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Prologue: Mental health benefits in public and private insurance range from no coverage whatsoever to a wide range of defined benefits. In addition, what insurance is available for mental health care often contains incentives for the wrong kinds of treatment or fails to provide adequate protection. In this essay the authors propose a “model” mental health benefit for the private insurance market that addresses these concerns. This model was developed in response to a congressional request to the National Institute of Mental Health (NIMH). Early presentations of the model to NIMH, insurers, and patient groups have sparked much controversy. One goal of the model benefit is to draw national attention to the need to include mental health care in serious proposals for national health reform. A bill introduced 12 May 1992 by Sen. Pete V. Domenici (R-NM) and Sen. John C. Danforth (R-MO) describes a model mental health plan to be included in any national health care reform. While the plan in this bill is not the model mental health benefit described here, “it adopts a set of principles that are consistent with what we’ve set out,” said author Richard Frank.

An economist, Frank is a professor in the Department of Health Policy and Management, The Johns Hopkins School of Hygiene and Public Health; and deputy director of the Johns Hopkins University (JHU)/University of Maryland (UM) Center on Organization and Financing of Care for the Severely Mentally Ill. Howard Goldman holds degrees in medicine and public health and a doctorate in social welfare research. He is a professor of psychiatry and director of mental health policy studies at the University of Maryland School of Medicine; and associate director of the JHU/UM center. Thomas McGuire is a professor in the Department of Economics at Boston University. He serves as a consultant to the JHU/UM center.
Insurance financing of mental health care is threatened by alarming cost increases. The 1989 A. Foster Higgins survey of mental health benefits reported that employers’ costs for mental health and substance abuse were “rising at a torrid pace.” The annual rate of cost increase in 1989 was 17.9 percent; mental health and substance abuse costs amounted to $244 per employee. Facing continuing cost increases, employers may be compelled to reduce benefit limits—still the major strategy for containing costs—or to venture into special mental health provider networks and managed care. National health legislation threatens to reduce mental health coverage by overriding state-mandated benefits with a minimum benefit package that does not include mental health coverage. Approximately ten of the twenty-six bills proposing major health care reform introduced by members of the 102d Congress specify no required coverage for mental health care. Among the bills that provide for some coverage of treatment for mental disorders, most set special limits on mental health coverage.

In response to a congressional request to the National Institute of Mental Health (NIMH), this essay proposes a “model” mental health benefit for use in private health insurance. The model plan we propose here exceeds the typical minimum coverage contained in congressional proposals and states’ mandated benefit legislation. Yet the model plan costs less than the coverage offered by many employers. It is designed to be part of a comprehensive acute care health insurance benefit. Although it offers needed acute care benefits to persons with severe mental impairments, it does not address disability coverage or some of the other social and human services (for example, residential or vocational services) required by individuals with severe and persistent mental illness. The plan is designed for a working population, not for an indigent or disabled Medicaid population. The plan provides the most important type of financial protection to beneficiaries and their families, controls costs, and promotes cost-effective care.

The model plan uses both supply- and demand-side incentives. Provider reimbursement policy is used mainly to constrain costs associated with catastrophic expenses, where patient cost sharing would impose financial hardship. Demand-side cost sharing, or benefit design, applies to initial treatment decisions, for services typically used by consumers without high expenses or for services with a demonstrated high demand response to insurance. This approach keeps patient and family financial risk to a minimum while promoting cost containment.

The model plan is designed to cover services offered by a broad array of providers and treatment modalities and to complement the evolving forms of managed care. Although it does not propose fundamental
change in the delivery of health services, the model plan encourages innovative and promising treatment settings in a way that is consistent with cost containment. We believe a sound benefit structure must underlie decisions about covered services and managed care. The payment system we propose is entirely consistent with the development of provider networks that are the core of many managed care programs. Managed care works best when both providers and patients are given incentives to be concerned with cost but also the freedom to develop patient-specific treatment plans and new approaches to care.

The model plan does not contain employers’ costs by shifting costs to the public mental health sector. We have structured a benefit that discourages the common practice of “dumping” privately insured patients onto the public sector when their insurance benefits are exhausted. We believe that the plan represents good public policy, financing mental health care through private insurance where possible.

We recognize that no plan is right in all circumstances. Some employers simply might not be able to pay for the model benefit; other employers may take the position that they should pay for employees’ medical costs without significant restrictions. We do not mean to imply that a more generous benefit than described here is necessarily a poor choice. Such strategies may be justified on grounds other than the application of benefit principles to mental health services.

Context And Terminology

One could design a model or ideal mental health benefit from one of two perspectives: the public health perspective, and the insured-group or private perspective. The public health perspective is broader, encompassing concern for services that may promote the best interests of the society but be of little or no interest to the insured group. For example, no employer may find it worthwhile to pay for preventive services, but paying for these services may be good public health policy. Both perspectives value cost-effective treatment of mental illness.

To achieve acceptance, a model plan must be attractive to employers. Thus, our main goal is to structure a plan that makes the best use of mental health benefit dollars—in other words, it emerges mainly from the insured-group perspective. Fortunately, we believe the dissonance between these two perspectives in our model plan is slight. Improving the mental health benefit from the insured group’s perspective generally advances the interest of public health policy.

Many private insurance plans specify a unified benefit for mental health and substance abuse treatments. Roughly one-third of facility-
based costs in private health insurance in the mental health and substance abuse area are for substance abuse. Outpatient costs for treatment of substance abuse are currently very low; in total, perhaps 20–25 percent of mental health and substance abuse costs in private insurance represent care for substance abuse.

We have developed the model plan after considering research and other experience in the mental health area only. Notwithstanding the unified coverage offered by some employers, substance abuse treatment raises some distinct policy issues. Employer policy in the substance abuse area must be concerned with productivity and criminal behavior issues, over and above the employee benefit issues on which our discussion of the model benefit is based. If an employer chooses to set these issues aside, the principles of payment for facility and ambulatory care developed for mental health can be readily applied to substance abuse.

Mental health economics and mental health services research have progressed such that it is feasible to use this research in the design of an insurance plan. The coverage and payment recommendations we make here would differ if more were known, however, and it is in the spirit of our proposal to alter the terms of coverage as research on clinical effectiveness, managed care, and response to financial incentives in benefit plans continues to accumulate.

Cost, quality, and access in a benefit plan are influenced by three forms of control exercised by a payer. First, demand-side cost sharing refers to policies that affect the price of treatment to the patient and the demand for care. Examples include deductibles, copayments, limits, and uncovered services. Virtually all health insurance plans include some demand-side cost sharing. Second, supply-side cost sharing refers to policies that affect the terms of payment to the provider and influence the supply of care. Examples include prospective payment, fee schedules, and capitation payments. Benefit plans have only relatively recently employed provider payment policies to influence treatment and costs. Third, managed care is defined as “a set of techniques used by or on behalf of purchasers of health benefits to manage health care costs by influencing patient care decision-making through case-by-case assessment of the appropriateness of care prior to its provision.” Managed care includes precertification of admissions, concurrent review, and case management. The term benefit plan refers to the combination of these elements.

Principles In Benefit Plan Design

Most private health insurance provides some coverage for both inpatient and ambulatory mental health care treatment, but coverage is...
almost always subject to special limits. Nearly 90 percent of the firms with mental health coverage place limits on inpatient coverage. Costs are controlled by limits on days of care per admission or per year. Most companies with limits (80 percent) set them at between thirty and sixty days (per year or per episode). Annual and lifetime dollar limits on mental health care use are becoming more common. Partial or day hospitalization and less-intensive residential programs are sometimes covered, often with benefits counting against hospital coverage. Office-based care by psychiatrists is virtually always covered, and, depending on state legislation, coverage may also be mandated to include categories of psychologists and social workers and occasionally other providers. Coverage of office-based mental health care is rarely on a par with other office-based physician care. According to the Higgins survey, 76 percent of employers put an annual limit on outpatient psychotherapy, and 65 percent require higher coinsurance for mental health care. Most plans pay hospitals on the basis of charges, discounted charges, or negotiated per diems and pay providers on the basis of charges subject to fee limits. Many third-party payers offer or contract for managed care services that monitor admissions and lengths-of-stay for inpatient care and sometimes outpatient treatment as well.

What is wrong with these approaches to coverage and reimbursement? Many plans fail to encourage alternatives to hospitalization and patient access to a continuum of care. Many plans leave patients exposed to costs of severe illness. Coverage may be overly generous for some forms of office-based care and unnecessarily restrictive for others. Many plans put too much reliance on benefit limits to control costs and not enough on incentives to providers. We do not elaborate on these criticisms of private health insurance structures; rather, we state the arguments as a list of principles of payment system design. We present this list as a standard against which insurance coverage can be judged.

**Principle One: The most important risks to insure are risks of catastrophic expenditures.** Catastrophic costs are the most subjectively painful risks and the ones for which insurance is most valuable. Kenneth Arrow has shown that in the absence of demand response to insurance, optimal health insurance is characterized by full coverage after the patient pays a deductible. The presence of demand response (explained in Principle Two) may mean that full insurance is not optimal. Nevertheless, the relative importance of coverage for catastrophic expenses still holds.

Coverage for mental health care is in most cases the mirror image of Arrow’s optimal coverage: Insurance pays a large share of the early expenses and puts a limit on total coverage, leaving the patient respon-
sible for high expenses. This places a heavy financial burden on individuals struck by the most severe mental disorders. Benefit limits are an easily administered, sure-fire means of limiting plan costs. Unfortunately, they eliminate the most valuable type of insurance coverage. In the absence of some other reliable cost control tactic, unlimited coverage would be too costly. The availability of alternative cost control mechanisms, however, mitigates the need for limits on coverage.\textsuperscript{8}

**Principle Two: When insurance benefit design is the only policy available to control costs, services with a more responsive demand should carry higher cost sharing.** A health benefit plan has two goals: to encourage cost-effective care and to protect patients from the financial risks of illness. In most discussions of health insurance these goals are assumed to conflict. The risk protection afforded by insurance comes at the cost of weakening patients’ incentives to use care efficiently: the “moral hazard” problem. Demand response to lower out-of-pocket costs implies that patients use more care when they are insured, and since they would not have purchased this care had they been paying full cost, there is a presumption that the care is “not worth the cost.”\textsuperscript{9} As Richard Zeckhauser made clear, the greater the demand response in some area of care, the more is sacrificed in terms of efficient care when insurance is increased.\textsuperscript{10} The implication is that care with a high degree of demand response should have less-comprehensive insurance coverage.

This argument is the technical counterpart to the popular concern that generous insurance coverage for mental health treatment will lead to unacceptable levels of costs. Empirical research partially supports this concern. Utilization does increase when benefits are expanded, although rates of use generally reach a plateau. This is true for most health care, not just mental health care. However, the response of mental health care use to the price-lowering effects of insurance is greater than for general medical care taken in the aggregate.\textsuperscript{11} Results from the RAND Health Insurance Experiment are probably most convincing in this regard. Emmett Keeler and colleagues found that families with full coverage use about four times as much ambulatory mental health care as families with no coverage use.\textsuperscript{12} The demand response for ambulatory mental health care is about twice as great as it is for general medical care. While people with an insurance plan that makes care nearly free use much more care, there is no evidence from the Health Insurance Experiment that better coverage improves mental health status.\textsuperscript{13}

The degree of demand response for inpatient mental health care is not known, although popular suspicion is that it is also very responsive. The contention that psychiatric facilities keep patients as long as care is covered and discharge patients when benefits run out implies that supply
is responsive to the payment system. This contention is supported by empirical evidence on length of inpatient stay, which typically shows multimodal distributions with “spikes” at common benefit limits (for example, thirty days). Suspicions about demand response to insurance for inpatient care are not supported or rejected by econometric research, largely because the numbers of psychiatric hospitalizations in population-based studies of demand are very small.” Demand for office-based mental health care—primarily individual psychotherapy—is more responsive to insurance than is general medical care. In the absence of good alternative cost control strategies, it is necessary to limit coverage for psychotherapy in the model plan.

Principle Two implies that mental health services should have the same cost-sharing arrangement as medical services, except for those services where there is convincing evidence that demand is substantially more responsive to cost sharing. There is no evidence that demand for medical management is highly responsive to cost sharing. Medical management is regarded as a brief office visit providing a mix of psychosocial and biomedical evaluation and management services. It is therefore similar to brief office visits for the management of somatic illness in terms of medical necessity and presumably demand response. The model plan proposes a definition of medical management that does not require the use of psychotropic drugs, although the recommended benefit is otherwise similar to current Medicare policy. Patient cost sharing for medical management would be identical to that for all other evaluation and management services; copayments for psychotherapy would be higher, following Principle Two.

Principle Three: Supply-side payment policies can contain costs without imposing financial risk on patients and should be used in place of demand-side payment policies where feasible. Use of health care services is influenced by what the patients want to get (demand) and what health care providers want to give (supply). There can be no doubt that demand-side financial incentives in the form of benefit design and supply-side incentives in the form of payment system design each have an important effect on ultimate use of services. Just as copayments and coverage limits impose cost sharing on patients, provider payment policy can impose cost sharing on providers. Whenever providers are faced with a payment schedule that reimburses at a rate less than marginal cost, they are said to be faced with “supply-side cost sharing.” Supply-side cost sharing reduces supply and thereby utilization. To cover providers’ total cost, supply-side cost sharing must be accompanied by a prospective payment system with some reimbursement paid independent of cost.
Reducing use through supply-side incentives has an important advantage over reducing use through demand-side incentives—namely, it imposes no financial risk on patients. Recalling again the two basic goals of a health payment system (protecting patients against financial risk and encouraging cost-effective care), when one goal—encouraging cost-effective care—can be achieved by supply-side policies, we are free to set insurance in a fashion that provides maximum risk protection.\textsuperscript{19}

The financial risk associated with facility care can be broken down into the risk of using any facility care and the risk of the extent of use. Consider here the second risk, to which we apply Principle Three. Once a patient is in the hospital or other facility, length-of-stay is determined by financial incentives to the patient and to the facility, and other factors, including the patient’s clinical condition. Principle Three implies using the financial incentives to the facility (supply-side cost sharing) where possible to control the length-of-stay risk. An advantage of supply-side cost sharing is that the provider bears the burden of assessing the benefits and costs of continued treatment. This puts the facility at risk for the cost of continued stays, not patients and their families. The empirical literature shows that supply-side incentives work to limit hospital resource use.\textsuperscript{20}

We propose a form of supply-side cost sharing to limit length-of-stay that does not rely on any clinical classification system for discharges. Further, supply-side cost sharing need not be as extreme as in Medicare’s prospective payment system (PPS), forcing facilities to bear (with the exception of outlier cases) all of the risk of a longer length-of-stay. A more moderate form of facility risk bearing can be used to contain costs.

Payment systems that impose some of the length-of-stay risk on facilities can be used as a substitute for benefit limits and heavy patient cost sharing for facility-based care. Unfortunately, there is no way aside from capitation or prospectively set hospital budgets to use supply-side cost sharing to control the risk of the facility use in the first place—the first part of the total risk of facility costs. To control this risk, we will need to rely on demand-side cost sharing and managed care.

Principle Four: The payment system should encourage substitution of low-cost for high-cost providers. The mental health sector has produced an enormous variety of therapists professing expertise: psychiatrists, psychologists, social workers, nurses, and counselors, to name just the main ones. A considerable body of research substantiates the value of each of these groups for certain types of problems. Social workers, nurses, and counselors generally charge fees that are significantly lower than those of psychologists and psychiatrists. The array of forms of facilities for treatment of psychiatric illness is as wide as the array of
professionals. Programs are residential and nonresidential, hospital based and freestanding, each featuring a distinctive form of treatment. Subacute residential facilities, partial hospitalization programs, and psychosocial rehabilitation programs have all been shown under certain conditions to produce clinical results equal to hospital care, at lower costs. Unfortunately, these findings do not imply that adding a new category of providers would result in savings to an insurance plan. A new provider group may sometimes substitute for a more expensive treatment, but it may also expand the number of patients in treatment and the volume of services provided.

We have structured the financial incentives to patients and providers so that the model plan can be open to new treatments, particularly those that have been developed for adolescents and substance abusers. Much of the organizational and systems innovation in mental health treatment has taken place in public programs, where the number of patients eligible for the treatment can be controlled and where the local mental health agency can dictate to patients where they can receive treatment. With the right payment system, innovative programs developed under public and private auspices can be employed for private patients.

Principle Five: The payment system should be consistent with managed care techniques that have been shown to be effective. Managed care, including prior authorization, concurrent review, case management, and their hybrids, is a rapidly evolving field in both health and mental health services. If inappropriate use of health services can be forestalled by managed care in a cost-effective way, payment incentives to patients and providers can be relaxed. The strongest evidence favoring managed mental health care arrangements shows a sizable impact on use of services by less severely ill cases and those not treated for substance abuse. However, it remains premature to generalize about the circumstances under which specific forms of managed care work best. And it is certainly premature to rely solely on managed care to control mental health costs. At this point, managed care and benefit design should be viewed not as alternatives but as two components of a good plan. Our model plan complements managed care by enlisting the institutional provider’s interest in limiting length of the treatment episode (the mixed payment system) and enlisting the patient’s interest in choice of alternatives to inpatient stays (the one-day deductible). We believe that the financial incentives in the model plan give managed care the best chance of success.

Applying the five principles. These five principles suggest how to combine demand-side cost sharing, supply-side cost sharing, and managed care in a benefit plan. In a simplified form, decisions about use and
cost can be broken down into a use/no-use decision and a decision about how much to use. What role should the three forms of control (demand-side cost sharing, supply-side cost sharing, and managed care) play in these decisions for ambulatory and facility-based care?

Consider first the use/no-use decision for facility-based care. As we noted above, supply-side cost sharing is not feasible here because the provider is not yet identified. Managed care, in the form of a precertification requirement, and demand-side cost sharing, in the form of a deductible, must be applied to constrain use. Experience might show that one or the other of these controls should take primacy. For example, if a precertification requirement for entry into facility-based care were effective in directing patients to the most appropriate settings, thereby controlling utilization at a reasonable cost, a deductible might be unnecessary. Or the deductible alone might be an easily administered method for alerting patients to relative costs and for affecting choice of facility. For now, we recommend that both be used.²⁵

Supply-side cost sharing and concurrent review control the decision of how much care to use once a patient has been admitted to a facility. The mixed payment system puts pressure on providers to limit length-of-stay and supports a managed care intervention. Reliance on supply-side cost sharing and managed care allows benefit limits to be lifted. On the outpatient side, demand-side cost sharing is the only feasible control device, for reasons discussed below.

The Model Plan

Exhibit 1 outlines the model benefit package. It is presumed that coverage for other medical care includes unlimited hospital care, possibly subject to deductibles and small copayments, and coverage for office-
based physician care, also with small copayments (for example, 20 percent). We also presume that the payer uses a fee schedule for professional bills. In 1992 Medicare began paying physicians according to a fee schedule. The Medicare fee schedule includes psychiatry (although no independent schedule has yet been developed for nonphysician therapists). To guard against cost shifting, private payers are advised to adopt fee schedules of their own. Finally, cost sharing in mental health is presumed not to count toward a major medical stop-loss.

**Facility-based care.** The coverage and payment structure for facility-based care (which includes partial hospitalization and other types of residential treatment) is in accord with the principles of benefit plan design. With no limits on facility coverage, patients and their families are protected against financial risk. Where no supply-side payment system incentives are available to control costs, demand-side cost sharing (the deductible) is relied upon. Supply-side payment incentives are the primary mechanism used to constrain costs. Substitution is encouraged via broad facility coverage with lower out-of-pocket costs for less costly settings. Patients enjoy some savings in their deductible payment by choice of a less costly provider.

To control costs of hospitalization—the most expensive part of the mental health care benefit—we recommend reliance on both financial incentives to patients and managed care. Patients pay a deductible equal to the cost of one day’s stay that would range from perhaps $200 for some day-only programs to $600 or more in some hospitals. Cost sharing is concentrated around the decision to be admitted. This directs patient cost sharing to a decision in which patients and their families have a clear role. By confining the cost sharing to the one-time charge in each episode, families face a limited financial risk. Paying a $500 deductible is burdensome, but demand-side cost sharing of any form must impose some burden if it is to be effective. The deductible helps to ensure that the decision to seek admission will be made with care and that patients will be aware of the cost of the facility they choose for treatment.

The requirement that admissions be precertified is another check on the appropriateness and site of an admission. Most precertification programs exempt “emergency” admissions, mandating only that the review program be contacted within forty-eight hours of admission. Precertification can be “gamed” by overusing the emergency gate into the hospital or by manipulating the response to precertification inquiries. Even if no admissions are stopped, precertification has the potential to direct some admissions to appropriate settings (especially in the context of the model plan coverage for alternatives to hospital care) and to initiate treatment planning in conjunction with a review program.
For facility-based care, the length-of-stay or extent-of-use decision is policed by supply-side cost sharing, enlisting the management of the facility into the role of “managing” care. The “mixed system” refers to a per discharge payment system that employs some prospective and some cost-based elements—hence the term mixed. We propose a mix of 50 percent prospective payment and 50 percent per diem payments. A facility admitting a patient is immediately entitled to a prospective amount set at half of the expected cost of such admissions in similar facilities. If the facility were a psychiatric hospital, for example, the average cost for an adult admission to psychiatric hospitals might be $5,000 with an average length-of-stay of twenty days. The psychiatric hospital would be entitled to 50 percent of $5,000, or $2,500, no matter how long the patient stayed, and an additional $125 per day for each day. Based on this formula, if the patient stayed exactly the average stay of twenty days, the hospital would receive $5,000. The low per diem ensures that the hospital has an interest in limiting length-of-stay.

Peer grouping is an important part of the payment system and is used to determine the prospective component of the payment. New Hampshire’s Medicaid psychiatric payment system, which uses a payment system like the one proposed here, uses three peer groups: specialized psychiatric hospitals, psychiatric units in general hospitals, and general hospitals with no psychiatric unit. The prospective component of the payment for a facility is determined by average cost in similar facilities.

The mixed system with peer groups has a number of desirable features. Incentives to contain costs are substantial, because for each extra day after admission that the patient stays, the hospital receives a payment much less than its usual per diem. The hospital is paid fairly, in the sense that it is given enough total resources with the combination of the prospective and the per day payment to care for the average admitted patient. This payment approach should minimize “dumping” of patients onto state mental hospitals, shifting costs to the public sector.

A payment system with any prospective payment component faces the issue of classifying patients. Medicare’s PPS handles this with diagnosis-related groups (DRGs). Extensive research has shown that DRGs alone are poor predictors of resource use in psychiatric care. Peer grouping within a mixed payment system substantially reduces the need for a patient classification system except in the broadest terms. Different payment amounts for adults and children (with children being higher) and for substance abuse and psychiatric discharges (the primary goal being to distinguish detoxification from rehabilitation treatment) is all we believe is necessary in terms of a patient classification system.

This approach to payment can be used for most facility-based care.
Residential treatment and partial hospital programs also would be paid in this manner under the model plan. Peer groups can be established via the grouping of similar facilities (for example, hospital-based partial care versus freestanding partial programs). The same ratio of prospective and per diem payments can be used for these providers. Concurrent review can be used with a mixed payment system. Since the mixed system aligns the interest of the providers in the direction of the interests of the payer, use of both payment and management tools should ease the tensions between providers and payers noted by Gary Tischler.\textsuperscript{34}

**Outpatient psychotherapy.** The model plan relies on demand-side cost sharing to control costs of psychotherapy. Patients would pay 50 percent of covered charges, with covered charges limited by a fee schedule. Research and experience shows clearly that such heavy cost sharing will serve as an effective brake on psychotherapy costs. Our recommendation is in accord with the conclusion reached by Will Manning and colleagues, based on the demand response estimated in the RAND Health Insurance Experiment, that 50 percent cost sharing for psychotherapy best balances the benefits of risk reduction against the costs of increased demand from coinsurance.\textsuperscript{35}

Supply-side policies are less appealing for outpatient psychotherapy than for inpatient psychotherapy for several reasons. First, most outpatient mental health care users make very few visits, thus adding administrative costs is not worthwhile for the vast majority of users. Second, there are a large number of suppliers of outpatient psychotherapy. If all are to be enrolled in a review mechanism, administrative costs would be high. If only some are to be included, beneficiaries’ choice may be greatly restricted. Third, individual practitioners are less able than facilities to bear the financial risk of supply-side cost sharing.

Elaborate contracting and managed care review mechanisms are not necessary when the mental health benefit takes the form we propose here. Patients have incentives to consider price in choosing providers and have incentives to be careful about total costs of treatment. With 50 percent cost sharing, a plan can be liberal in its inclusion of nonphysician professionals. Heavy cost sharing circumscribes casual use. Fee schedules allow the plan to benefit from the less costly per hour fees charged by providers without doctoral-level training.

A potential problem with imposing heavy cost sharing on outpatient psychotherapy is that it would encourage patients to seek treatment from more costly settings, particularly hospital care. The argument that coverage for psychotherapy should be expanded to decrease reliance on hospital care has been made for some time, but there is no clear evidence to show that such an effect is important in the range of benefit changes
considered in most plans. Clearly, some ambulatory mental health care benefit should be provided to support community-based treatment for the severely ill. Within the context of our proposed benefit package, including a deductible for facility treatment (equal to the cost sharing on ten or more psychotherapy visits) and more generous coverage for medical management, we do not believe the case can be made to expand coverage for psychotherapy in anticipation of a fall in use of hospital care.

**Outpatient medical management.** In the RAND Health Insurance Experiment, individual psychotherapy accounted for 90 percent of all visits (and a larger share of costs) when a mental health visit was defined most broadly. A very small portion of psychiatric benefit costs for employed populations go to medical management. It is impossible to directly identify medical management visits in the RAND Health Insurance Experiment, but they appear almost certainly to have amounted to less than 1 percent of all mental health costs. At the time of the Health Insurance Experiment, medical management was not an identified service. Since that time the medical management procedure has emerged as a potential substitute for more costly care. We believe it is important to distinguish medical management from psychotherapy in a payment plan.

By covering medical management on a par with other medical procedures, the model plan provides generous coverage for basic ambulatory treatment for a number of severe and disabling mental disorders, such as major depression and schizophrenia. Concern about demand response for this population and these treatments is outweighed by the importance of covering a cost-effective therapy.

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**What Does The Model Plan Cost?**

An employer’s costs are affected by many factors, including workforce demographics, local market characteristics, and the benefit plan. Whether the plan would save money depends on the structure of existing coverage. Here we use recent data from one employer that has agreed to make its experience available to illustrate the cost consequences of choice of the model plan in relation to some alternatives. The relative impact of plan changes at this employer are expected to be representative of many private employers. Simulations are conducted with the Simulation Model for Alternative Payment Systems (SMAPS). The employer’s cost of mental health benefits (excluding substance abuse) was $182 per employee per year with the actual benefit plan. The current benefit at this employer was more generous than average. The employer had very limited demand-side and no supply-side cost


sharing for facility-based care. On the ambulatory side, patients pay a small amount of coinsurance. The major limit on ambulatory use is a fee schedule set about 25 percent below market prices. By permitting providers to “balance bill” patients, there is a *de facto* coinsurance of about 33 percent in the plan.

Exhibit 2 shows the estimated per employee cost of the current benefit and the model plan. Both the model plan and the current benefit have a precertification and concurrent review program. The model plan costs considerably less than the employer’s current coverage. Savings to the employer are achieved at only a small increase in employees’ costs. Furthermore, the increase in uncovered costs is spread more evenly over all users, rather than being concentrated on a few very high users of inpatient care who experience catastrophic financial losses. The only benefit reduction for inpatient care is the one-day deductible, and employees and their families have no financial responsibility for catastrophic facility-based expenditures.

We have also compared costs in the model plan with two alternative plans to anticipate objections to the model plan (Exhibit 3). One objection might be that a payer or employer is unable to implement any supply-side cost sharing. Much is lost by this. The first alternative in Exhibit 3 replaces the one-day deductible and mixed system of provider payment with full coverage for sixty days of inpatient care per year and

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**Exhibit 2**  
Savings Of Model Mental Health Insurance Plan In Relation To Current Coverage Costs Per Employee, Representative Employer, 1989

<table>
<thead>
<tr>
<th>Current plan and costs</th>
<th>Model plan and costs</th>
<th>Change in costs with model plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inpatient</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little demand-side, no supply side cost sharing</td>
<td>One-day deductible, mixed system</td>
<td>$128.85 - $100.29 = $28.56 (–22.2%)</td>
</tr>
<tr>
<td>$128.85</td>
<td>$100.29</td>
<td></td>
</tr>
<tr>
<td><strong>Ambulatory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 percent coinsurance, no limit</td>
<td>50 percent coinsurance, no limit</td>
<td>$53.52 - $35.21 = $18.31 (–34.2%)</td>
</tr>
<tr>
<td>$53.52</td>
<td>$35.21</td>
<td></td>
</tr>
<tr>
<td><strong>Total plan costs</strong></td>
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<td></td>
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<tr>
<td>$182.37&lt;sup&gt;a&lt;/sup&gt;</td>
<td>$135.50&lt;sup&gt;a&lt;/sup&gt;</td>
<td>$46.87 (–25.7%)</td>
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<tr>
<td><strong>Total uncovered costs</strong></td>
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</tr>
<tr>
<td>$26.78&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$41.71&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$14.93 (+55.8%)</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$209.15</td>
<td>$177.21</td>
<td>$31.94 (–15.30%)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Paid by employer.  
<sup>b</sup>Paid by employee.
Exhibit 3
Impact Of Modifications To The Model Plan, Costs Per Employee, Representative Employer, 1989

<table>
<thead>
<tr>
<th></th>
<th>Plan costs</th>
<th>Uncovered costs</th>
<th>Total costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model plan</td>
<td>$135.50</td>
<td>$41.71</td>
<td>$177.21</td>
</tr>
<tr>
<td>Alternative inpatient plan (no deductible, no supplieside cost sharing, 60-day annual coverage limit)</td>
<td>$156.86 (+15.8%)</td>
<td>$40.62 (-2.6%)</td>
<td>$197.48 (+11.4%)</td>
</tr>
<tr>
<td>Alternative ambulatory plan (20 percent coinsurance, no limit)</td>
<td>$171.11 (+26.3%)</td>
<td>$24.19 (-42.0%)</td>
<td>$195.30 (+10.2%)</td>
</tr>
</tbody>
</table>

No supply-side cost sharing. First, costs to the plan are nearly 16 percent higher than with the model benefit. Second, although the average per employee uncovered costs are about the same, the distribution of these costs will be much more concentrated in the modified benefit plan where the uncovered costs fall on the few families with high expenses. From the plan’s standpoint in terms of costs and from the employee’s standpoint in terms of risk, the model plan is much preferred.

Another possible objection to the model plan is that it “discriminates” against outpatient psychotherapy. The second alternative in Exhibit 3 reduces coinsurance for psychotherapy to 20 percent. Plan costs per employee per year would increase $35 (26 percent) by such a change (although the costs would still be below those under current coverage). Outpatient costs are sensitive to cost sharing, and outpatient coverage cannot be improved without a large increase in costs.

One final objection that might be raised is the plan’s failure to address drug benefits. The widespread use of psychotropic agents makes this a particularly important issue for mental health benefit design. Pharmacotherapy is central to the treatment of most severe mental illnesses. The high cost of several new medications to treat depression and of the antipsychotic agent clozapine is of special concern in insurance design. We know of no empirical basis for differentially treating the coverage of medication for mental illnesses, so we recommend that such coverage be equivalent to the coverage for all other medications. Lacking the relevant data, we do not offer estimates of the cost of such a benefit.

Concluding Remarks

Mental health providers, consumers, and family members have argued that the coverage offered by public and private insurers for treatment of mental disorders fails to provide financial protection and encourages the
wrong kinds of treatment. Two serious concerns stand out. First, the costs of catastrophic illness are inadequately covered. Coverage limits for inpatient care and limits for community treatment leave most families unprotected against the financial risk of major mental disorder. Second, the range of covered services is too narrow. Inpatient hospital care is encouraged even when residential or alternative facility-based care may be appropriate. Psychotherapy is viewed as the exclusive form of ambulatory care, ignoring medical management, due in part to the manner in which units of service are defined and prices are set. At the same time, concerns of payers have focused on cost and on the bewildering proliferation of provider types.

The plan we have described here attempts to deal with each of these concerns on behalf of a working population by judicious application of the full set of tools available for plan design. It uses research findings on both demand and supply response to payment incentives. It adheres to important principles of payment system design. Finally, it attempts to match benefit design features to clinical effectiveness findings.

The use of both provider payment policy and benefit design to affect utilization adds new flexibility to the task of balancing the competing goals of financial protection for patients and cost containment for payers. Differentiation between psychotherapy and the medical management required by severely and persistently mentally ill patients accommodates the greater needs of the severely ill without compromising cost containment. The cost analysis, although based only on one plan, shows that our plan represents an attractive and responsible choice by employers. Projected premiums are likely to be lower than in many corporate plans, striking a practical balance between coverage and cost.

This research was supported by Grant no. MH43703 and Grant no. 1-K05-MH00832-02 from the National Institute of Mental Health (NIMH). The model benefit proposed here was developed in discussions with Randall Ellis, Judith Lave, and David Salkever. We are grateful to the following people for commenting on an earlier draft: Laura Altman, Bernard Arons, Jay Burke, Linda Frisman, Dominic Hodgkin, Tom Lalley, Philip Massad, Grayson Norquist, Agnes Rupp, Veronica Vaccaro, Bryant Welch, and Paul Widem. The views expressed here are the authors’ own and do not necessarily represent the views of officials of NIMH.
NOTES


2. An employer may wish to cultivate good relations with the health care community, maintain long-term employees by providing a secure environment, or encourage employee identification with the firm. Furthermore, the personal income tax system makes health benefits an attractive means to increase employee compensation.

3. Private health insurance policy cannot solve all mental health financing issues. We do not address the question of whether all employers should be forced to offer some health insurance, nor do we address the problem of financing care for the uninsured or those paid for through public programs. Our goal is limited to advising employers who do offer health insurance about the form of mental health coverage.

4. Frank et al., “A New Look at Rising Mental Health Insurance Costs.”


7. K. Arrow, “Uncertainty and the Welfare Economics of Medical Care,” American Economic Review (December 1963): 941–973. The deductible is due to transaction costs of insurance. If insurance premiums were exactly actuarially fair for all potential policies (no loading charges, fixed or variable) and there were no demand response to insurance, the risk-averse consumer would choose full coverage with no deductible.

8. Private payers can get away with limiting mental health benefits because the state mental health system serves as a backup. Exhausted coverage presents patients and families with hard choices. In mental health these choices include some access to public care in most places. It is preferable to use tax dollars to pay for care of those who lack the ability to pay, not for those whose employers choose not to offer adequate coverage.


12. E.B. Keeler et al., The Demand for Episodes of Mental Health Services, RAND Report no. R-3432-NIMH (Santa Monica, Calif.: The RAND Corporation, October 1986).


14. There were fewer than 100 conventionally defined psychiatric hospitalizations in the 20,000 person-years of the RAND Health Insurance Experiment, across all plans. RAND researchers did not estimate a demand response for mental hospital care.


16. We recommend singling out medical management, leaving higher coinsurance to apply to any other mental treatment code. Medical management has been given distinct codes
in Medicare and may also be billed under a general medical evaluation and management code. As convincing evidence on effectiveness accumulates, the spirit of our proposal would be to provide expanded coverage for other studied procedures.


21. W.A. Hargreaves and M. Shumway, “Effectiveness of Mental Health Services for the Severely Mentally Ill,” in *The Future of Mental Health Services Research*, ed. Taube et al. In virtually all of the research supporting this point, patients are assigned to alternative programs, and costs and outcomes are compared. The finding that alternatives to hospital care are as good but less expensive establishes the potential of such substitution, but it does not demonstrate that such substitution would actually take place in the real-world, fee-for-service mental health care system.

22. Ibid.


25. A deductible is easily administered and has the advantage from the employer’s point of view of shifting one day’s cost to the patient. This first-dollar cost shift is not a significant risk to families, nor is it likely to affect the public mental health system.


29. Small employers with admissions spread over a large number of facilities will have neither the information upon which to base peer-group computations nor the willingness to invest the administrative costs necessary to set up a special payment system with
in institutional providers. Designing a mixed payment system is the function of the claims processor, usually a commercial insurance company or Blue Cross plan.


31. Even if costs per day decline with length-of-stay, payment of one-half the average per diem for each extra day will encourage efficiency.


33. The fairness of such a payment system for Medicare is demonstrated in Cromwell et al., “A Modified TEFRA System for Medicare Discharges.” The overall “fit” of payments in a mixed system with peer grouping to facility average costs is vastly superior to any system based on patient classification and prospective payment.


36. McGuire, “Financing and Demand for Mental Health Services.”

37. Demand response for medical management has not been studied separately from demand for psychotherapy. It seems likely that demand for medical management is less responsive to price than is demand for psychotherapy.

38. Details about the employer, its mental health benefit plan, its utilization, and SMAPS are contained in T.G. McGuire, “Designing a Payment Plan for Mental Health Services: An Application to ‘Company X’” (Unpublished paper, Department of Economics, Boston University, 1991). Covered populations may take several years to adjust behavior to incentives in a new coverage plan. SMAPS estimates costs in 1989 as if the benefit had been in effect for several years, allowing for any such adjustments to take place.

39. In the simulations reported here, substance abuse treatment was not separated out from mental health treatment. All were put under the “model plan” and its alternatives. In the plan studied, substance abuse treatment was about 30 percent of inpatient costs. Diagnoses were not reported reliably on office-based claims.

40. Results in Exhibits 2 and 3 apply to the average employee. An advantage of the model plan is that it provides good protection to the few families with high expenses during a year. For an appendix that illustrates the impact of the model plan and a common alternative benefit package on family out-of-pocket costs in two scenarios, and for more detail on costs, contact Thomas G. McGuire, Department of Economics, College of Liberal Arts, Boston University, 270 Bay State Road, Boston, Massachusetts 02215.

41. State governments would prefer the model plan as well, since some of the uninsured costs of individuals who use more than sixty days during a year would surely fall on the public mental health system.

42. Many plans impose a dollar or visit limit on outpatient mental health costs. A $1,500 limit to go along with the 50 percent coinsurance would save the plan an additional $12 per employee per year.

43. The plan advanced here is not intended to apply to Medicaid, which cannot use demand-side cost sharing. Furthermore, Medicaid clearly has both rehabilitative and long-term care components that are not addressed in private health insurance plans. We believe that design of Medicaid mental health benefits is a critically important activity and needs to be a priority of the policy research agenda for the 1990s.