

# Health Insurance May Be Improving—But Not for Individuals with Mental Illness

**Roland Sturm**  
**Kenneth Wells**

Reprinted from  
*Health Services Research*

A profile of RAND Health, abstracts of its publications (including all other reprints), and ordering information can be found on the RAND Health home page on the World Wide Web at <http://www.rand.org/organization/health/>.

RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. The RAND reprint series contains offprints of RAND research originally published in journals or books. The text is reproduced here with permission of the publisher. RAND® is a registered trademark. RAND's publications do not necessarily reflect the opinions or policies of the sponsors of RAND research.

Published 2000 by RAND  
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138  
1200 South Hayes Street, Arlington, VA 22202-5050  
RAND URL: <http://www.rand.org/>

To order RAND documents or to obtain additional information, contact Distribution Services: Telephone: (310) 451-7002; Fax: (310) 451-6915; Internet: [order@rand.org](mailto:order@rand.org)

# Health Insurance May Be Improving—But Not for Individuals with Mental Illness

*Roland Sturm and Kenneth Wells*

---

**Objective.** To explore the question of how insurance coverage has changed among individuals with mental problems compared to the general population in the last two years.

**Data Sources.** HealthCare for Communities, a national survey to track health system changes.

**Principal Findings.** The percentage of uninsured persons in the general population has not changed very much, and more respondents believe that health insurance coverage has improved rather than deteriorated over the years 1996 to 1998. However, among individuals with probable mental health disorders, more have lost insurance in those two years than have gained it and more report decreases in health benefits. Individuals with worse mental health consistently report a deterioration of access to care compared to individuals with better mental health.

**Conclusions.** Substantial activity has taken place in state and federal legislation to increase the mental health benefits offered by health insurance. Although this activity could have improved health insurance especially for individuals with mental illness, such persons continue to fare significantly worse than the general population.

**Key Words.** Mental health, health insurance, depression, insurance coverage

---

The number of individuals without health insurance increased from 1979 to 1997 (Kronick and Gilmer 1999; Carrasquillo et al. 1999; U.S. Census Bureau 1997). This has been attributed to declines in the number of employers offering insurance or in lower employer contributions (resulting in fewer employees electing coverage due to higher costs) (Fronstin and Snider 1996; Cooper and Schone 1997; Ginsburg, Gabel, and Hunt 1998). Because individuals with major psychiatric disorders are at high risk for poverty (and least likely to be able to afford plans that require large contributions) or unemployment, persons with such disorders may be particularly vulnerable to becoming uninsured. Even if the improved economy is beginning to reduce

the likelihood of becoming uninsured, such benefits may not accrue to persons with mental illness. What are the most recent developments in insurance coverage and perceived access to care for persons with mental illness, and how do such coverage and access compare to that seen in the general population? We investigate these questions using data from a national household survey that was completed in December 1998.

Persons who are mentally ill are of particular interest because the past decade has witnessed declining insurance coverage for mental health care, while at the same time, rapid advances have been made in efficacious treatments and clinical practice guidelines for major psychiatric disorders, such as affective and anxiety disorders and schizophrenia (Hay Group 1998; Wells et al. 1996; Depression Guideline Panel 1993; Kessler, Andrews, Mroczek, et al. 1999; Hirschfeld, Keller, Panico, et al. 1997). Although health plans seldom limit the number of covered outpatient visits or inpatient days for major medical illnesses, the typical employer-sponsored plan in 1996 imposed several limits on mental health care, including limits on visits or days, or on annual or lifetime dollars (Sturm and McCulloch 1998). Similar discrepancies in coverage for medical and mental illnesses are evident in deductibles, copayments, and coinsurance rates. These increasing discrepancies have resulted in an almost 50 percent drop in the mental health share of total health care costs paid by employment-based insurance over the past ten years (Hay Group 1998).

In response, the 1990s have brought federal and state legislative activity in the form of insurance mandates that require mental health care coverage to maintain the same level as medical care benefits ("parity"). The enactment of a modest federal mental health parity bill in 1996 was followed by more ambitious state activity. More than 30 states introduced parity legislation in 1997 alone (Sturm and Pacula 1999). Although patient advocacy groups have praised their passage, it is unclear whether or not parity laws represent a major improvement either in benefits or in access to appropriate care. In particular, some have been concerned that employers may drop health care coverage altogether, or may drop mental health coverage, to avoid

---

We gratefully acknowledge research support from the Robert Wood Johnson Foundation and from the National Institute of Mental Health through grants number MH54147 and MH54623.

Address correspondence to Roland Sturm, Ph.D., Senior Economist, RAND, 1700 Main Street, Santa Monica CA 90401. Kenneth B. Wells, M.D., M.P.H. is Senior Scientist at RAND. This article, submitted to *Health Services Research* on August 2, 1999, was revised and accepted for publication on October 22, 1999.

increased costs under parity legislation (Custer 1998; Jensen and Morrissey 1999; Sturm 1997).

## DATA AND METHODS

We analyze data from HealthCare for Communities (HCC), a national survey funded by the Robert Wood Johnson Foundation (Sturm, Gresenz, Sherbourne, et al. 1999). HCC was designed to identify variations in health care and to track health care changes over time. The HCC household survey reinterviewed participants in the Community Tracking Study (CTS) (Kemper, Blumenthal, Corrigan, et al. 1996) about 18 months after their initial interview. The HCC household sample was selected from a random sample of 30,375 adult CTS telephone respondents (the HCC sampling frame), out of which 14,985 were selected for an expected completion of 10,000 interviews. We obtained 9,585 eligible responses (64 percent response rate). Two populations are of particular interest in HCC: individuals with likely alcohol/drug/mental health (ADM) problems and poor individuals. We used information from the baseline CTS interview to oversample individuals with low income or high psychological distress; or mental health specialty use from the HCC sampling frame. This increases the design effects for estimates on all individuals, but it provides more precise national estimates for these subgroups. To permit oversampling, the sample was stratified by three factors: (1) low income (family income  $\leq$  \$20,000) versus higher-income (family income  $>$  \$20,000); (2) psychological distress, based on the two mental health items included in the SF-12 instrument (Ware, Kosinski, and Keller 1996); and (3) mental health specialty outpatient use in the past 12 months versus no use. Weights to adjust for sampling design and nonresponse were developed to obtain nationally representative estimates. A full description of the study design has been published in Sturm, Gresenz, Sherbourne, et al. (1999); additional information specific to HCC is available at <http://www.hscrcenter.org>.

We measure probable mental health disorder based on screening items. Major depressive and dysthymic disorder in the prior year are assessed by the screening versions of the Composite International Diagnostic Interview (CIDI-SF) (Kessler, Andrews, Mroczek, et al. 1998; World Health Organization 1995); generalized anxiety disorder is assessed by the CIDI-SF, and probable panic disorder by CIDI stem items for panic disorder plus reported limitation in role functioning on the SF-12 (Ware, Kosinski, and Keller 1996); probable lifetime bipolar disorder is assessed by a CIDI stem item for lifetime

manic symptoms; psychotic disorder by having an overnight hospital stay for psychotic symptoms or by ever having received a diagnosis of schizophrenia from a doctor. The comparison group is the population that does not exceed any of the mental health screeners, which we contrast to (a) individuals who exceed the screener for depression, and (b) individuals who exceed the screeners for any mental health disorder. In addition, global mental health was measured by the score on the Mental Health Inventory (MHI-5) (Ware and Sherbourne 1992; Wells et al. 1996). A higher standardized score (0–100) indicates better mental health. The median in the population is 84, the 5th percentile is 40, and the 10th percentile is 52. (The last two percentiles reflecting people with poor mental health.) As a third comparison, we compare individuals with average scores on the mental health inventory (MHI-5 = 84) to individuals with poor mental health (MHI-5 = 48, which would be the average score for depressed patients of psychiatrists).

We analyze three dependent variables. One is a measure of change in insurance status (from uninsured to insured, no change, or from insured to uninsured) over the interval covered by the CTS and HCC interviews. The other measures are responses to these two questions: Compared to two years ago, is your health insurance coverage now better, worse, or about the same? Compared to two years ago, is it easier, harder, or about the same to get good health care when you need it?

The dependent variables have ordered categorical responses (either “better-same-worse,” “easier-same-harder,” “became insured-same-lost insurance”), and we use ordered logistic regression models to control for confounding factors. The three mental illness comparisons (any assessed disorder, probable depressive disorder, global mental health) were used in separate models as the main independent variable. Other explanatory variables were age groups (<35 and  $\geq 50$ , each contrasted with 35–49), female contrasted with male, years of schooling, log of family income, ethnic status (white is the omitted category), and a count of chronic medical conditions.

This analysis has several limitations. The longitudinal panel survey used here may not be ideally suited to commenting on insurance rates in the general population, which is best done by a repeated cross-section survey that avoids the compounded nonresponse rate of panel data. However, the main finding of this study is the differential coverage and access change for people with mental health problems compared with coverage and access for the general population, for which the panel data are useful. In addition, this study is the first that is consistent with the latest U.S. Census data, which showed that the percentage of individuals without health insurance has not significantly

increased in the last year (Campbell 1999). Mental health disorders are assessed by a clinical screening instrument, not a full diagnostic measure. Because we are primarily concerned with patient need, a precise classification is not as important for this analysis as it may be for others. The fact that the data are based on patient self-response and the negativistic perceptions of persons with depression or in psychological distress, rather than on actual trends, may account for differences in perceived insurance coverage and access. To avoid this problem, our first dependent variable is actual insurance status, not a perception item. We also repeat our analysis, subsetting to individuals with private insurance in both periods to test for a negativity bias. If negativistic perceptions were a major factor, individuals with mental illness would report adverse changes in insurance coverage even among the group with stable insurance coverage.

## RESULTS

Table 1 provides descriptive statistics. Compared to individuals without a disorder, individuals with a probable mental health disorder are significantly more likely to have lost health insurance in the past year, significantly more likely to report that health insurance has deteriorated, and significantly more likely to find that access to care has become more difficult ( $p < .001$  for all three comparisons). However, the groups also differ in many other sociodemographic characteristics. More individuals with probable disorder are female, which is related to higher insurance rates, but other characteristics are associated with lower insurance rates (e.g., younger, lower income, less schooling).

Table 2 controls for the confounding factors by using ordered logit regression and predicts the difference in the outcome measures that is due to changes in mental health status alone. It shows that individuals with poor mental health or with probable depressive disorder are significantly more likely to have lost health insurance and significantly less likely to have gained health insurance. For depression, it means that the gap in insurance rates between individuals with probable depressive disorder and those with no mental health disorder has grown by 2.3 percentage points (1.8 percent more losing insurance, 1.5 percent fewer gaining insurance) during a period in which no significant change occurred in the percentage of the population without health insurance (Campbell 1999). The estimated effect for any mental health disorder is of the same size as that using the MHI-5, but it is not

Table 1 Descriptive Statistics

	No		Any		t-test	
	Mental Health Disorder	Mental Health Disorder	Depression	None vs Any Disorder		
Uninsured now, insured before	3.6	6.7	7.4	<i>p</i> < .001		
Health insurance worse now	9.4	15.6	17.5	<i>p</i> < .001		
Access to care harder	14.2	22.5	24.6	<i>p</i> < .001		
Female	51	63	64	<i>p</i> < .001		
Young	30	34	38	<i>p</i> < .01		
Old	38	30	26	<i>p</i> < .001		
Family income in \$1,000s	47.0	36.8	38.2	<i>p</i> < .001		
Years of schooling	13.3	12.6	12.8	<i>p</i> < .001		
African American	11	15	15	<i>p</i> < .001		
Hispanic	9.3	8.8	8.0	NS		
Number of chronic medical conditions	1.2	2.5	2.5	<i>p</i> < .001		
N	7348	1853	1309			

significant. The (nonsignificant) effect is an increased gap of 1.7 percentage points in health insurance rates between individuals with any mental health disorder and those with no mental health disorder.

A similar pattern appears for changes in the perceived quality of health insurance (generosity), although it is only statistically significant in the MHI-5 comparison. To determine whether this can be attributed to changes in having any health insurance (versus having none) or to changes in perceived insurance generosity among insurance holders, we repeat the analysis subset to individuals with private health insurance in both periods. The difference by mental health status largely disappears among this population (bottom panel of Table 2).

The third dependent variable asks about changes in access to health care. There is a large and highly significant difference by mental health status for all three measures. Moreover, subsetting to the privately insured population reduces the size of the difference, but it remains statistically significant.

## DISCUSSION

The decline in the number of individuals with health insurance from 1979 to 1997 has spurred many policy attempts to reverse this trend (Kronick and Gilmer 1999; Carrasquillo et al. 1999; U.S. Census Bureau 1998). Mental health advocates have pointed out that insurance benefits for treating mental

Table 2 Effect of Mental Health on Change of Insurance Status, Perceived Insurance Generosity, and Access to Care (in percent)

	Poor Compared to Average Mental Health (MHI-5)	Probable Depressive Disorder Compared to No Disorder	Probable MH Disorder (any) Compared to No Disorder
Uninsured now, insured before	0.9**	1.8**	0.8
Insured now, uninsured before	-0.9**	-1.5**	-0.9
Health insurance worse now	2.2***	1.8	1.3
Health insurance better now	-2.7***	-2.3	-1.7
Access to care harder	4.8***	4.3***	4.0***
Access to care easier	-3.1***	-2.9***	-2.7***
<i>Among Individuals with Private Insurance in Both Periods</i>			
Health insurance worse now	0.3	-0.9	0.2
Health insurance better now	-0.6	1.5	-0.1
Access to care harder	4.0***	2.8*	2.4***
Access to care easier	-2.5***	-1.8*	-3.7***

\*\*\* $p < .01$ ; \*\* $p < .05$ ; \* $p < .10$ .

Note: Results adjusted for age, sex, ethnicity, income, and schooling, and weighted to be nationally representative.

health and substance-related disorders, compared to medical care benefits, declined even more over the past decade.

This latest survey found little change in the percentage of individuals without health insurance in the general population over the past two years, a finding consistent with the 1999 census data (Campbell 1999). In addition, more respondents—regardless of age, income, or ethnicity—reported that their health insurance had improved than reported a deterioration (even among those who were insured in both periods, results not reported). Unfortunately, the situation continues to be deteriorating for individuals at risk for mental health problems. For these groups, rates of being uninsured are increasing; perceived quality of insurance is declining, and perceived access to good health care is decreasing faster than for other groups. There is no consistent similar effect among people with chronic medical conditions, so the effect of deteriorating insurance coverage appears to be somewhat unique to mental health care.

More persons with poor mental health, compared to others, report that their health insurance coverage is worse ( $p < .01$  for global mental health status, although not statistically significant for the two screeners). Subsetting,

in both surveys, to individuals with private health insurance removes the differences by mental health status in perceived change in generosity of coverage (suggesting that negativism does not appear to affect response to generosity). Thus, the perception of declining insurance quality is likely attributable to a loss of insurance coverage among persons with mental health problems, although some of this effect could reflect the loss of private insurance among individuals upon becoming eligible for Medicaid. The rate of Medicaid coverage is about four times higher among individuals with any disorder than among individuals without a disorder.

Individuals with worse mental health are also relatively more likely than individuals with better mental health to report that it is getting harder to obtain good health care when they need it, a measure of need-adjusted access to care. This deterioration in perceived access to care relative to perceived access among individuals with better mental health remains significant even when we subset to people with private insurance in both survey periods.

Although perceived access to good health care appears to be deteriorating across the general population as well, the significantly stronger deterioration in access to good health care among individuals with mental health disorders may be a consequence of insurance market changes in response to recent mental health parity legislation. This would hold true especially for state legislation, but it also includes the Federal Mental Health Parity Act, which became effective in 1998. The National Mental Health Advisory Council predicted that introducing parity nationwide would accelerate the trend to increased management of mental health services because “in every example in which parity has been put into place, management has followed” (National Advisory Mental Health Council 1998). One would expect that individuals with mental health needs put more weight on care management specific to mental health—and have more experience with it. Thus, a differential shift to more aggressively managed care for mental health care than for general medical care, as a consequence of recent parity legislation, could be reflected in the perceived access/quality responses concerning overall health care among persons with mental health needs. Of course, we do not know if the time trend revealed declines in their perception of treatment specifically for their psychiatric disorders.

The finding on access to “good health care” compared to perceived generosity echoes the distinction between nominal and effective benefits: policies aimed at mandating certain benefit design structures (nominal benefits) leave open to managed care many other ways to affect an individual’s effective coverage (Frank and McGuire 1998; Frank, Koyanagi, and McGuire

1997). Alternative interpretations of the effects on access to "good care" are possible, including negativity biases. However, the insurance findings are unambiguous: compared to the general population, individuals with mental health problems experience a deterioration in their health insurance status.

## REFERENCES

- Campbell, J. A. 1999. *Health Insurance Coverage 1998*. U.S. Census Bureau, P60-208. Washington, DC, October.
- Carrasquillo, O., D. U. Himmelstein, S. Woolhandler, and D. H. Bor. 1999. "Going Bare: Trends in Health Insurance Coverage, 1989 Through 1996." *American Journal of Public Health* 89 (1): 36-42.
- Cooper, P. F., and B. S. Schone. 1997. "More Offers, Fewer Takers for Employment-Based Health Insurance: 1987 and 1996." *Health Affairs* 16 (6): 142-49.
- Custer, W. S. 1998. *Health Insurance Coverage and the Uninsured*. Washington, DC: Health Insurance Association of America.
- Depression Guideline Panel. 1993. *Depression in Primary Care: Volume 2, Treatment of Major Depression, Clinical Practice Guideline Number 5*. U.S. Department of Health and Human Services, Public Health Service, AHCPR Pub. No. 93-0551. Rockville, MD: Agency for Health Care Policy and Research, April.
- Frank, R. G., and T. G. McGuire. 1998. "Parity for Mental Health and Substance Abuse Care Under Managed Care." *Journal of Mental Health Policy and Economics* 1 (1): 153-160.
- Frank, R. G., C. Koyanagi, and T. G. McGuire. 1997. "The Politics and Economics of Mental Health Parity Laws." *Health Affairs (Millwood)* 16 (1): 108-19.
- Fronstin, P., and A. C. Snider. 1996. "An Examination of the Decline in Employment-based Health Insurance Between 1988 and 1993." *Inquiry* 33 (winter): 317-25.
- Ginsburg, P. B., J. R. Gabel, and K. A. Hunt. 1998. "Tracking Small-Firm Coverage, 1989-1996." *Health Affairs* 17 (1): 167-71.
- Hay Group. 1998. *Health Care Plan Design and Cost Trends: 1988 through 1997*. Washington, DC: Hay Group.
- Hirschfeld, R. M., M. B. Keller, S. Panico, B. S. Arons, D. Barlow, F. Davidoff, J. Endicott, J. Froom, M. Goldstein, J. M. Gorman, D. Guthrie, R. G. Marek, T. A. Maurer, R. Meyer, K. Phillips, J. Ross, T. L. Schwenk, S. S. Shartstein, M. E. Thase, and R. J. Wyatt. 1997. "The National Depressive and Manic-Depressive Association Consensus Statement on the Undertreatment of Depression." *Journal of the American Medical Association* 277 (4): 333-41.
- Jensen, G. A., and M. A. Morrissey. 1999. *Mandated Benefit Laws and Employer-Sponsored Health Insurance*. Washington, DC: Health Insurance Association of America, January.
- Kemper, P., D. Blumenthal, J. M. Corrigan, P. J. Cunningham, S. M. Felt, J. M. Grossman, L. T. Kohn, C. E. Metcalf, R. F. St. Peter, R. C. Strouse, and P. B. Ginsburg. 1996. "The Design of the Community Tracking Study: A Longitudinal

- Study of Health System Change and Its Effects on People." *Inquiry* 33 (summer): 195-206.
- Kessler, R. C., G. Andrews, and D. Mroczek, B. Ustun, and H. U. Wittchen. 1998. "The World Health Organization Composite International Diagnostic Interview Short-Form (CIDI-SF)." *International Journal of Methods in Psychiatric Research*.
- Kronick, R., and T. Gilmer, 1999. "Explaining the Decline in Health Insurance Coverage, 1979-1995." *Health Affairs* 18 (2): 30-47.
- National Advisory Mental Health Council. 1998. Parity in Financing Mental Health Services: Managed Care Effects on Cost, Access, and Quality. Interim Report to Congress by the National Advisory Mental Health Council, National Institute of Mental Health. Washington, DC.
- Sturm, R. 1997. "How Expensive Is Unlimited Mental Health Care Coverage Under Managed Care?" *Journal of the American Medical Association* 278 (18): 1533-37.
- Sturm, R., and J. McCulloch. 1998. "Mental Health and Substance Abuse Benefits in Carve-Out Plans and the Mental Health Parity Act of 1996." *Journal of Health Care Finance* 24 (1): 84-95.
- Sturm, R., and R. L. Pacula. 1999. "State Mental Health Parity Laws: Cause or Consequence of Differences in Use?" *Health Affairs* 18 (5): 182-92.
- Sturm, R., C. R. Gresenz, C. D. Sherbourne, K. Minnium, R. Klapp, J. Bhattacharya, D. Farley, A. S. Young, M. A. Burnam, and K. B. Wells. 1999. "The Design of Health Care for Communities: A Study of Health Care Delivery for Alcohol, Drug Abuse, and Mental Health Conditions." *Inquiry* 36 (2): 221-33.
- U.S. Census Bureau. 1997. *Health Insurance Coverage: 1997*. [www.census.gov/hhes/althins](http://www.census.gov/hhes/althins).
- Ware, J. E., and C. D. Sherbourne. 1992. "The MOS 36-item Short-Form Health Survey (SF-36): I. Conceptual Framework and Item Selection." *Medical Care* 30 (6): 473-83.
- Ware, J. E., M. Kosinski, and S. D. Keller. 1996. "A 12-Item Short-Form Health Survey: Construction of Scales and Preliminary Tests of Reliability and Validity." *Medical Care* 34 (2): 220-33.
- Wells, K. B., R. Sturm, C. Sherbourne, and L. S. Meredith. 1996. *Caring for Depression*. Cambridge, MA: Harvard University Press.
- World Health Organization. 1995. *Composite International Diagnostic Interview (version 2.0)*. Geneva, Switzerland: WHO.



RP-877