

# Effect Of Declining Mental Health Service Use On Employees Of A Large Corporation

**General health costs and sick days went up when mental health spending was cut back at one large self-insured company.**

*by Robert A. Rosenheck, Benjamin Druss, Marilyn Stolar, Douglas Leslie, and William Sledge*

**ABSTRACT:** This study examines concurrent changes in use of mental and general health services and in annual sick days among 20,814 employees of a large corporation. From 1993 to 1995 mental health service use and costs declined by more than one-third, more than three times as much as the decline in non-mental health service use. However, employees who used mental health services showed a 37 percent increase in use of non-mental health services and significantly increased sick days, whereas other employees showed no such increases. Savings in mental health services were fully offset by increased use of other services and lost workdays.

**DATAWATCH** 193

**A**GGRESSIVE EFFORTS TO CONTAIN THE GROWTH of health care costs have resulted in major changes in the delivery of both general health care and mental health services.<sup>1</sup> Several studies have reported reductions of as much as 30 percent in both mental health service use and costs in recent years.<sup>2</sup> Some studies also have shown that managed care approaches can effectively reduce service use and costs for employers, but data on clinical outcomes have been unavailable in most cases.<sup>3</sup> The RAND Medical Outcomes Study, however, found poorer quality of care for depres-

.....  
 Robert Rosenheck is a professor of psychiatry and public health, Yale University School of Medicine; director of the Division of Mental Health Services and Outcomes Research, Yale Department of Psychiatry; and director of the Northeast Program Evaluation Center (NEPEC), Veterans Affairs (VA) Connecticut Healthcare System. Benjamin Druss is an assistant professor of psychiatry and public health, Yale School of Medicine. Marilyn Stolar is a biostatistician, NEPEC and Department of Epidemiology and Public Health, Yale School of Medicine. Douglas Leslie is an assistant professor of psychiatry, Yale School of Medicine, and an economist, VA-Connecticut Mental Illness Research, Education, and Clinical Center. William Sledge is assistant chief of psychiatry at Yale-New Haven Hospital, and a professor of psychiatry, Yale School of Medicine.

sion under prepaid plans, and data from both this study and Medicaid managed care evaluations have suggested that more severely ill patients may experience both reduced service use and poorer outcomes in prepaid plans than in traditional financing arrangements.<sup>4</sup>

It is well established that patients with mental illness show increased use of non-mental health services, as well as increased health care costs, lost time from work, and disability.<sup>5</sup> However, we know of no studies that have examined the relationship of reduced mental health service use as a result of cost containment, and changes in overall health care costs and sick days among employees.

In this study we present data from 1993–1995 on mental health service use, non-mental health service use, and sick days among 20,814 employees who were covered by health insurance plans offered by a major U.S. corporation. During these years the company introduced two new types of cost containment mechanisms. First, it offered a series of indemnity and point-of-service (POS) plans with reduced premiums but greatly increased deductibles and copayments. These plans thus provided incentives for employees to elect plans that were less expensive, because of their lower monthly premiums, but that discouraged service use, because they required higher initial out-of-pocket expenses in the form of deductibles. Second, the company established a relationship with several managed care organizations that introduced prior-authorization requirements for inpatient care and utilization review (UR) procedures for both inpatient and outpatient care. Since these proprietary UR procedures were illness specific, they had the potential to affect the treatment of mental illness differently than they affected that of physical illness.

We seek to address three questions: (1) Were there changes in mental health service use and cost among this company's employees during these years? (2) Did changes in use and costs for the treatment of mental illness differ from those for the treatment of general medical and surgical illnesses? (3) Were reductions in mental health service use associated with unique increases in non-mental health service use that were observed only among mental health users?

## Methods

This study is based on data from current employees of a large manufacturing corporation employing an average of 23,600 persons per year during 1993–1995. The corporation offered a variety of health plans to its employees, including conventional indemnity plans; a series of POS plans with varying premiums, deductibles, and copayment requirements; and health maintenance organizations (HMOs). Because of rising health care costs, the corporation offered

a series of plans during these years that had lower premiums but higher deductibles. These plans would have been especially attractive financially, at least in the short run. Furthermore, the company contracted with managed care organizations to implement illness-specific preauthorization and UR procedures, in a further effort to slow the growth of corporate health care costs. However, copayment rates (50 percent for mental health versus 20 percent for other health care) did not change during the years covered by this study.

**Sample.** There were 11,983 employee observations for 1993, 14,305 for 1994, and 15,153 for 1995, for a total of 41,441 employee-years. The average age of employees in the sample was 38.7 years, with 27,306 (65.9 percent) males; 14,129 (34.1 percent) females; 29,792 (71.9 percent) whites; 7,044 (17.0 percent) blacks; 3,066 (7.4 percent) Hispanics; and 1,533 (3.7 percent) of other ethnicities. Average weekly earnings were \$764. Altogether, 40,731 (98.3 percent) worked full time; 39,860 (96.2 percent) worked on the day shift, and 5,428 (13.1 percent) were new employees to the company. About one-third (13,425, or 32.4 percent) of observations pertained to employees in the same state in which the corporate headquarters was located; 12,265 (29.6 percent) worked in six other states with large employee populations; and 15,745 (38.0 percent) worked in forty other states or the District of Columbia.

**Sources of data.** Health care claims were merged with employees' demographic data and data on sick days at the level of the unique employee for each year (the employee-year) for calendar years 1993–1995 (N = 41,441 employee-years for 20,814 unduplicated employees across all three years). Altogether, 7,718 employees (37 percent) worked for the corporation and were covered by one of its non-HMO health plans during all three of the years under study; 5,191 (25 percent) were covered for two of the three years; and 7,905 (38 percent) were covered for one of the three years.

Utilization data were not available on employees either who did not enroll in a health plan through the corporation (for example, because they were fully covered by a spouse's plan) or who enrolled in an HMO (since HMOs do not submit health care claims). Because the number of employees included in our database increased modestly from 1993 to 1995 (from 11,983 to 15,153) and the proportion of employees enrolled in HMOs increased only slightly (from 30 percent to 33 percent) over these years, these exclusions are not likely to affect the representativeness of our results.

**Measures.** *Service use.* Claims were summarized separately by each employee for each year, as the total number of days on which mental health and non-mental health inpatient services were received and the total number of days on which mental health and non-mental

health outpatient services were received (the potential range is 0–365 for all utilization measures). Claims for *International Classification of Diseases*, Ninth Revision (ICD-9) codes from 290.00 to 312.99 were classified as mental health claims, while all others were classified as non-mental health claims.

*Health care costs.* Because of the well-known problems with using charge data as a proxy for costs, we estimated the cost of services from the payers' perspectives by summing the deductible, copayment, coinsurance, and corporation payments for each claim following methods for deriving costs from claims data used elsewhere.<sup>6</sup> Pharmacy costs were included when covered by a specific plan and linked to mental health care by diagnosis codes. All costs were adjusted for inflation to 1993 levels using the Medical Care Consumer Price Index.<sup>7</sup>

*Sick time.* Data on days absent from work for reasons of sickness or disability were available for all employees covered by the Fair Labor Standards Act, primarily nonexecutive and technical employees (that is, blue-collar workers), as required by law ( $n = 25,179$  employee-years, 61 percent of the total).

*Statistical analyses.* We first evaluated the significance of differences from 1993 to 1995 in average annual inpatient and outpatient mental health and non-mental health service use, statistically controlling for sociodemographic characteristics, employment income, and state of employment. We then evaluated differences across years in health care costs and sick days for employees who had a mental health claim, compared with those who had no mental health claim—a time-by-group interaction.

Data were available for each employee in the study for each year in which they were both employed by the corporation and enrolled in one of its non-HMO health plans. The structure of the data thus is repeated measures over equally spaced time points, with missing data for some employees in some years. Statistical analyses therefore must account for within-subject correlation of these outcomes, as well as for the unbalanced structure of the data. Hierarchical linear models and generalized estimating equations were used for these analyses because they adjust for the nonindependence of observations that pertain to the same subject in different years.<sup>8</sup>

All statistical tests evaluate mean differences between 1993 and 1995 use or cost and are adjusted for sociodemographic characteristics, employment income, full- or part-time employment, shift, and state of employment. Contrasts for mental health service users and nonusers for 1993 versus 1995 were estimated by including a year-by-subgroup interaction term in the model.

## Results

**Changes in service use and cost.** *Mental health service use.* There were no significant changes in the patterns of inpatient mental health service use across the three years, with fewer than forty employees (0.22–0.26 percent) hospitalized each year (Exhibit 1). Nor was there a significant change in the proportion of employees who used outpatient mental health services. However, there was a highly significant and substantial 34 percent reduction in the number of days of outpatient mental health service use per patient per year, declining from 13.9 days per patient in 1993 to 9.2 days per patient in 1995. Thus, while the proportion of employees who used mental health services did not change, the number of days of outpatient service fell.

*Non-mental health service use.* While there was also no significant change in inpatient non-mental health service use, there was a significant increase in the proportion of all employees in the sample who used outpatient non-mental health services (from 63.5 percent

**EXHIBIT 1**  
**Changes In Service Use: Percentage Of Enrollees Who Used Each Service, And Number Of Days Of Use Per User, 1993–1995**

	1993 (N=11,983)	1994 (N=14,305)	1995 (N=15,153)	Percent change
<b>Mental health</b>				
<b>Inpatient</b>				
Percent of enrollees who used services <sup>a</sup>	0.22%	0.25%	0.26%	18.2%
Days of use per user <sup>b</sup>	14.03	13.08	10.95	-22.0
<b>Outpatient</b>				
Percent of enrollees who used services <sup>a</sup>	5.84%	5.84%	5.18%	-11.3
Days of use per user <sup>b</sup>	13.92	10.35	9.18	-34.1****
<b>Non-mental health</b>				
<b>Inpatient</b>				
Percent of enrollees who used services <sup>a</sup>	3.9%	3.8%	3.6%	-7.7
Days of use per user <sup>b</sup>	5.61	6.23	5.59	-0.4
<b>Outpatient</b>				
Percent of enrollees who used services <sup>a</sup>	63.5%	78.7%	75.8%	19.4****
Days of use per user <sup>b</sup>	9.56	9.42	9.65	0.9
<b>Mental health care costs</b>				
Percent of enrollees who used services <sup>a</sup>	6.2%	6.2%	5.5%	-11.3
Cost per user <sup>c</sup>	\$1,912	\$1,471	\$1,192	-37.7****
<b>Non-mental health care costs</b>				
Percent of enrollees who used services <sup>a</sup>	63.5%	78.5%	75.2%	18.4****
Cost per user <sup>c</sup>	\$2,141	\$2,001	\$1,883	-12.1****

SOURCE: Corporate health claims.

<sup>a</sup> Generalized estimation equation (logistic).

<sup>b</sup> Generalized estimation equation (Poisson).

<sup>c</sup> Hierarchical linear model.

\*\*\*\*  $p < .001$

in 1993 to 75.8 percent in 1995) but no significant change in the intensity of service use among those employees.

**Costs.** There was no significant change in the percentage of employees who incurred any inpatient or outpatient mental health service costs. However, total costs of mental health services per user declined significantly, by 37.7 percent per user (Exhibit 1). Non-mental health services, in contrast, were provided to 18.4 percent more employees in 1995 than in 1993, but the cost per user declined by only 12.1 percent.

There were no significant changes in inflation-adjusted per diem costs for inpatient or outpatient mental or non-mental health care. Thus, the observed changes in overall costs are primarily attributable to changes in service use, not to changes in payment rates.

**Health-related costs and sick time.** The next set of analyses compares costs among workers who used mental health services and those who did not (Exhibit 2). Mental health service users showed an average increase of \$850 (36.6 percent) in non-mental health service costs during 1993-1995, compared with only an \$18 (1.4 percent) increase among non-mental health service users. Statistical analysis shows a significant main effect for mental health

**EXHIBIT 2**  
**Changes In Costs And Sick Days, Mental Health Users And Nonusers, 1993-1995**

	1993	1994	1995	Percent change, 1993-1995	Statistical significance of differences between means		
					Mental health versus non-mental health <sup>a</sup>	Effect of time <sup>b</sup>	Interaction (product of mental health and time) <sup>c</sup>
<b>Non-mental health care costs</b>							
Mental health users	\$2,325	\$3,055	\$3,175	36.6%	****	****	****
Non-mental health users	1,297	1,465	1,315	-1.4			
<b>All health care costs</b>							
Mental health users	\$4,241	\$4,532	\$4,369	3.0	****	****	.54
Non-mental health users	1,297	1,465	1,315	1.4			
<b>Sick days</b>							
Mental health users	6.4	9.5	7.8	21.9	****	.0011	.0016
Non-mental health users	4.0	4.0	3.6	-10.8			
<b>All health care costs<sup>d</sup></b>							
Mental health users	\$4,599	\$5,340	\$4,954	7.7	****	****	.92
Non-mental health users	1,765	1,840	1,711	3.1			

SOURCE: Corporate health claims.

NOTE: Mean values.

<sup>a</sup> Significance of differences between mental health users and non-mental health users across all years.

<sup>b</sup> Significance of differences in mean values over the years regardless of status as mental health users or non-mental health users.

<sup>c</sup> Significance of differences in time trends between mental health users and non-mental health users. When significant, it indicates that the time trends for mental health users (as reflected in column 4, which reports changes in cost and percentage over time) are significantly different from the time trends for non-mental health users.

<sup>d</sup> Health care plus the cost of sick days.

\*\*\*\*  $p < .001$

users (indicating greater overall use of non-mental health services by mental health service users); a significant effect for time; and a significant interaction between mental health use and time (that is, the increase in non-mental health costs for mental health users was significantly greater than was the increase for other workers).

The next panel of Exhibit 2 presents changes in total direct health care costs (mental health and non-mental health) for mental health users and other employees. These data reveal small increases: 3.0 percent for mental health users and 1.4 percent for non-mental health users. Statistical analyses show a significant effect for mental health users, once again reflecting higher total costs among mental health users, and a significant change over time, but no significant interaction between the two. Thus, the decline in mental health costs among mental health service users was fully offset by the increase in non-mental health costs.

The third panel of Exhibit 2 shows the analysis of sick time, demonstrating an average increase of 1.4 sick days per year (21.9 percent) among mental health service users, compared with a decrease of 0.4 days per year (-10.8 percent) among non-mental health service users. Significant effects for mental health service use and time indicate that mental health users had more sick days than other employees had and that sick time changed significantly over time. The significant interaction term shows that sick time increased more for mental health users than for other employees.

Total health costs, summing both health care service costs and the cost of sick time, are presented in the fourth panel and did not show significantly different patterns of change (that is, interaction with time) between mental health users and other employees.<sup>9</sup>

## Discussion

In this sample, reduced mental health service use in an employed population over a three-year period was associated with increased non-mental health service use and increased days absent from work. Data were provided by a large corporation in which a variety of managed care methods were used to reduce health care costs and in which the effects of these methods fell especially heavily on the delivery of outpatient mental health care. Between 1993 and 1995 mental health care spending fell by 38 percent per user, as contrasted with a 12 percent decline in non-mental health spending per user. This difference primarily reflects reduced intensity of outpatient mental health service use. Savings in mental health care were offset by a concomitant increase in costs related to non-mental health service use and also were accompanied by an increase in sick days among mental health service users. It thus appears that in this

*“Reductions in use of mental health services may adversely affect the health status of patients, with no savings to payers.”*

---

corporation reducing mental health care was associated with potentially adverse consequences for employees with mental health problems, with no gain for the employer’s “bottom line.”

**Limitations due to observational study design.** Before discussing the implications of these findings, we address several potential limitations of the study. First, since this was a retrospective, observational study, patients were not randomly assigned to different levels of service use, and our observations could reflect unmeasured changes in health care needs or other employee characteristics not related to changes in mental health service delivery. We believe that this cannot explain our results, for several reasons.

First, employee characteristics may have changed over the three study years. However, reanalysis of data including only employees who were included in the claims database during all three years did not greatly change the results. Second, the observed results also may have been attributable to changes in health needs, selection biases, or plan shifting. However, for this to be the case, these processes would have had to have been so selective as to affect only mental health users, since the increase in non-mental health service use is observed exclusively among those employees. Furthermore, there were no differences in cost containment procedures for non-mental health services between mental health patients and other patients. Therefore, it seems likely that the difference in the changing use of non-mental health services and sick days between these groups is mainly attributable to the difference in intensity of mental health service use by the mental health patients.

Third, there may have been increased medical needs among mental health users over the years, which we have not identified. Although we cannot rule this out, we have adjusted for differences in age, job type, race, and sex—factors that typically predict health status and service use. In addition, it seems unlikely that medical problems would become more frequent among persons with mental health problems but not among other patients. Finally, there was no significant change in the proportion of employees who were enrolled in HMOs or who used mental health services across the three years, and an examination of the diagnostic characteristics of mental health service users showed no change across the years in the categories of treated mental health disorders. This indicates that there was no change in psychiatric case-mix.

**Other limitations.** A second kind of limitation is that data are not available on out-of-plan use, and it is therefore possible that the decline in reimbursement of mental health services by corporate health plans was offset by increased use of mental health services from employee assistance plans, privately unreimbursed providers, or public agencies. Even if employees did have access to other sources of mental health care, that care was evidently not sufficient to prevent an associated increase in use of non-mental health services or in sick days.

Yet another limitation is that data on changes in sick days are only available for 60 percent of employees, primarily those in nonexecutive and nontechnical occupations, and thus may not be representative of the entire population. However, analysis of changing patterns of mental health and non-mental health service use in this subsample showed the same patterns observed in the larger sample, which suggests that the overall pattern of relationships is likely to be generalizable.

A final limitation is that we have addressed the experience of the employees enrolled in non-HMO health plans of only one corporation, and our findings cannot necessarily be generalized to other corporations, to patients in HMOs, or to the impact of managed care on mental health treatment at the national level. Managed care approaches are quite heterogeneous; it is therefore important that their impact be evaluated in a variety of settings.<sup>10</sup>

**Implications.** Perhaps the most important implication of this study is that reductions in use of mental health services can be associated with compensatory increases in use of medical services and may adversely affect the functional and health status of patients, with no savings to payers. It also is notable that such effects can be identified through systematic analysis of administrative databases, since it suggests a method for monitoring the impact of managed care on vulnerable populations. There has been widespread concern that by increasing barriers to use of mental health services, managed care organizations may generate unintended adverse consequences. This study is one of the first to present evidence that may reflect such consequences.

Our findings also have important implications for the study of the medical cost-offset effect. Numerous reports in recent years have demonstrated that people who receive treatment for mental illness also use high levels of non-mental health services, at considerable cost.<sup>11</sup> These observations suggest that effective treatment of mental illness may result in substantial savings in non-mental health costs; however, evidence of such an offset effect has been limited by the methodological weaknesses of most studies. The data presented

here indicating that reduced use of mental health services can be associated with increased use of medical services provides indirect support for the offset hypothesis. If reducing mental health care is associated with increased medical service use and cost, it may be inferred that use of mental health services prior to these reductions was restraining such costs.

Although this was not a central objective of this study, the data presented here also demonstrate some of the serious economic and functional consequences of mental illness in insured populations. These consequences have only recently begun to receive appropriate attention in the medical literature.<sup>12</sup> Patients who used mental health services had much greater medical costs as well as more sick days than other employees had. These data thus confirm the significant adverse effect of mental illness and underline the importance of improving both the efficacy of mental health treatments and the quality and accessibility of their delivery—for both individual well-being and societal economic productivity.

.....  
*This project was supported by an academic collaboration between the Yale Department of Psychiatry and the corporation that is the subject of this paper. The project was facilitated by Benjamin S. Bunney, chairman of the Yale Department of Psychiatry. Boris Astrachan provided helpful comments on an earlier draft of this paper. Dennis Thompson provided data management support for the analyses reported here.*

202 SERVICE  
 USE

## NOTES

1. T. Getzen, *Health Economics: Fundamentals and Flow of Funds* (New York: Well, 1997); D. Mechanic, M. Schlesinger, and D. McAlpine, "Management of Mental Health and Substance Abuse Services: State of the Art and Early Results," *Milbank Quarterly* 73, no. 1 (1995): 19–55; and H.A. Pincus, D.R. Zarin, and J.C. West, "Peering into the 'Black Box': Measuring Outcomes of Managed Care," *Archives of General Psychiatry* 53, no. 10 (1996): 870–877.
2. D.L. Leslie and R.A. Rosenheck, "Shifting from Inpatient to Outpatient Care? Mental Health Utilization and Costs in a Privately Insured Population," *American Journal of Psychiatry* (forthcoming); W. Goldman, J. McCulloch, and R. Sturm, "Costs and Use of Mental Health Services before and after Managed Care," *Health Affairs* (March/April 1998): 40–52; and C.A. Ma and T.G. McGuire, "Costs and Incentives in a Behavioral Health Carve-Out," *Health Affairs* (March/April 1998): 53–69.
3. Goldman et al., "Costs and Use of Mental Health Services;" Ma and McGuire, "Costs and Incentives;" D. Hodgkin, "The Impact of Private Utilization Management on Psychiatric Care: A Review of the Literature," *Administration and Policy in Mental Health* 19, no. 2 (1992): 143–157; and B.M. Astrachan et al., "The Role of a Payor Advisory Board in Managed Mental Health Care: The IBM Approach," *Administration and Policy in Mental Health* 22, no. 6 (1995): 581–595.
4. K.B. Wells et al., *Caring for Depression* (Cambridge, Mass.: Harvard University Press, 1996); W.H. Rogers et al., "Outcomes for Adult Outpatients with Depression under Prepaid or Fee for Service Financing," *Archives of General Psychiatry* 50, no. 7 (1993): 517–525; N. Lurie et al., "Does Capitation Affect the Health of the Chronically Ill? Results from a Randomized Trial," *Journal of the American*

- Medical Association 267, no. 24 (1992): 3300–3304; and M.K. Popkin et al., “Changes in Process of Care for Medicaid Patients with Schizophrenia in Utah’s Prepaid Mental Health Plan,” *Psychiatric Services* 49, no. 4 (1998): 518–523.
5. R.C. Kessler and R.G. Frank, “Impact of Psychiatric Disorders on Work Loss Days,” *Psychological Medicine* 27, no. 4 (1997): 861–973; G. Klerman and M. Weissman, “The Course, Morbidity, and Costs of Depression,” *Archives of General Psychiatry* 49, no. 10 (1992): 831–834; and K.B. Wells et al., “The Functioning and Well-Being of Depressed Patients: Results from the Medical Outcomes Study,” *Journal of the American Medical Association* 262, no. 7 (1989): 914–949.
  6. M.R. Gold et al., *Cost Effectiveness in Health and Medicine* (New York: Oxford University Press, 1996); and R.G. Frank and R. Brookmeyer, “Managed Mental Health Care and Patterns of Inpatient Utilization for Treatment of Affective Disorders,” *Social Psychiatry and Psychiatric Epidemiology* 30, no. 2 (1995): 220–223.
  7. U.S. Bureau of the Census, *Statistical Abstract of the United States: 1996* (Washington: U.S. Government Printing Office, 1996).
  8. The basic text on hierarchical linear modeling is A.A. Bryk and S.W. Raudenbush, *Hierarchical Linear Models* (Newbury Park, Calif.: Sage Publications, 1992). The general estimation equation (GEE) approach is described K. Liang and S.L. Zeger, “Longitudinal Data Analysis using Generalized Linear Models,” *Biometrika* 73, no. 1 (1986): 13–22. All analyses were run in SAS. For dichotomous outcome variables and for outcome variables that were either counts or rates (in which GEEs with Poisson error were employed), the SAS GENMOD procedure was used. For outcome variables that were continuous with approximately normal distributions, hierarchical linear models were estimated using the SAS PROC MIXED procedure. Logarithmic transformations were used to normalize non-normally distributed data.
  9. Applying a Bonferroni correction to the four final interaction analyses presented in Exhibit 2 would lower the critical value of alpha to .0125 but would not change the pattern of statistically significant findings.
  10. D. Leslie and R.A. Rosenheck, “Changes in Inpatient Mental Health Utilization and Cost in a Privately Insured Population: 1993–1995,” *Medical Care* 37, no. 5 (1999): 457–468; and I. Fraser, “Introduction: Research on Health Care Organizations and Markets—The Best and Worst of Times,” *Health Services Research* 32, no. 5 (1998): 669–678.
  11. B.G. Druss and R.A. Rosenheck, “Health Care Costs of Mental Disorders in a National Sample,” *Psychiatric Services* 50, no. 2 (1999): 214–218; G.E. Simon and D.J. Katzelnick, “Depression, Use of Medical Services, and Cost-Offset Effects,” *Journal of Psychosomatic Research* 42, no. 4 (1997): 333–344; and M. Olfson, M. Sing, and H.J. Schlesinger, “Mental Health/Medical Care Cost Offsets: Opportunities for Managed Care,” *Health Affairs* (March/April 1999): 79–90.
  12. Kessler and Frank, “Impact of Psychiatric Disorders on Work Loss Days;” Klerman and Weissman, “The Course, Morbidity, and Costs of Depression;” and Wells et al., “The Functioning and Well-Being of Depressed Patients.”