

## Commentary

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### Mental Health Economics

Over the past twenty years, the NIMH has gradually increased its investment in epidemiology and mental health services research, including mental health economics research. Not only has this investment produced fundamental changes in our understanding of the distribution of mental disorders in the population, but it has also greatly informed our understanding of the distribution and determinants of mental health services utilization. At the time of initiating this program, the President's Commission on Mental Health provided a policy context which highlighted the limitations of our database in these areas for informing mental health policy issues. Of considerable significance for the research now contained in this new *Journal of Mental Health Policy and Economics* was the initiation of an economics research program which began with the impetus of Carl Taube, then Deputy Director of the Division of Biometry and Epidemiology, and the early interest of extramural research investigators in developing this field.

Among the earliest extramural contributors to this field were two authors of articles in this issue of the journal. Both Tom McGuire and his graduate student at the time, Richard Frank, helped those of us in the NIMH to shape a research program which would focus on mental health issues from both a theoretical and applied policy perspective. Since that early beginning, the NIMH has supported research training centers which assisted in the career of Sam Zuvekas, and research centers which have helped to support the work of Roland Sturm. Our collaboration with staff at the Agency for Health Care Policy Research where both Marc Frieman and Sam Zuvekas have worked has increased the breadth of the mental health economics work and integrated it more fully with general health economics.

The applied implications of this research are particularly obvious when the NIMH is now periodically asked to respond to requests from the Congress on major health policy issues. These include the potential cost of legislation that would

mandate parity in benefits for mental health care in comparison with general medical/surgical benefits. The first such request came in 1991 from the Senate Appropriations Committee as part of the appropriations bill to the NIMH. The subsequent report enabled the NIMH staff to pull together the first comprehensive review of the scope of mental disorders in the population, the proportion that could be identified as having severe mental disorders, data on the efficacy of treatments for those disorders from clinical trials, the use of a full range of mental health services and both current and projected costs that would be associated with parity legislation.<sup>2</sup> This was followed by consultations on the cost of mental health benefits under the Clinton health plan which ultimately failed to receive legislative support. Since that time, there have been additional requests to provide economic analyses of major mental health policy issues. Among such issues, the impact of providing equal (or parity-level) insurance coverage for mental disorders has been one of the most stimulating. Of particular note has been the interaction between parity legislation at state levels and the use of managed behavioral health care to control the expected cost increases associated with increasing benefit levels.

The journal presents several of the analyses which the NIMH has supported and used to examine the empirical data which can inform the Congress on the consequences of parity legislation. The paper by Freiman addresses co-insurance rates for mental health coverage, which is an issue of considerable historical interest for the development of mental health insurance benefits. The RAND Health Insurance Experiment (HIE) indicated that the increase in use and cost of mental health services, for the same reduction in cost sharing, would be proportionately greater than that for medical surgical services. The 'moral hazard' argument which emerged from this experiment was that subscribers might overuse mental health benefits in comparison to medical/surgical benefits if there were not a greater cost-sharing to control 'demand' for mental health care. Although managed care has now shifted more of the cost/utilization controls to the 'supply side', most plans continue to have 'demand-side' co-payment differentials which may affect costs. Of particular interest to Frieman is that employers may wish to maintain relatively high co-payments and other demand-side controls precisely to avoid adding employees with significant mental disorders in themselves or their family members.

The concept of adverse selection is well understood by insurance companies in that offering better benefits for mental

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health care can result in a higher enrollment of those likely to use such care. In the same manner that insurance companies may offer low mental health benefits to avoid attracting high-cost patients, Frieman suggests that employers may also try to select employees with greater productivity potential by offering insurance policies which would discourage applicants who have significant but hidden mental health problems. In the absence of true random assignment to different co-payment levels, one would expect that persons with significant mental health service needs would choose insurance coverage with low co-insurance rates for such disorders. However, employers could counteract such tendencies by preventing employees from having the option to choose plans with a low co-insurance rate. By using an index of potential mental health service need and comparing it with selection of a plan with varying mental health service co-payment levels, the National Medical Expenditure Survey (NMES) database was analyzed. The actual findings from this non-experimental database were only suggestive of possible employer-side selection effects by demonstrating that employees with high mental health indices did not end up in plans that would provide lower co-payments for mental health care. However, the employees were able to select plans with lower co-payments for their dependents with high mental health indices as would be predicted by a utility maximization strategy. This model should be of benefit for future studies of selection dynamics affecting mental health insurance coverage which include complex interactions between the perspectives of the employee, the insurance company and the employer.

Using the same NMES data base, Sam Zuvekis and colleagues were able to demonstrate the marked discrepancies between insurance coverage for medical/surgical conditions and that available for mental disorders. Policy booklets which document insurance benefits were reviewed for each person in the national sample to determine co-insurance rates, deductibles and limits on inpatient days, outpatient visits and dollar maxima. Using a simulation analysis applied to the NMES database, discrepancies between coverage levels for physical and mental disorders were studied using four different treatment scenarios ranging from relatively brief out-patient treatment episodes to more severe episodes requiring a mix of in-patient and out-patient services. Higher out-of-pocket costs for mental health coverage ranged from slightly over \$400 for the brief treatment episode to almost \$25 000 for a severe episode. Additional detail is added to demonstrate the differences between HMO and non-HMO plans as well as for group policies of different sized groups. The large discrepancies in out-of-pocket payments for mental health care in all programs has continued to drive family members and advocacy groups to work for parity in mental health insurance coverage. Given the risk that state governments have for underwriting the cost of severe mental disorder treatment when private insurance benefits and personal resources are exhausted, it is not surprising that many states have mandated some level of mental health insurance coverage in the past with some now requiring various forms of parity for mental and physical disorders.

States such as Texas and North Carolina legislated mental

health parity insurance coverage requirements for state employees in the early 1990s. Other states such as Massachusetts and Ohio have introduced managed behavioral health care plans for their state employees which have increased the generosity of mental health insurance benefits to the level of parity without explicit legislation. By analyzing the seven-year longitudinal experience with parity and managed care in Ohio, Roland Sturm and colleagues provide an extremely informative case-study of utilization and costs for both indemnity and HMO type plans in this state. Ohio included the same co-payment levels and unlimited in-patient and out-patient benefits for mental and addictive disorders as were available for medical-surgical conditions. As with every other state or private employer which has lifted demand-side controls, Ohio employed a managed behavioral care organization to provide supply-side controls on access and utilization of services. Of considerable interest was the 70% drop in in-patient days and 40% drop in out-patient visits for the indemnity plan, and the 47% increase in out-patient utilization for the HMO population which also had a minimal decrease in in-patient care. Although the contractor was given utilization standards of 500 out-patient visits, 40 intermediate days and 25 in-patient days per 1000 members, there was no requirement or apparent monitoring of the actual treated prevalence (percent of the population receiving any mental health services). The authors note the absence of outcome standards, which make it difficult to determine whether there is an efficient and effective delivery of mental health services to those who need them most. However, the high level of patient and employer satisfaction with the combination of parity benefits and management approach has led to renewal of the contract. Although the issues of quality and access remain unaddressed, this case-study demonstrates that the financial risk of providing a parity-level insurance policy benefit for mental and addictive disorder treatment can be controlled over an extended period with management techniques.

It remains for Richard Frank and Thomas McGuire to raise the question of what parity of mental health benefits actually means in an era of managed care. Although higher co-payments and lower benefit limits were developed as 'demand-side' controls on patient behavior in a fee-for-service system, the switch to 'supply-side' controls under managed care remove many of the patient prerogatives to 'demand' services. Since it is up to the managed care company in consultation with the mental health service provider to determine whether services are 'medically necessary', both access to any treatment and the intensity and type of treatment are only partially affected by patient cost-benefit decisions. The Ohio experience demonstrates that even the availability of unlimited visits or bed-days with minimal \$10 co-payments was not sufficient incentive to increase costs and use in the face of managed care controls.

Frank and McGuire note that under the earlier fee-for-service, indemnity system, 'it was never the level of costs that drove the case against parity for MHSA, it was that the costs were more responsive to insurance coverage'. The 'moral hazard' implication was that the greater responsibility

of mental health service use to insurance coverage indicated that the extra services were less valuable to the patient and would only be consumed if the cost were lowered. Unfortunately, the RAND HIE model, which produced the insurance responsiveness elasticity indices, was developed more than twenty years ago. As such it does not take into account improvements in pharmacologic and other treatment technology nor does it differentiate between patients with more severe disorders and those with more discretionary treatment needs. More significant than these limitations, however, is that treatment access and costs are controlled primarily no longer by out-of-pocket costs to the patient, but by management. Hence, parity is no longer a guarantee of equal access and the consumer may exercise less judgement on the quality of services received.

An elegant description of the 'moral hazard' and 'adverse selection' insurance dynamics under the fee-for-service system is provided by Frank and McGuire to set the stage for understanding the much more complex dynamics of a managed care system. Information on the 'demand response' to different co-payments and limits for both general health and mental health care was used to control costs and to identify major gaps of insurance coverage caused by adverse selection—the latter could then be addressed by targeted regulatory mandates for minimal required coverage. However, in managed care, a form of rationing by providers takes place which is relatively independent of consumer demand and response to co-payments. The ostensible goal of management is to assure that patients with the most need receive the most effective services and that non-essential, discretionary services are not covered by insurance. However, the tools used to facilitate rationing include incentives to limit care such as capitation and bonuses to providers based on utilization, and precertification or utilization review to evaluate patient need for care. One approach to characterizing need for services, based on economic theory, is to determine the internal value accorded to a service by a manager, and to reflect this as a 'shadow price' for each service. To develop meaningful shadow prices, managers must have an internal value which they place on a given service which is informed by clinical judgements of the cost-effectiveness of treatments for a given disorder. Consumers or employers are charged a pre-paid price for the health or mental health services, and then have the services rationed by a manager with implicit cost-effectiveness values to stay within that price. Since demand-side cost sharing is not necessary for decisions on rationing, retaining differential co-payment costs for mental health services under managed care appears redundant or a means of relieving some of the judgement responsibility of the manager. For example, if a given patient could benefit substantially by providing additional mental health services that may be refused because of the co-payment, it is feasible that the employer could lose the services of a productive employee and the managed care firm could incur future more expensive health or mental health costs which were preventable with appropriate care.

Despite the obvious advantages of managed care for controlling costs, insurance company and employer selection

effects may still operate to discourage high-risk employees from enrolling in the plans. Since managed care carve-out and other insurance firms operate in a regulated environment to control 'market failure', Frank and McGuire suggest four mechanisms that may be used to enhance market efficiency as follows: risk adjustment of premiums, direct regulation of contracts, visible carve-outs for mental health and quality measurement as an outcome variable. Although all of these methods have limitations at their present state of development, it is important to understand the new leverage points which may facilitate an equitable access to mental health services.

In summary, the current journal issue provides a rich background of information for understanding the impact of managed care and parity legislation on mental health service availability and cost. The conceptual economic principles of adverse selection by insurers and employers and the use of co-payments and differential limits to control demand for care in a fee-for-service environment are important backdrops for the movement into a managed care market. Additional factors which may alter insurance dynamics even more dramatically may be the movement of managed care companies into both public and private insurance markets in the same geographic areas. As this begins to occur to managed care companies that are at risk for an entire population group, there may be less incentive to shift costs between the two sectors as is currently the case. In addition, as the market stabilizes with fewer but larger managed care companies competing, it may be possible to have additional stability in the field which will make long-term investments in prevention and quality of care more attractive for managed care firms. The short-term perspective is only one of many factors which can lead to denial of necessary care when the out-year costs associated with increased illness or disability may not be incurred by the managers' firm.

One benefit of the development of a field of mental health economics that has been in close proximity to related developments in epidemiology, clinical research and services research has been a relatively rapid exchange of information between each of these fields. Both direct and indirect cost approximations require information on prevalence, treatment effectiveness and service use patterns. In addition, an appreciation of economic forces which determine insurance coverage is essential to assure access of patient populations to effective treatment. By understanding more of the variables that affect economic and health seeking behavior, we have a much better opportunity as a society to reduce discrimination against any patient group, such as those who experience either brief or chronic mental disorders, and thereby increase the productivity of all our citizens.

## References

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