Risk Sharing In Managed Behavioral Health Care

Mental health visits went down 25 percent when a large behavioral health care firm changed the way it contracts with providers.

by Meredith B. Rosenthal

ABSTRACT: While policymakers have expressed concern over the impact of risk sharing with providers on treatment patterns, the literature lacks decisive evidence on which to base policy. This paper evaluates the impact of a contracting change within a managed behavioral health organization from a fee-for-service system to a case-rate system with utilization management delegated to providers. The contracting change resulted in a 25 percent reduction in mental health visits per episode. This effect varies with the dollar amount of the case rate and is more pronounced for providers with a larger share of revenue from risk contracts and with intensive utilization management programs.

Widespread changes in the ways in which managed care organizations contract with providers have led to concerns about the impact of provider risk bearing on treatment choices. In particular, the locus of clinical management and financial responsibility has shifted away from health plans toward provider organizations.

In behavioral health the transfer to providers of financial risk and the accompanying responsibility for managing care is still emerging. Recent evaluations of carve-outs to managed behavioral health organizations (MBHOs) indicate the reliance of these entities on more traditional cost-control methods such as preauthorization and closed networks. However, some risk sharing with behavioral health care providers is beginning to occur. For example, in 1997, 14 percent of psychiatrists participated in capitation contracts. The proliferation of new behavioral health care organizations analogous to physician practice management (PPM) companies may be further evidence that risk sharing in behavioral health is on the rise. Through a variety of organizational forms, psychiatric PPMs (PPPMs) provide the necessary scale and skills that behavioral health care providers need to accept delegated contracts.

Although most public and private payers have remained skeptical about downstream contracting between MBHOs and providers,

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there is ample reason for concern from a theoretical standpoint. Risk contracts may affect both access to care and intensity of treatment. There is almost no evidence in the literature that would allow us to quantitatively assess the impact of risk sharing and delegation on mental health treatment. Without this, neither policymakers nor the market can make important judgments about whether the latest delivery system changes are, on net, positive.

This paper describes a natural experiment in which an MBHO began delegating risk and clinical management for outpatient mental health care to behavioral health care providers in its network. Because part of the network continued to be paid fee-for-service (FFS) and to be managed by the MBHO as before, there was a natural control group. The central analysis described here focuses on the change in visits per episode of outpatient mental health care. I then describe supplemental pieces of evidence that provide further insight into providers’ responses to the new incentives.

The Setting

The natural experiment described here took place in an MBHO that covers approximately two million lives in a mature managed care market. It now contracts with twenty-six provider groups and independent practice associations (IPAs) using a case rate, as well as a large pool of providers in solo or small-group practice.

Provider payment. Until recently the MBHO used a negotiated fee schedule to pay all of its providers. Beginning in July 1995 a case-rate system was phased in for a select group of twenty-six IPAs and group practices with which the MBHO had previously contracted by FFS. The remaining clinicians, who are primarily in solo or small-group practice, continued to be paid on a fee schedule. Individual clinicians practicing outside of a group practice or IPA are not considered by the MBHO to be candidates for managing care under a risk-sharing contract, primarily because they lack the ability to pool risk across a sufficiently large number of patients.

By January 1996 the MBHO had fully implemented a case-rate payment system for almost all of the IPAs and larger groups in the network. Implementation included not only working out new financial relationships but also providing assistance in developing utilization- and quality-management capabilities. In effect, the MBHO changed its role from managing individual treatment plans to supporting the groups’ efforts to do so, while monitoring clinical processes and overall quality indicators.

The case rate, which covers outpatient mental health services (substance abuse treatment and inpatient services are paid for separately) for a one-year period beginning at the date of referral, was...
computed on the basis of historical use data for the MBHO’s patients as a whole. The case rate varies only as a function of the outpatient visit limits and, to a lesser degree, by the consumer’s copayment. Case rates are not adjusted for diagnosis or other patient characteristics.

**Patient management.** Patients are assigned to providers by the MBHO triage staff. About 98 percent of patients enter the system through the toll-free telephone line maintained by the MBHO. Callers are evaluated by means of a routine questionnaire delivered by a trained (nonclinician) staff person. If the staff person recommends treatment, a referral is made to the closest participating provider, with preference given to groups/IPAs if they are located at no greater distance than solo providers. For referrals to individual providers, patients are initially allotted five sessions. For patients sent to the groups and IPAs who accept the case rate, no preauthorization is required for visits. FFS providers must request any additional sessions beyond five, with closer scrutiny for each subsequent request.

**Provider-group characteristics.** The twenty-six group practices and IPAs that are the focus of this study range in size from ten to 450 clinicians. They range from very loose forms of organization, in which clinicians may only commit a small percentage of their time (IPAs and faculty practices), to tightly managed clinics with full-time employed clinicians. For the most part, psychiatrists, psychologists, and masters of social work (MSWs) are equally represented in these organizations (although more visits are accounted for by the latter two groups). The distribution of licensure within the groups roughly mirrors that of the MBHO’s network as a whole.

Without exception, the groups and IPAs that accepted the case-rate contracts were oriented toward managed care. A minority of the groups were new to risk sharing in 1996, but all had significant prior experience with managed care and the brief-treatment philosophy that MBHOs embrace. Several of the organizations (particularly the IPAs) had dedicated case and utilization management staff.

Utilization management varies in formality and frequency. Within some of the smaller staff/clinic-model groups there is more informal consultation among clinicians. In terms of formal case review, most groups review fewer than 25 percent of cases for medical necessity, and a similar share of groups report that utilization profiles are shared with individual clinicians.

Most of the groups that contract for care with this MBHO continue to pay their clinicians using FFS payment. The remaining groups, including several university-based clinics, employ salaried providers. In most cases, the salaried arrangements include productivity bonuses, ranging in size from 1 percent to 25 percent of com-
pensation. In addition, a small number of groups adjust compensation for patient satisfaction and other quality-of-care measures.

**Data And Methods**

The primary data source for examining the impact of the natural experiment is the administrative database of the MBHO. These data comprise claims and encounter records and eligibility files and include information on the provider, payment, procedure code, diagnosis, and indicators of whether the member had any inpatient mental health stays or used any chemical dependency services during the study period. From the eligibility records of the MBHO, demographic and coverage information have been extracted, including age, sex, relation to policyholder, geographic location, outpatient visit limits, and effective dates of coverage.

Information on the structure, financial incentives, and monitoring activities of the groups and IPAs were obtained by means of a brief survey. The survey data are intended to measure the organizational factors influencing treatment choice as well as the internal reimbursement scheme. The survey domains are structure, nature of patient/revenue base, compensation, and utilization and quality management. The case-rate groups are classified as follows: (1) organizational structure: staff model (84 percent) or IPA (16 percent); (2) compensation: salary (39 percent) or FFS (61 percent); (3) utilization and quality management: high or low; and (4) revenue base: FFS (49 percent), case rate (22 percent), or capitation (28 percent).

The unit of analysis for the study is an episode of care—a series of treatments in which no two visits are separated by more than eight weeks. The basic approach to measuring the impact of risk sharing is to compare change over time in number of visits per episode for patients of case-rate providers with that for patients of FFS providers, while controlling for a broad array of patient characteristics.

**Possible selection problems.** Two potential selection problems warrant a brief discussion. The first concerns providers. FFS providers may not be an ideal control group for case-rate providers. These providers were not offered risk-sharing contracts and may have self-selected an FFS environment on the basis of practice styles that are incompatible with fixed payment. This may bias my results upward in spite of the fact that I attribute only the difference in the changes in visits over time between the risk-sharing and non-risk-sharing groups to the case-rate payment system.

The second selection problem concerns patients. That is, given that providers received a fixed payment for all covered treatment, we would expect them to try to select healthy patients. In this setting it is useful that the MBHO assigns patients to providers...
primarily based on geographic proximity. However, providers still may practice selection by discouraging more severely ill patients from returning after the first visit. This behavior would be manifested by a disproportionate number of single-visit episodes. Alternatively, patient-level selection may occur because the MBHO triages patients so that those likely to require extended treatment are referred to case-rate providers, while more self-limiting cases are referred to the FFS network. If this were the case, my results would be biased downward. To investigate the possibility of patient-level selection, I examined case-mix differences over time and tested whether the effect of the case rate differs by severity of illness.

Results

Case-mix differences over time. A few case-mix differences between the patients of the two groups of providers at baseline are statistically significant ($p = .05$), as shown in Exhibit 1. Even before the contracting change, patients of providers who remained in FFS over the entire period are more likely than patients of providers who were selected to receive a case-rate contract were to suffer from depression or anxiety and be on medications. Over time, there are small increases in the percentage of patients referred to case-rate providers who have an adjustment disorder and decreases in those with anxiety and psychosis. Patients of FFS providers also appear to be shifting from the depression diagnosis to adjustment disorders.

EXHIBIT 1
Characteristics Of Patients, By Type Of Provider, Before And After Contracting Change

<table>
<thead>
<tr>
<th>Characteristic (variable)</th>
<th>Fee-for-service providers</th>
<th>Case-rate providers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before contracting change</td>
<td>After contracting change</td>
</tr>
<tr>
<td>Age (average, years)</td>
<td>35 (n = 1,395)</td>
<td>35 (n = 9,787)</td>
</tr>
<tr>
<td>Female</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>Primary beneficiary</td>
<td>55</td>
<td>53</td>
</tr>
<tr>
<td>Diagnosis of depression, any</td>
<td>35</td>
<td>30</td>
</tr>
<tr>
<td>Diagnosis of depression, severe</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Diagnosis of anxiety</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Diagnosis of psychosis</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Diagnosis of adjustment disorder</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Use of medication</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Any chemical dependency treatment</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Any inpatient mental health use</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Outpatient mental health visit limit (days)</td>
<td>31</td>
<td>30</td>
</tr>
</tbody>
</table>

SOURCE: Author's calculations from encounter/claims database.
NOTES: Continuously enrolled, treated population with complete records. N = 21,673.
These trends may indicate a decline in the severity of patients or possibly a change in coding practices toward the use of the adjustment-disorder category. Finally, the difference in the share of patients on medications that existed at baseline is dissipated over time, as FFS providers appear to medicate less and case-rate providers more.

Impact of case rate on therapy visits. Exhibit 2 depicts the unadjusted time series for the average number of visits per episode by quarter for the continuously enrolled population who used outpatient mental health services during the study period (N = 21,673). Along the X-axis are the ten quarters beginning July 1995. In the aggregate, the trend in visits per episode shows an increase at the beginning of the study period, followed by a steady decline from January 1997 through October 1997. Although the two raw trends diverge at some points in time, there are clearly some common elements. The initial increase, for example, is roughly parallel for the two groups and may reflect a systemwide shock such as a change in benefit design for some of the MBHO’s members. Not surprisingly, the visits per episode for members who saw case-rate providers are below the visits per episode for members who saw FFS providers for most of the period. This is consistent with the MBHO’s stated case-rate strategy: to select providers who were experienced in brief treatment and could effectively manage utilization.

Exhibit 3 presents several results from the multivariate regression analysis. The main effect measured by the model is the impact of the contracting change on the average number of visits per episode. The overall effect of the contracting change is a 25 percent decline in visits per episode. Note that this result takes into account the fact...
that the groups who ultimately received the case rate provided 23 percent fewer visits per episode before the contracting change.

The two provider characteristics that are significantly associated with larger responses to the case rate are (1) the presence of more intensive, routine utilization review, and (2) the share of revenue from traditional FFS contracts. Intensive utilization review nearly doubles the effect of the case rate. The share of revenue from FFS patients works in the opposite direction. At the mean value of 50 percent, FFS revenue raises visits by 34.4 percent, relative to the case-rate effect with no FFS revenue.

Two other interactions are of potential interest. First, the effect of risk sharing on treatment choice does seem to depend on the level of the case-rate payment associated with a given patient. Specifically, a $100 increase in the case rate would result in a ten-percentage-point reduction in the size of the main effect (that is, a 15 percent reduction in visits relative to FFS rather than a 25 percent reduction). In contrast, there is no apparent differential effect of the contracting change as a function of diagnosis of the patient.

**Supplemental analyses.** To enrich the analysis of treatment effects resulting from the contracting change, I considered several alternative impact measures. These results may be used to better characterize the clinical impact of the case rate.

First, the reduction in visits might have arisen from providers’ active attempts to discourage high-cost patients from returning after the first visit. However, the data revealed no difference in the probability of having a single-visit episode by provider payment method (case rate versus FFS). Furthermore, analysis of the probability that an enrollee switched providers or dropped out of the plan altogether, given that the initial referral was to a case-rate provider, revealed no measurable effect of the contracting change on this dimension of care.
Second, providers may be (appropriately or inappropriately) substituting other treatment modalities for therapy. Data from the MBHO’s quality-monitoring systems indicate that, in fact, case-rate patients are more likely than FFS patients are to receive medications, be referred to self-help programs, and be referred to a community mental health center.

Finally, do the changes in treatment patterns that occurred after risk sharing and delegation were implemented imply worse outcomes for patients? Quality-assurance data from the plan indicate that patients of case-rate providers gain similar benefits from treatment, as measured by the change in reported Global Assessment of Functioning scale over the treatment period. However, these data are reported by providers and thus may be subject to bias.

**Discussion And Policy Implications**

Researchers have questioned whether risk sharing is an important determinant of treatment patterns in a closed-network managed behavioral health care setting. This view is based on the observation that carve-outs that include significant risk sharing with the vendor perform similarly to those with only a small amount of risk sharing. Evidence from this natural experiment, in which a mature MBHO began using risk-sharing contracts with selected providers, supports an alternative view. The difference may lie in the fact that the risk-bearing units in this study are provider organizations rather than large behavioral health care carve-out vendors. The disaggregated results also indicate that providers’ characteristics and competing incentives are important moderating factors.

**Effects on supply.** The results described here have several implications for payers and policymakers. First, even in a tightly managed system the introduction of risk sharing with providers can have striking effects on the supply of health care services. These effects may indicate that providers, given control over the treatment budget, can find efficiencies in the system that could not be generated by the health plan. On the other hand, evidence from demand-side risk sharing indicates that the reduction in visits may be composed of both high-value and low-value treatments.

**Payment level.** Second, the generosity of payments, not just the marginal incentives, affects treatment choices. If delegation is desirable for giving providers more control over clinical management, then there is reason to believe that the level of fixed payments can be adjusted to meet desired treatment-intensity objectives. For those concerned about managing behavioral health care costs within a fixed budget, the fact that providers are responsive to both form and level of payment may be good news.
about patients’ welfare, however, these results may be disturbing. Current legislative efforts to ensure access to mental health treatment (specifically, parity legislation) assume that benefit design is the critical determinant of access to care. My estimates, which control for benefit design, support a more complicated model of treatment choice with a major role for providers’ financial incentives.

**The role of context.** A third implication is that context matters. Behavioral responses to payment incentives vary depending upon whether the provider organization has a highly developed utilization management system and is generally pursuing risk-sharing contracts. This finding indicates that introducing risk sharing and delegation in a market in which providers are relatively new to this type of contracting may have very different results than shown here.

**Minimal selection effects.** Fourth, changes in case-mix differences over time reveal minimal observable selection effects at the patient level. There may, however, be changes in diagnostic coding by providers that mask some actual increases in case-mix severity. Moreover, the MBHO may be practicing selection on the basis of characteristics that are not observable to the researcher.

**Process of care.** Finally, this study indicates that risk sharing and delegation change not just the intensity of treatment but also the process of care. Providers at risk appear to tap into collateral services that are less costly (or possibly “free”) to themselves, although not necessarily to patients or other stakeholders, as substitutes for their own services. Whether this altered mix of services produces better or worse outcomes is a matter more of philosophy than of empirical fact. Those who advocate “brief treatment” as appropriate and effective care would view the apparent change in treatment patterns with considerably less suspicion than would those who view brief treatment as a poorly cloaked attempt by managed care companies to justify reducing needed services.11

The substitution of other services for therapy also raises the issue of cost shifting and the impact of risk sharing on social costs. Although the data available for this study cannot address this question, it would clearly be of interest to learn more about spillover effects of risk sharing in managed behavioral health care on pharmacy costs, primary care costs, and the public mental health system.

The difficult policy question is whether the visits that were eliminated by the case-rate system might have been of any use (and if so, how much). To address this issue, we need to understand better the effectiveness of therapy and collateral treatments in this type of population. Ultimately, this inability to evaluate the welfare effects of risk sharing and delegation points to
the need for further research on appropriate treatment patterns and outcomes, particularly for less severely ill populations.

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NOTES

4. There are notable exceptions to this general statement. For example, the Massachusetts Division of Medical Assistance has prohibited its behavioral health carve-out vendor from sharing risk with providers.
5. These measures may be endogenously determined with treatment choices, as they are potential substitutes for outpatient care. However, excluding these variables does not significantly change the estimates of the effect of the case rate on outpatient treatment.
6. This episode definition has been validated and widely used in the literature. See L. Kessler, “Episodes of Psychiatric Utilization,” Medical Care (December 1980): 1219–1227. Sensitivity analysis using six weeks and twelve weeks to define episodes was performed with no qualitative change in the results.
7. For complete details regarding the estimation, a technical appendix is available upon request from the author at mrosenth@hsp.harvard.edu.
8. Patients are unlikely to be actively selecting certain types of providers here, since their costs do not differ across the two types of providers and they are unlikely to be aware of the method of payment.