

Managed Care for Persons With Serious Mental Illness

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Abstract and Introduction

Abstract

The rapid enrollment of Medicaid clients in private sector managed care plans has prompted considerable debate among consumers and policymakers about the extent that private sector techniques are transferable to vulnerable populations, such as persons with serious mental illness. Concern about these issues and the lack of empiric data to inform policy choices led the Substance Abuse and Mental Health Services Administration (SAMHSA) to initiate a 3-year (1996-1999) study at 21 sites to assess the impact of managed care on several vulnerable populations, including persons with serious mental illness. This article sets the background for these SAMHSA studies by addressing the relevant research findings related to the mentally ill adult population. The major question examined is whether managed care strategies, used to effect reductions in cost of mental health care in the privately insured population, can be duplicated for low-income, seriously mentally ill adults.

Introduction

Privatization of health care and the diminishing role of the state in administering publicly funded mental health care programs are issues of great concern for consumers, providers, and policymakers. Most states today are contracting out health care services to private sector entities, such as HMOs, in order to contain the costs of health care and reduce fiscal risk. The rapid and decentralized diffusion of managed care into public sector systems has created great variance in the form that managed care plans take and the philosophies and structures under which they operate.

A managed care tracking project funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) documented that 97 managed care programs operating in 47 states include some form of mental health and drug abuse benefits.[1] Most integrated programs (which generally include mental health and physical health) contract with private sector organizations, whereas carveout arrangements for behavioral health are equally divided between private and governmental agencies. Almost all contracts place the managed care entity at financial risk through capitated arrangements, whereas the providers are usually paid on a fee-for-service (FFS) basis.

Managed care represents both opportunity and risk as it begins to reshape systems that serve our most vulnerable populations. To date, most private managed care firms have experienced cost reductions and administrative efficiencies with members who have no serious mental illness but who experience episodes of acute illness. Whether these cost reductions and efficiencies can be realized in the public mental health sector is uncertain. What makes public sector managed care problematic is that this sector serves clients with the most severe and long-standing psychiatric conditions, often overlaid with a variety of co-occurring medical and substance abuse problems, poverty, inadequate housing, and lack of social support. Because of the recurrent nature of their illnesses and the associated high volume of service use, persons who have serious mental illness may not fare well under managed care programs that emphasize cost reductions, substitution of high-intensity for low-intensity services, cost shifting, or outright cost avoidance. Moreover, the variety of social rehabilitative needs that historically were attended to by state funding and by use of insurance reimbursements may be ignored when the criteria of stringent medical necessity are applied. As a result, opponents believe that managed care arrangements may greatly disadvantage persons with serious mental illness, while supporters believe managed care offers opportunities for more coordinated appropriate care for the most needy patients.

Concern about these issues and the lack of empiric data to inform policy choices led SAMHSA to initiate a 3-year (1996-1999) study at 21 sites to assess the impact of managed care on several vulnerable populations, including persons with serious mental illness. The 5 study sites were located in Florida, Hawaii, Oregon, Pennsylvania, and Virginia.

Each site compared the experiences of Medicaid clients under traditional FFS Medicaid with clients under some form of Medicaid managed care. A common research protocol was followed at each site to obtain interviews with a cohort of Medicaid beneficiaries with serious mental illness (N = 2318) to learn about social functioning, symptoms, satisfaction, and quality of life. In addition, the sites collected Medicaid claims/encounter data, pre- and post-managed care, for information on service use and costs. Family interviews were conducted to determine family burden and support information that could be linked with administrative records that provide information on diagnoses, hospital admissions, outpatient services, and pharmacy use. These linkages provided opportunities to confirm self-reported use of services and to connect self-reported outcomes measures (eg, client satisfaction) with services. Interviews and contract reviews were also carried out with the MCOs at each site to identify network composition, risk-sharing arrangements, capitation arrangements, accountability mechanisms, benefit design, enrollee characteristics, and so on.

The sites represent a diversity of for-profit (Virginia, Florida), private not-for-profit (Hawaii), and public not-for-profit (Pennsylvania, Oregon) managed care plans. Four of the plans are behavioral health carve out plans, while Virginia's is an integrated behavioral and physical health plan. Florida includes 2 distinct forms of Medicaid managed behavioral health care in addition to FFS.

The study's administrative data component examined patterns of utilization and cost for all Medicaid clients across sites using the same sampling criteria, common service definitions, service units, and costs. This data set provides opportunities to address questions of considerable interest to policymakers and program managers about Medicaid services for persons with serious mental illness, such as purchasing and contracting arrangements, quality of care, and cost and efficiency of care delivery.

This article provides a literature review addressing the issues of service use, cost, and outcomes examined in the SAMHSA study of the seriously mentally ill population.

Structure of Managed Health Care Programs

During the past several years, major changes have occurred in the management of public behavioral health care services for adults with serious mental illness. Motivated primarily by concerns of cost containment, these changes involve new financial and organizational strategies that cumulatively are called managed care. Managed behavioral health care refers to a set of strategies in which behavioral health care is financed by fixed payments for enrolled populations. The alternative to managed behavioral health care is FFS, in which providers are reimbursed for the volume of services delivered on a retrospective basis. However, the simple label of managed care belies a varied and complex set of relationships among purchasers, providers, and consumers that are not precisely defined and not well understood in relation to client outcomes.[2]

Risk Arrangements

A redefinition of risk and accountability for adults with serious mental illness is one of the most fundamental changes comprising the shift to managed care. While states have traditionally borne the risk for the seriously mentally ill,[3] many of the current arrangements shift risk for community care to private organizations, of which many are for-profit entities.[4] Private for-profit plans agree to accept risk for identified populations with mental illness for a flat fee, which is typically paid on a per-member-per-month basis.[5] To the degree that these entities can reduce service use relative to historical expectations, they will realize a profit.

Risk and profit arrangements are negotiated in each contract. Variations in risk arrangements and profit and loss thresholds may influence the behavior of MCOs and impact access to services and consumer outcomes. Although the role of the state is fundamentally changed by these arrangements, it still is ultimately responsible for state hospitalization and other special services paid for by block grants.[3]

Integrated Versus Carve Out Arrangements

Carve out plans are the most popular arrangement used by states.[6] In these plans, the funds that have historically been used to purchase behavioral health care services for identified populations are separately allocated to specialty behavioral health managed care organizations (BHMCOs). These BHMCOs are then responsible for all of the behavioral health care services (or in some instances, for mental health only) for the identified population of enrollees. These programs may be operated by public agencies at the state or local level or contracted out to private BHMCOs.[7] They vary with respect to the comprehensiveness of their benefit packages and the placement of the pharmacy benefit (eg, whether to be in the carve out or in the HMO).

In an integrated arrangement, funds for behavioral health services typically are combined with general health care into an integrated capitation rate per member per month. In these instances, the provider organization (usually an HMO) is typically at risk for physical and behavioral health care services. Given the high rate of medical comorbidity among those with serious mental illness, these integrated plans may hold special promise for addressing the complex health needs of this population.[8,9] Conversely, this arrangement may result in fewer overall capitated dollars being allocated for behavioral health care, which generally is considered as more discretionary by the HMO.

Since persons with serious mental illness are known to have a broad range of needs, including rehabilitative and supportive services, the range of services that are included in a health plan and the mechanisms that are available for obtaining care outside of the covered benefit are quite important. Alcohol and other drug abuse (AODA) services are of particular concern given the high rate of AODA comorbidity for populations with severe mental illness.[10]

Fragmentation in community service systems, driven by categorical funding mechanisms, has been a concern for persons with serious mental illness since the onset of deinstitutionalization.[11] Managed care purchasing arrangements may further fragment systems and make it more difficult for patients to obtain the range of benefits that they need to treat their mental illness.[12]

The financing incentives implicit in managed care programs may also encourage providers to shift costs to other entities (such as the criminal justice system or general health care). These cost shifts may further degrade the quality of care and cause overestimates of the overall cost savings that accrue to MCOs. On the other hand, if these pressures cause increases in the use of informal services, it might be considered a laudatory effect of the changing financial scheme.

While the integrated and carve out distinction relates to the allocation of the capitation fee by the public payer, its relationship to the structure of the service system is indirect at best. In many of the integrated arrangements, the integrated organization subcontracts with another risk-bearing organization for the provision of behavioral health care. An HMO, for example, may be the provider with whom the state contracts for health and mental health care; however, the HMO might split the integrated per capita fee and carve out the behavioral health component through an at-risk contract with a BHMCO.[4]

Provider Arrangements

The nature of the BHMCO's relationship with its providers is an important consideration in understanding the functioning of managed behavioral health care systems. Though most MCOs receive capitated payments for the enrolled population, BHMCOs purchase services on an FFS basis from community providers -- often negotiating a discount with the promise of a large volume of services. Other BHMCOs employ providers directly. Still others enter into risk-bearing contracts with provider agencies that agree to provide all the services for a needed population based on a prospective fee structure.

The degree to which intermediaries are present between the purchaser and the ultimate provider of services may have important implications for the ratio of service expenditures to premiums paid. It is assumed that intermediaries are associated with lower service to per capita fee ratios, although there is no empiric evidence to support this claim.

Management Strategies

Utilization management methods impact the performance of the plan.[13] Organizations that purchase services from a network of providers may be less responsive to consumer need than organizations in which the providers are employees of the BHMCO. Overly restrictive utilization management procedures and restricted formularies that frustrate use of commonly used services and medications may restrict consumer choices and adversely affect outcomes. In contrast, appropriate utilization management with a range of treatment options may help to standardize care and assure adherence to empirically validated treatment protocols. The utilization management function is in many ways the greatest promise and threat of managed care strategies; it can be used to improve the overall standard of care and/or to frustrate consumer access to needed services.

Market Forces

The characteristics of the provider market and the degree of competition among managed care plans are likely to have an impact on the performance of the system as well. At least some of the frustration with the existing public mental health system's responsiveness may be related to lack of competition among providers. Since many agencies were granted franchises to be the exclusive public sector service providers in geographically mandated service areas, indigent and disabled consumers had no choice with regard to a provider. To the degree that the introduction of managed care arrangements increases competition among providers, overall system performance may be improved. The ability to change plans is also an important plan characteristic related to competitive mechanisms that can improve the quality of care.

Population Characteristics

The characteristics of the population served in a managed care plan as well as the methods used for risk-adjusting premiums are critical to reflect the anticipated use of services. Plans that include services to the full range of Medicaid recipients (Temporary Assistance to Needy Families/Aid to Families With Dependent Children [TANF/AFDC] recipients, Supplemental Security Income [SSI] recipients, medically indigent) may have to be fundamentally different than those focused only on persons with disabilities (eg, SSI recipients) or more narrowly on persons with serious mental illness. Segmentation of the population to be served may result in desirable, highly specialized services or relegate persons with the most severe disabilities to a second-class system of care. To the extent that more specialized populations are the intended recipients of service, criteria for admission to the specialized programs and for determining when individuals are no longer eligible for a level of service will have to be developed and implemented.

Quality Assurance

The system of oversight and quality assurance employed by the purchaser and the MCO may have important consequences for the performance of plans.[14] Part of the initial promise of managed care was a shift away from process-oriented regulation in favor of more outcomes-oriented monitoring in order to reduce the regulatory burden on providers and increase their flexibility in designing plans to meet consumer needs. However, states and other purchasers have not been quick to move to an outcomes monitoring system because the technology is difficult to implement. Unfortunately, during this transition many states have not enforced the collection of individual level process-oriented data, which has led to a gap in information on service use and cost at the patient level.

To understand the effects of managed care on persons with serious mental illness, we must be able to identify variations in the characteristics of MCOs and their contexts and relate them to the performance of the plan.[2] Most managed care programs have developed in advance of much empiric evidence concerning their effects. Studies on the impact of managed mental health care are generally at the case level and provide few details on the strategies used to effect change, focusing instead on the effect of managed care on utilization and cost outcomes, as is evident by the literature review that follows.

Strategies dealing with risk arrangements, relationship of the MCO plan with its providers, array of services, and so on are seldom discussed or directly investigated. Nevertheless, it is implicit that any significant differences in outcomes between FFS and managed care programs be related in a systematic way to these strategies. Our understanding of the specific interventions that relate to access, utilization, cost, and outcomes for vulnerable populations, based on the literature on mental health managed care, is acutely limited. The SAMHSA multisite study initiative has supported the implementation of an extensive

survey instrument on the organization and financing of each managed care program as well as the contracting mechanisms involved, which is expected to enhance our understanding of the relationships between plan characteristics and performance.

Access, Utilization, and Cost

The empiric literature on managed care has focused on comparisons of utilization and cost of services in FFS versus managed care plans -- with little explanation of the mechanisms used by these plans. Advocates of managed care state that managed care generally will result in greater access to outpatient care, reduced use of emergency and hospital care, and more appropriate and creative treatment alternatives. Detractors predict that managed care, particularly for the seriously mentally ill and other vulnerable populations, will lead to poor quality care as a result of the perverse incentives associated with cost containment and the profit motive.

Early studies on mental health treatment in managed care settings showed that while mental health illnesses were more likely to be diagnosed and treated in HMOs, treatment was less intense than in FFS plans. In addition, the number of psychiatric hospital days were typically found to be significantly reduced in the managed care setting. These findings, however, were based primarily on privately insured, relatively young, employed, low-risk populations who were voluntarily enrolled in HMOs.[15-18]

Studies on public sector populations in managed mental health plans became more prevalent following the implementation of demonstration programs for Medicaid recipients under HCFA waivers that allowed states to experiment with new forms of care delivery.[19,20] The first wave of programs serving the mentally disabled population was implemented in Arizona,[21] Minnesota,[22] Rhode Island,[23] New York,[24,25] Utah,[26-28] and Massachusetts,[29-34] followed by projects in California,[35-37] Oregon,[38-40] Colorado,[20,41,42] and Tennessee.[43] The utilization and cost findings on managed care for the population with serious mental illness are summarized below.

The Rochester, NY, project (Monroe-Livingston counties) focused primarily on long-time residents of the state mental hospital.[44,45] This generously funded, prepaid program was found to be less costly than the usual care approach.[46]

In Minnesota, where seriously mentally ill patients (not solely state hospital patients) were randomly assigned to HMOs or FFS plans, no difference was found in inpatient mental health admission rates, although HMO patients had shorter lengths of stay.[22]

Oregon implemented a managed behavioral health care program for seriously mentally ill clients in involuntary treatment situations and found that capitated clients used fewer hospital resources than comparison subjects.[38,40]

The Utah capitation project, which was similar to Oregon's,[47] used community mental health centers as managing agents and assigned the centers to a capitated versus FFS payment strategy. Patient assignment was not random, as in Minnesota. An evaluation of utilization and cost in Utah showed reduced inpatient care at the capitated sites, increased use of outpatient services at both sites, and no overall difference in total expenditures.[27,48] In contrast, an analysis of patients with schizophrenia found no significant difference in utilization between the capitated and noncapitated sites.[49] Changes did, however, occur in service mix with case management substituted for traditional therapy. Of concern was that patients were less likely to receive optimal antipsychotic medication at the capitated sites.[28] No cost shifting to state hospitals was found for the seriously mentally ill population.[27]

California focused on a severely mentally ill public sector population randomized to an FFS versus a capitated program site that provided assertive continuous treatment. One-year follow-up results showed that managed care patients in the continuous treatment program had less hospital time, had more time in paid employment, and were less likely to discontinue treatment than FFS clients.[35-37]

The Massachusetts Medicaid waiver was granted in 1992 and covered 370,000 lives. The program evaluation concluded that the managed care plan for AODA and mental health services provided a cost

savings of 22%, although there were differential savings across mental health and AODA services and across enrollment groups -- SSI and AFDC. Results also showed a slight increase in access, although there was considerable variability, and improvement in quality, as measured by a provider survey. An analysis of the 22% cost reduction showed it to primarily be due to a 61% decline in the use of costly 24-hour substance abuse services.[31] Following the first-year reduction, overall utilization increased slightly, with expenditures remaining constant in subsequent years.[29,30] Surprisingly, outpatient mental health care was lower than the level provided before the carve out, an unexplained finding if outpatient care is, in some measure, considered to be an appropriate substitute for lowering inpatient use.

While reductions were dramatic in Massachusetts for the overall plan, patients with schizophrenia showed only small decreases in per-person expenditures, attributed to reductions in inpatient admissions and length of stay and emergency utilization; however, outpatient use rose slightly for this group, and pharmaceutical costs doubled because of higher costs of new antipsychotic medications.[32] Also, no apparent cost shifting to medical care or pharmaceuticals was ascertained in the enrolled population, despite the fact that medical and pharmaceutical areas were outside the behavioral health care contract.[50]

Overall, the statewide managed care program in Massachusetts reduced Medicaid behavioral health care costs 25% below projected FFS costs from July 1992 to July 1995, despite weak financial incentives in the contract. One explanation for the large reductions in Massachusetts is that there were high spending levels before managed care, allowing for large decreases -- savings that might not be possible in other states that have already reduced their inpatient utilization.[33]

A national study on access to care in managed care programs for public sector consumers was done by the Kaiser/Commonwealth Foundation. Although not focusing on seriously mentally ill adults, a telephone survey of low-income adults, which included Medicaid recipients, was taken in 1996. It showed little difference in access between managed care and FFS enrollees in the percentage having a usual source of care, a regular provider, or emergency department use. Managed care recipients did report more problems obtaining care and were less satisfied with their health plan than FFS enrollees.[51] Almost 50% of survey respondents with poor health reported an emergency department visit regardless of care arrangements.[52] This survey showed that use patterns did not differ significantly for low-income adults, regardless of what type of plan they were in.

While the evidence for managed mental health care for Medicaid population groups shows some degree of inpatient reductions, results are less dramatic for the seriously mentally ill subpopulation, although most plans show some degree of reduced inpatient care days. With respect to outpatient care and access, some studies show increases in outpatient care while others find evidence of service-mix changes, such as a substitution of case management for traditional therapy services. To date, no cost shifting to state hospitals has been found, probably as a result of lower availability of long-term state-operated hospital beds and strict gatekeeping practices by state officials.

The Urban Institute estimates reductions in costs by managed care plans with Medicaid populations to be 5% to 10% below FFS program expenditures. They caution that savings obtained in the past have been found in groups such as mothers with dependent children (AFDC recipients), who were the first to enroll voluntarily in managed care programs and are generally the least costly patients in the Medicaid population. These enrollees have only a quarter of the annual costs of the disabled subgroup (SSI recipients), who are generally the last to enroll in managed care unless mandated to do so.[53] Furthermore, it is the SSI group that comprises the largest number of persons with serious mental illness.

Outcomes Under Managed Care

Studies on patient-level outcomes in managed care programs for persons with serious mental illness are considerably fewer than utilization and cost evaluations. Four studies of public-sector programs for the seriously mentally ill population are reviewed in this article. These are programs in Arizona, Colorado, Minnesota (Hennepin County), and New York (Monroe-Livingston counties). Clearly, an area of critical importance for future studies is outcomes research.

In an evaluation of the Arizona capitated Medicaid system, outcomes for a group of seriously mental ill persons in the capitated program were reported to be slightly better on social conflict and global functional levels.[54] Furthermore, investigators found that more distressed patients had slightly better outcomes under capitation than under FFS funding on symptoms and social conflict, while less psychiatrically distressed patients had equal or poorer outcomes.

The evaluation of the Hennepin County pilot program in Minnesota revealed mixed results as well.[55] In this randomized study, numerous outcome indicators were measured, including general health status, physical functioning, social functioning, psychiatric symptoms, the Global Assessment Scale, and indicators of community function. The investigators found no significant differences on most measures between FFS and managed care groups. The exceptions were that fewer clients in the prepaid group reported being victimized, and the Global Assessment Scale scores were lower in the prepaid group compared with the FFS group during the study period.

Outcome results from the Rochester (Monroe-Livingston) experiment also indicated no differences between the managed care and FFS groups in symptomatology or level of functioning based on consumer interviews 1 and 2 years following enrollment in the study.[44]

Findings from a study done in a community agency with a Medicaid population in Colorado showed that following the implementation of capitation, patients had a reduced level of psychopathology in most dimensions and reported improved quality of life in the domains of work, finances, and social relations.[20]

In summarizing the outcome results, it is clear that more data on person-level outcomes must be collected and analyzed before broad conclusions can be made about the effect of managed care strategies for persons with serious mental illness. The diversity of the measures and instruments selected by investigators, variability in the research designs employed, lack of adequate follow-up periods, and the disparate nature of the managed care systems under study all contribute to the difficulty in interpreting the scant data that exist on outcomes. Furthermore, evidence from studies done by the Center for Studying Health System Change suggest that managed care practices have changed organizational structure and function more than provider practices.[56] The SAMHSA multisite study on seriously mentally ill recipients will be able to provide an analysis using outcomes measures on more than 2000 clients in FFS versus managed care plans.

Discussion

Managed care is now the predominant mechanism used by private health insurers to coordinate and manage mental health and substance abuse services. Approximately 60% of the US population (or 80% of persons receiving health care benefits through their employers) were in some form of managed care plan in 1996.[57] Between 1991 and 1998, the number of Medicaid recipients enrolled in managed care programs increased 6-fold, from 2.7 million to 16.6 million persons.[58] The growth market for managed care increasingly involves the public sector, with almost all states experimenting with a wide variety of managed care strategies to control Medicaid-funded behavioral health care costs.

The rapid enrollment of Medicaid clients in managed care has prompted considerable debate because many fear that private sector results are not generalizable to the public sector. Approximately 5% of expenditures in predominately private sector managed care programs were allocated to behavioral health care,[59] despite the fact that national mental health expenditures, including substance abuse, ranged from 8% to 12% of the total US health budget.[57,59,60] The amount of behavioral health dollars in managed care plans could result from cost containment and efficiencies in managed care, or more likely from the fact that the population enrolled in managed care during those years did not include the majority of persons with serious mental illness or chronic substance abuse being treated in the public sector.[61] Thus, it is important for MCOs enrolling the Medicaid population to be aware that former allocations cannot be used as the basis for mental health service expenditures for public sector clients.

Furthermore, privatizing the administration of mental health care continues to be perceived by many as incompatible with principles of public sector service.[53] Advocates cite concerns about care-rationing and quality-rationing in private delivery systems, particularly since severely mentally ill Medicaid beneficiaries may be poorly equipped to deal with denial of services.[27] Incentives for managed care plans to provide

preventive services are weak because there is a large turnover of healthier individuals in Medicaid, with only chronic patients remaining. Concerns also linger regarding treatment under managed care, with some studies finding problems in the identification, diagnosis, long-term treatment, and fewer types of services available for persons with serious mental illness.[2]

One way to ensure appropriate treatment would be to use risk-adjustment strategies to deal more equitably with providers and to make sure that appropriate resources are made available to the sickest clients. Unfortunately, most risk-adjusted models used to estimate spending on mental health and substance abuse care perform poorly in that no more than 10% of spending is explained. It has been suggested that the state use risk-sharing arrangements with plans enrolling a large percentage of persons with severe mental health or substance abuse problems.[62]

Another solution is to offer acute but limited mental health and/or AODA benefits to all Medicaid recipients, but to carve out people with more intense mental health and AODA needs. These persons would either be served by the state mental health agency or state substance abuse authority or under a contract with a private BHMCO.[63]

While the carve out approach for managing mental health benefits may have several advantages, it also may have important shortcomings. Among these is the continued isolation of mental health from general health care. Preserving the categoric funding boundaries between mental health and general health services may frustrate access to and continuity of care with primary care services. These parallel care systems may not only be stigmatizing to the patient and restrict his or her access to the full range of available providers - - thereby decreasing market pressures to maintain quality -- but also be an inefficient strategy for allocating public resources to maintain separate, specialized systems of care.[64]

Furthermore, nothing definitive is known about the relative cost-effectiveness of carving out mental health and AODA, together or separately. Although there have been relatively few controlled trials of integrated community treatment, the weight of the evidence thus far suggests the superiority of integrating mental health and substance abuse treatment within 1 program over providing parallel treatment across organizational boundaries.[65,66] There is also evidence of the cost-effectiveness of an integrated approach to treatment, which produced significant reductions in social as well as treatment costs.[67]

In summary, it appears that managed care programs in the private sector and in some public sector populations have been able to reduce the costs of mental health treatment by reducing hospitalization and substituting less expensive and less intensive outpatient services for more costly approaches. In the few studies of outcomes in FFS versus managed care programs for the seriously mentally ill, the results are mixed, with no dramatic differences seen. Though there is reason for cautious optimism, direct application of private-sector models to public-sector populations still requires that cost containment be integrated with performance measures involving quality of care. Also, community involvement and oversight through advisory boards and consumer groups are needed.[10,53]

The SAMHSA multisite study should move the knowledge base on managed care for persons with serious mental illness ahead substantially. The fact that each of the sites is collecting data using a common protocol, including common outcomes measures, will eliminate a major challenge to interpretation of existing data. Another benefit of analyzing data from multiple sites will be the ability to examine specific subgroups (eg, ethnic minorities) and to account for potentially confounding contextual variables (eg, urban/rural differences). Moreover, the sheer quantity of person-level and administrative data that is available from the SAMHSA study appears to equal or exceed all that exists from individual studies completed to date. Finally, information on a variety of managed care programs used by the seriously mentally ill population will enable researchers to associate which management and financial strategies relate to access, utilization, cost, and outcomes of care.

Questions yet to be resolved are those dealing with staff competence and quality of care that are not addressed in the SAMHSA project. Also, follow-up periods for outcomes assessment studies in the future need to be extended to 12 months,[2] and continued work must be done to develop an appropriate severity of illness measure.[68] The inability to adjust for case mix limits the capacity to make valid comparisons

within, as well as between, study populations with respect to the impact of various managed care and financing strategies. Though the SAMHSA multisite study will answer many questions by reducing many of the obstacles found in prior studies, continued research will be required to answer other questions.

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