrists' mean income rose to $137 200, an increase of about 61%. In 1985, psychiatrists made, on average, $87 200, as compared to $48 000 for psychologists, almost a 2:1 ratio. In 1995, clinical psychologists' overall mean income was $74 600, about a 55% increase since 1985, which is similar to the situation of psychiatrists, whose incomes increased about 57% over this period. The pattern of income change for psychologists, however, differs from that of psychiatrists. Although the increase in psychiatrists' incomes over time has been relatively constant, psychologists' incomes increased rapidly through the 1980s but have increased at a much slower rate since 1989.

Because data on income changes over time were not available for master's-level social workers and nursing specialists in the specific area of mental health, we examined changes in income for similar groups of workers from the Current Population Survey (CPS), identifying workers through the 1980 occupation codes. For both groups, we restricted our analysis to those with a master's degree or higher. For certified nurses, we further restricted our analysis to nurses identified as working in hospitals or health services using the 1980 industry codes. We computed average weekly earnings for these groups of providers by year, applying CPS sampling weights, and then computed annual earnings as 50 times CPS usual weekly income. The important limitations of this approach to estimating trends in provider earnings have been detailed elsewhere.[21] We found that the earnings of advanced practice nurses have increased steadily since 1984. The earnings of master's-level social workers increased rapidly from 1990 to 1993, but this increase has leveled off since 1993. The incomes of both of these groups have increased significantly since 1989 relative to psychologists and psychiatrists.

Together, these data suggest that the demand for psychiatrists has become somewhat static throughout the 1990s. Overall, the incomes of psychologists have increased similarly to those of psychiatrists since 1985. While the market has supported much faster growth in the number of psychologists, psychologists' incomes have also slowed in their rate of increase since 1989, suggesting that the increase in the supply of these providers has kept pace with (and if present trends continue, may exceed) the increase in the demand for their services. The numbers of social workers and clinical nurse specialists in mental health have increased dramatically in recent years, accompanied by increases in their earnings. This suggests a substantial increase in the demand for the services of social workers and advanced practice nurses in recent years.



 

Data from my recent case study[22] of the staffing ratios and provider mixes of two staff-model health maintenance organizations (HMOs) and a mental health MCO corroborate the above income–demand trends in the sense that these organizations appear to be achieving cost reductions at least in part through economic substitution of more-expensive providers (i.e., psychiatrists) with less-expensive providers. In 1995, licensed clinical social workers predominated on the staffs of the two HMOs, and Ph.D. psychologists predominated in the mental health carve-out with the balance of the staff fairly evenly divided between psychiatrists and social workers. These staffing ratios held consistently for the two HMOs during a 1992–1995 period of work force reduction.

The staff mix and ratios in our sample are fully consistent with national staffing trends in MCOs, which show increased use of nonphysician mental health providers. The appropriate degree of economic substitution of one type of provider for another is, of course, a controversial issue. However, the cost savings achieved by using lower-paid nonphysician health professionals to deliver mental health services can be seen as an incentive for the development of a more collaborative model of medical practice. Indeed, although we did not study the amount or content of care delivered by each of the three provider types in our organization sample, the preliminary analysis of the division of labor among providers in a large mental health MCO by Sturm and Klap,[23] as measured by outpatient claims, indicates need-based and comanagement of care. Contrary to prevailing consumer concerns—which have coalesced into almost a see-evil mythology about MCO industry practices, something along the lines of 'reduce costs, the patients' needs be damned'—Sturm and Klap found that psychiatrists were targeted to patients with severe mental illness (psychotic and bipolar disorders), master's-level therapists and social workers were targeted to patients with less-severe disorders such as adjustment and relational problems and Ph.D. psychologists fell somewhere in between, handling patients with depression and adjustment and relational problems. Moreover, provider combinations (comanagement between a psychiatrist and another provider-type) were in keeping with the above distribution of services by *DSM*-IV diagnoses: the more severe the disorders, the more likely the patients saw a psychiatrist alone or in combination with another type of provider.

The competitiveness of the managed behavioral health care market may partially explain the changes in provider mix and staffing ratios observed over the last decade. Markets with a high level of managed care penetration and increasing competition would seem to hold stronger incentives for economic substitution of certain types of mental health worker for others. However data are sparse on this issue and the truth is we simply do not yet understand the market forces at work here.

What is clear from the data I have collected on the changing mix and geographical distribution of mental health providers is that states with higher ratios of psychiatrists per 100 000 population typically have higher ratios of other types of mental health workers, a trend that more reflects a higher demand for mental health services than economic substitution among provider types. As I have detailed elsewhere,[4] there are a number of possible explanations of why the mental health work force is distributed the way it is nationally: regional variations in insurance coverage and state expenditures on health, levels of income for both clients and providers, state regulations on licensing and scope of practice, regional preferences for certain types of providers and even the location of mental health care training programs. In short, supply and demand and the impact of managed care on cost is a tricky and complex business.

## Impact of Managed Care on the Mental Health Work Force

In my research to date on the US mental health work force, based on supply data collected by various professional associations, certification and accreditation agencies and other researchers, I roughly estimate that there are 350 000–400 000 providers comprising the five major groups of psychiatrists, master's- and doctoral-level psychologists, clinical social workers, clinical nurse specialists in psychiatry and counselors of varying backgrounds. I have found that there are about twice as many psychologists as psychiatrists, and over twice as many clinical social workers as psychologists.[4,21,24] During the period 1989–1995, growth in the number of psychologists was about twice that of psychiatrists, while the rate of growth in the number of clinical social workers was almost double that of psychologists. Overall, it is at present difficult to tell from these supply figures whether the faster rate of growth in the numbers of psychologists relative to psychiatrists signals higher demand for, or oversupply of, psychologists relative to psychiatrists, and likewise for social workers relative to psychologists.

The increasing role of managed care in mental health and the concurrent reconfiguration of the mental health work force are likely to continue. Specific categories of mental health professionals have particular skills that are likely to be valued in a managed care setting. By focusing on those unique skills, many providers are likely to find a niche within managed care settings. Opportunities abound for collaboration among mental health providers, as well as for collaboration between mental health and primary care providers. While there are barriers to collaboration, it has the potential to improve service delivery and patient outcomes in mental health care.

While some mental health professionals may have suffered income loss or been forced to change employment settings, others have found a niche within managed care. Particular skills that are likely to be increasingly valued in the managed care context include case management, the use of short-term treatment modalities and working collaboratively within a team of mental health professionals.

If the psychiatric profession is to thrive in the managed care environment, the profession will need to redefine what constitutes the unique domain of psychiatry. This includes

directing more attention to the medical side of their training as it applies to mental health care (e.g., neuropsychopharmacology and psychiatric–neurologic differential diagnostics). The administrative role of psychiatrists as 'at-risk psychiatrist–managers', integrating clinical care and cost containment, is likely to become increasingly widespread.[25] In addition, the psychiatric residency curriculum would need to devote additional attention to management and supervision of other mental health providers and primary care providers, and specific training in collaboration.[26]

For psychologists, who have often been critical of managed care, adapting to the managed care environment is essential.[27,28] Possible roles are emerging in health psychology, combined practices with primary care providers and stress management and substance abuse programs within employee assistance programs. A particular strength, for those with doctoral research skills, may include directing analysis of intra-organizational data, clinical practice guidelines and clinical outcomes. An important and unresolved issue for this group pertains to the future direction of regulation of prescription privileges.

Clinical social workers offer the unique family and systems approach to mental health services delivery. Additionally, specific training in case management would seem to fit well with many of the current trends in behavioral health care. Skill in this area should be a standard part of training and continuing education. Advanced practice nurses in mental health offer a unique combination of differential diagnostic skills and mental health training. Additionally, an expanding scope of practice in many states suggests that these workers may increasingly provide prescription services for patients, either independently or at the direction of a physician.

Collaboration among various providers has the potential to improve the delivery of mental health services.[29] A collaborative model would use the unique skills and competencies of different providers in a complementary fashion and might include the pairing of a mental health specialist with a primary care provider, or use differing mental health specialists in a team approach to care.

Group practices, particularly multidisciplinary practices, can be seen as offering an increasing opportunity for mental health specialists to offer a complementary service to general physicians' care of patients. Where primary care providers face increased pressures to see higher volumes of patients, those providers may also lack time to provide optimum screening for stressors and mental disorders. A mental health professional functioning within a group practice (whether on site or in a 'practice without walls') can build capacity in the area of mental health services—services an ideal primary care practice would offer.[30,31]

## Research Agenda for the Future

In closing, the behavioral health care data and policy reviewed here lead me to look to the future research agenda in mental health economics. I have identified the following areas of inquiry to be salient follow-ups to the current body of empirical and policy literature in mental health.

(i) Is the proportionately greater impact of managed care on the annual growth rate of mental health care spending a temporary phenomenon or does it signal an enduring difference in the rates of increase between behavioral health care and health care in general?
(ii) How much of the change in mental health care organization, financing and delivery is owing to managed care as opposed to market forces?
(iii) Beyond industry downsizing, what are the substitutions among mental health providers that are going on, and will go on, to produce cost-effective practices?
(iv) What are the new financial or risk-sharing arrangements between providers and MCOs that will produce appropriate and high-quality mental health services?
(v) What are the potential antitrust concerns given the ongoing consolidation of firms in the managed behavioral health care industry?
(iv) What kind and degree of intervention is needed by state and local government in regulating the managed care industry and fostering competition?

The last question provides an excellent opportunity to conclude with one of the priceless quotes of the decade in the mental health services literature. In discussing the consumer outcry about managed care and the opportunistic responses of politicians of all stripes to regulate and legislate without knowing, much less understanding, the nature of the managed care beast, David Mechanic[32] (p. 126) has insightfully observed, 'Having legislators micromanaging mental health care is even more frightening than having MBAs doing so'. I wholeheartedly concur.

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