



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Office of the Assistant Secretary
for Health
Washington, DC 20201

MAR 23 1994

NOTE TO KEN THORPE

The attached analysis on Mental Health Benefits is provided
per your request by NIMH.

Susanne A. Stoiber

cc: Lisa Simpson



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Institute of Mental Health
5600 Fishers Lane
Rockville, Maryland 20857

Date: March 23, 1994

To: Suzanne Stoiber, Ph.D.
Director, Office of Health Care Reform, PHS, DHHS

From: Director, Division of Epidemiology and Services Research, NIMH, NIH,
PHS, DHHS

Subject: Mental Health Benefit Estimates for the Uninsured

In response to recent discussions with analysts evaluating the cost of mental health benefits, NIMH staff have prepared the attached analysis of data relating to the cost of providing mental and addictive disorder benefits to the uninsured population. According to HCFA, CRS staff, and the American Academy of Actuaries, there is general agreement that the cost of the Health Security Act mental health benefit for the insured population would be \$141 per capita, of which 2/3 can be attributed to inpatient care--this premium includes administrative costs. However, cost estimates of the benefit for that proportion of the population that is uninsured have been unstable and have tried to divide the premium between the uninsured high user and the remaining uninsured population.

Unfortunately, for the uninsured analyses, these estimates continue to use the aggregate National Health Accounts data totals divided by the 37 million uninsured in the population. Both the numerator (total funds in the public sector have been adjusted upwards as fringe benefit and administrative costs are added) and the denominator (up to 50 million are uninsured at some time in the year) continue to shift as actuaries and health economists attempt to derive a mental health benefit premium from these data. In addition, the formulas are not well established for deriving the appropriate proportion of costs for the uninsured that would be covered under the benefit versus that proportion which will remain the responsibility of the State public mental health agencies.

In contrast, an experience based approach has been used with the insured population because of the availability of extensive utilization and claims data for this group. Based on the recent availability of experience data (ie service utilization data distributions) for the uninsured from both the National Comorbidity Survey (NCS) and from the CMHS National Reporting Program, we are suggesting a paradigm shift in how one might approach determining a benefit cost for the uninsured. This shift combines high and low users of mental health services by the uninsured and analyzes actual outpatient visit and bed day utilization experience to determine relative utilization of the currently insured and uninsured.

The attached analysis draws on two data sources which provide the only known utilization data on a national basis for the uninsured. The first data set for outpatient data is from the recently completed National Comorbidity Survey (NCS)(age 15-55) of the University of Michigan as analyzed by Richard Frank, Johns Hopkins University. The conclusion of this analysis is that there is currently a lower per capita use of out-patient mental health and addictive services by the uninsured. However, when a logistic regression analysis was performed which controlled for insurance status, age, gender, ethnicity, marital status, illness severity, and educational attainment, it could be estimated that given universal access to coverage, the currently uninsured would use outpatient mental health services at essentially the same rate as the currently insured. (see attached FAX from Richard Frank)

Since the Frank analysis only covers the out-patient portion, NIMH staff studied inpatient service use by insurance status. We analyzed data from the Center for Mental Health Services, National Reporting Program's 1986 Client/patient sample survey (CPSS) of all private and public mental health facilities in the U.S. For a denominator population, we used the 1987 National Medical Expenditure Survey (NMES) data tape to assess service utilization rates. In order to provide a comparable analysis to the NCS survey, the data for those age 15-55 were extracted from both the CPSS and the NMES surveys. Although a logistic regression analysis comparable to that used by Richard Frank has been performed on the inpatient data, the finding that the uninsured were hospitalized at higher rates than the insured required the more detailed analysis summarized in the attached Tables.

1. About 1% of the U.S. population, aged 15-55 had a psychiatric hospitalization in 1986 of which 34.5% were uninsured and 65.5% were insured. The uninsured used a disproportionate share of total bed days by accounting for 39% of the bed days in contrast to 61% for the insured.
2. The uninsured were hospitalized at about three times the rate of the insured, 1.9% of the uninsured versus 0.6% for the insured. This rate may be somewhat inflated because the uninsured also include those who may be insured for physical health reasons, but have exceeded their mental health benefit levels or are ineligible for mental health benefits (eg persons with medicaid, age 21-64 who are seen in State hospitals).
3. Among the uninsured, 77% used public mental health facilities including State & County Mental Hospitals and other public general hospitals, and 23% used private specialty and general hospital facilities.
4. Given the 30 day inpatient hospital benefit of the Health Security Act, the

insured and uninsured were divided into two groups: those who used 30 days or less, and those who used more than thirty days. The attached length of stay tables summarize this analysis.

- a. 76% of the uninsured and 85% of the insured were hospitalized for thirty days or less. The average LOS for the uninsured was 9.9 days and 11.7 days for the insured--showing the expected insurance effect for the brief hospital stay group. (See Table Section 1 and Section 2)
- b. 24% of the uninsured and 15% of the insured had hospitalizations of more than 30 days. The average LOS for the uninsured was 69.9 days and 67.5 days for the insured. These data demonstrate that a significantly higher percent of the uninsured have extended hospitalizations and tend to have a longer LOS. As a result, those with a LOS of more than 30 days account for 69% of the bed days among the uninsured and for 49% of the bed days among the insured. (See Table Section 1 and Section 4)

Based on the analysis performed by Richard Frank, and the NIMH inpatient service use analysis, it should be possible make some estimates of the impact of patient behavior under the Health Security Act.

- o The uninsured should be estimated as requiring the same benefit cost as the insured for outpatient care. However, there will also be ambulatory care needs for the severely mentally ill in excess of those covered by the Health Security Act. These costs would continue to be covered by the State Mental Health Authorities until there is a comprehensive benefit plan.
- o For determining an inpatient benefit, it would be useful to separate both the uninsured and the insured into two groups--those with 30 days or less of hospitalization (short stay) and those with more than 30 days hospitalization (long stay). There are 76% of the uninsured and 85% of the insured who have a LOS of 30 days or less. If one estimates that 15% of the population is uninsured, then this population is hospitalized for brief periods of less than thirty days at twice the rate as is found for the insured (calculations not shown). This is illustrated by the fact that the uninsured, short term hospitalized group accounts for 0.03 days per capita (33% of the total days for 15% of the population) versus 0.06 days per capita for the insured--a total of 0.09 days per capita for the short stay component. (See Table Section 2)

- c. The longer stay uninsured (24%), contribute roughly the same proportion of hospital days (0.06 per capita) as the longer stay insured (15%)--also 0.06 days per capita. For longer stay admissions, the uninsured are hospitalized at about 6 times the rate as the insured. Although one would expect them to contribute 15% of the bed days if they were hospitalized in proportion to population numbers. However there were an equal number of bed days actually experienced by these two groups. (See Table Section 3)
- d. Since a very strict interpretation of the 30 day benefit could place the long stay group of both insured and uninsured under the care of States, that would mean that potentially 57% of total bed days would be the responsibility of the States (See Table Section 4). However, one would need to subtract the first 30 days from these longer stay patients which could be billed to the Accountable Health Plans. The attached Table, section 5, provides the calculations for identifying the number of days per capita covered by the benefit that would be attributed to those with more than 30 days hospitalization--.02 days for the uninsured and .03 days for the insured. (See Table Section 5)
- e. By combining the total per capita length of stay for the short term and longer term hospitalizations that would be covered under a 30 day plan, it is possible to estimate that 35.7% of the per capita days would be attributable to the uninsured and 64.3% to the insured. (See Table Section 6)
- f. A weighting factor which contrasts the bed days used by the uninsured to those used by the insured can be derived by comparing the relative percentage of per capita bed days accounted for by the uninsured to their percent of the population ($35.7\%/15\% = 2.38$) (See Table Section 7)
- g. Finally, a benefit cost for the uninsured can be estimated by keying the relative use and cost of outpatient and inpatient services to those estimated for the insured. Given an inpatient benefit of \$94 for the insured, the uninsured would be expected to use 2.38 times that amount for a total of \$224. When the equivalent outpatient benefit cost of \$47 is added, the total benefit for the uninsured would be \$271. (See Table Section 8)
- h. A weighted mental health benefit for the entire population would include estimates that 85% of the population would cost \$141, and 15% of the population would cost \$271 for a total premium of

160.50--adding a 15% administrative cost would increase the overall premium to \$184.50. Hence, it would be possible to cover the uninsured at the level of benefit anticipated in the Health Security Act for an additional \$20 per capita.

(See Table Section 8)

With the above paradigm approach, it should be possible to subtract the aggregate benefit costs for the uninsured from the total cost expenditures now in the public sector. The remaining funds would be used by the States to cover the costs of those severely mentally ill who exceed benefit limits whether they are now in either the insured or uninsured sectors.

It should be noted that these are preliminary estimates which were developed by Agnes Rupp, Grayson Norquist, Michael Feil, and myself and still can benefit from review within the Department. We would appreciate your review of the approach and the data analyses before they are elaborated and formally submitted to the various Congressional and Administration users of this information.

Sincerely,



Darrel A. Regier, M.D., M.P.H.

cc Dr. Kirschstein
Dr. Arons
Mr. Ferguson
Ms. Stephens
Dr. Manderscheid

Attachments

Richard Frank memo
Length of stay tables

Length of Stay

1. Length of stay dichotomized into 30 or fewer days and more than 30 days by insurance status

Length of stay	Insurance status (episodes)		Total	Percent
	Uninsured	Insured		
30 or fewer days	359,608 (76%)	767,868 (85%)	1,127,476	82.5%
More than 30 days	111,648 (24%)	128,211 (15%)	239,959	17.5%
Total	471,256 (100%)	896,079 (100%)	1,367,335	100.0%
	(34.5%)	(65.5%)	(100%)	

2. Length of stay for 30 or fewer days

a. Insurance status - per capita

Uninsured: length of stay/capita = $3,546,777/138,882,282 = 0.03$ daysInsured: length of stay/capita = $8,991,626/138,882,282 = 0.06$ daysTotal: length of stay/capita = $12,538,403/138,882,282 = 0.09$ days

b. User insurance status

Length of stay/uninsured user = $3,546,777/359,608 = 9.86$ daysLength of stay/insured user = $8,991,626/767,868 = 11.71$ daysLength of stay/all users = $12,538,403/1,127,476 = 11.12$ days

c. Total bed days

Uninsured = 3,546,777 (28%)

Insured = 8,991,626 (72%)

Total = 12,538,403 (100%)

3. Length of stay for more than 30 days

a. Insurance status - per capita

Uninsured: length of stay/capita = $7,800,764/138,882,282 = 0.06$ daysInsured: length of stay/capita = $8,649,619/138,882,282 = 0.06$ daysTotal: length of stay/capita = $16,450,383/138,882,282 = 0.12$ days

b. User insurance status

Length of stay/uninsured user = $7,800,764/111,648 = 69.9$ daysLength of stay/insured user = $8,649,619/128,211 = 67.5$ daysLength of stay/all users = $16,450,383/239,959 = 68.6$ days

c. Total bed days

Uninsured = 7,800,764 (47%)

Insured = 8,649,619 (53%)

Total = 16,450,383 (100%)

4. Number and percent of bed days for users having episodes with durations of 30 or fewer days and more than 30 days by insurance status

Length of stay	Insurance status (bed days)				Percent
	Uninsured	Insured	Total		
30 or fewer days	3,546,777 (31%)	8,991,826 (31%)	12,538,603		43%
More than 30 days	7,800,754 (69%)	8,649,619 (49%)	16,450,383		57%
Total	11,347,511 (100%)	17,641,245 (100%)	28,988,786		100%
	(39%)	(61%)	(100%)		

5. Per capita contribution of the first 30 days for those with more than 30 days hospitalization

Uninsured - Length of stay/capita = $(111,648 \times 30) / 138,882,282 = 0.02$ days

Insured - Length of stay/capita = $(128,211 \times 30) / 138,882,282 = 0.03$ days

Total - Length of stay/capita = $(239,859 \times 30) / 138,882,282 = 0.05$ days

6. Combined length of stay per capita for benefit coverage of 30 day hospitalization (2a + 5)

Uninsured = $0.03 + 0.02 = 0.05$ days (35.7%)

Insured = $0.06 + 0.03 = 0.09$ days (64.3%)

Total = $0.09 + 0.05 = 0.14$ days (100.0%)

7. Estimated weighting factor for uninsured compared with insured

35 % of per capita days
----- = 2.38
15 % of population

8. Benefit cost estimate for uninsured

Total insured benefit cost = \$141 per capita of which 2/3 (\$94) attributed to inpatient costs and \$47 to out-patient costs

Uninsured in-patient = $\$94 \times 2.38 = \224
Uninsured out-patient = 47
Total \$271

Weighted mental health benefit for entire population

\$ 141 x .85 = \$ 119.85
\$ 271 x .15 = 40.65

160.50
+ 15 % administrative costs 24.00

Total \$ 184.50

February 8, 1994

To: Darrell A. Regier
From: Richard G. Frank
RE: Estimates of the Impact of Insurance on Utilization

This memo summarizes some analyses of utilization data obtained from the National Comorbidity Survey (NCS). Utilization data are all derived from Part 2 of the survey. The implication of this is that not all participants in the survey completed Part 2 and the sub-sample of subject for whom utilization data are available is smaller than for the overall survey (about 5900 people). In order to assess the impact on utilization of mental health services of the populations of individuals who are currently uninsured we define the "impact" of insurance. The impact with which we are concerned is the amount of utilization that will occur for the uninsured above that observed in the currently insured population.

In order to assess the impact of coverage above that for the insurance on those currently uninsured we define the impact in the following way:

$$\text{excess impact} = \{(\text{uninsured baseline use} \times \text{insurance impact}) - (\text{baseline insured use})\} / (\text{insured baseline use})$$

This approach to calculating the impact of insurance allows one to incorporate the impact of insurance holding other factors constant as well as taking account that at baseline the uninsured may have a different propensity to use services than the insured population. In order to calculate the impact one needs to: 1) obtain an estimate of the insurance impact and 2) make use of baseline data.

This approach was implemented in such a manner as to include separate impacts for specialty mental health services and all mental health services delivered by health care providers.

In order to estimate the insurance impact we estimated two logistic regression models where the dependent variables were equal to one if: a) any mental health services were used and zero otherwise or b) any specialty mental health services were used. The independent variables in both regressions included: income, age, gender, marital status, race, educational attainment, diagnoses other than severe mental illness and the insurance status. Insurance status was specified as a dummy variable that takes a value of one if the individual has no coverage for treatment of mental problems and zero otherwise.

The regression results are attached to this memo. Note that the insurance coefficient indicates an insurance impact (odds ratio) of 1.64 in the regression for all mental health services and was estimated to be 1.993 in the regression for specialty services both are statistically significant. Using the formula above we calculated the impact of insurance coverage. The estimates suggest that overall the population that is currently uninsured would use all mental health care at a rate of about 1% more than the currently insured population $[(1.64 \times 5.95\%) - 5.95\%]/(5.95\%)$. (Note that they would use 64% more than they are currently using). The estimates for specialty sector use suggest that the population that is currently uninsured would use services at a rate roughly 5% greater than the currently insured population $[(1.993 \times 3.65\%) - 3.65\%]/(3.65\%)$. This represents close to a doubling of the rate of use of specialty services to the uninsured.

These estimates suggest that the projections made by both the Task Force Working Group and the HCFA Actuaries were based on assumptions that seriously over estimate induced utilization among all groups of uninsured individuals. It is important to note that the uninsured include both individuals with no mental problems, those with non-severe disorders and those with severe mental illnesses (e.g. schizophrenia and manic depressive illness). Recall for example that the Actuaries used estimates that had the uninsured non-severely mentally ill using at a rate that was 33% higher than the insured population.

The SAS System

The LOGISTIC Procedure

Data Set: WORK.TEMP
 Response Variable: MLTMSXSR
 Response Levels: 2
 Number of Observations: 6877
 Weight Variable: P2PWT
 Sum of Weights: 6877.0000781
 Link Function: logit

depress = health system
 income = incdol, incdolsq
 interaction = no

17:05 Tuesday, January 25, 1994

Response Profile

Ordered Value	MLTMSXSR	Count	Total Weight
1	0	616	520.8874
2	1	6262	5356.1197

WARNING: 2221 observation(s) were deleted due to missing or negative frequencies or weights.

Criteria for Assessing Model Fit

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	5520.800	5083.678	
SC	3527.868	3180.640	
-2 LOG L Score	5518.880	2051.670	487.001 with 15 DF (p=0.0001) 581.829 with 18 DF (p=0.0001)

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio	Variable Label
INTERCEPT	1	-6.0343	0.2676	413.3278	0.0001		0.007	Intercept
SEXP	1	0.5845	0.1044	31.3823	0.0001	0.180885	1.794	
AGE	1	0.0318	0.00817	97.0184	0.0001	0.185165	1.032	
RMH	1	0.3108	0.1312	5.8088	0.0178	0.372832	1.364	
MARCAH	1	-0.8020	0.1153	8.7390	0.0034	-0.380750	0.739	
ED12	1	-0.3836	0.1440	7.4784	0.0061	-0.104511	0.878	
EDNOTE12	1	0.1418	0.1380	1.0529	0.3048	0.028289	1.162	
WMHNS	1	0.4874	0.1885	12.3750	0.0004	0.118621	1.829	
INCDOL	1	0.00001	2.812E-8	15.1855	0.0001	0.150248	1.000	
INCDOLSQ	1	-8.67E-13	8.83E-11	1.7137	0.1898	-0.043108	3.708	
ANI	1	1.3105	0.1278	105.5628	0.0001	0.310708	2.176	
MINHAF	1	1.0030	0.1881	28.6879	0.0001	0.045376	2.137	
DYEDAD	1	0.7548	0.1853	20.8448	0.0001	0.091851	1.837	
QTHRA	1	0.6716	0.1218	30.4033	0.0001	0.178780	1.837	
AFIVALE	1	0.3775	0.1884	4.0648	0.0459	0.052185	1.000	
AFIVCON	1	0.7822	0.2304	11.8818	0.0007	0.074480	2.186	

Model Full CR1 Post Year-94
 Model Full CR1 Post Year-94

The SAS System

The LOGISTIC Procedure

Data Set: WORK.TEMP
 Response Variable: MMSPECR
 Response Levels: 2
 Number of Observations: 8877
 Weight Variable: P2PWT
 Sum of Weights: 8877.0000731
 Link Function: Logit

Response Profile

Ordered Value	MMSPECR	Count	Total Weight
1	0	484	383.8480
2	1	5493	5513.8380

WARNING: 2221 observation(s) were deleted due to missing values.

Criteria for Assessing Model Fit

Criterion	Intercept Only	Intercept and Covariates	Chi-Square
AIC	2730.210	2351.831	.
SC	2738.889	2458.692	.
-2 LOG L Score	2738.210	2310.831	408.378 519.007

Analysis

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square
INTERCPT	1	-5.7843	0.3075	354.94
SEX	1	0.6488	0.1241	27.13
AGE	1	0.0273	0.00808	20.18
ARM	1	0.8914	0.1688	18.80
MARCON	1	-0.5888	0.1880	19.82
ED13	1	-0.3458	0.1718	4.04
EDMORE12	1	0.2884	0.1610	3.88
WHINS	1	0.6888	0.1708	16.34
INCOOL	1	9.108E-6	3.048E-6	8.88
INCOOLSQ	1	-137E-12	7.88E-11	0.03
CHI	1	1.4148	0.1438	96.80
MINAFF	1	1.1014	0.2153	26.17
DVSQAB	1	0.6848	0.1877	12.82
OTHER	1	0.5318	0.1428	13.87
AFIYALC	1	0.5953	0.1856	10.26
AFIYCON	1	0.6833	0.2456	12.94



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Date: December 20, 1993**To:** Kenneth Thorpe, Ph.D.
Deputy Assistant Secretary for Planning and Evaluation
DHHS**From:** Director, Division of Epidemiology and Services Research, NIMH, NIH,
PHS, DHHS**Subject:** Sen. Wellstone's request--Severe Mentally Ill/uninsured

In response Senator Wellstone's request, we have provided an analysis of existing cost estimates and newly compiled data to assist in your presentation to the Senate staff. These analyses are contained in Appendix A. Appendix B contains the major conceptual issues which need to be addressed in response to his information requests. Appendix C contains a set of preliminary assumptions and calculations which may be useful in estimating the cost of coverage for the uninsured severe mentally ill under the Administration plan.

These data have been compiled by NIMH staff and we will be pleased to work further with you and Dr. Arons in refining this response for the Congressional review of these cost estimates.

Sincerely,

Darrel A. Regier, M.D., M.P.H.

cc Dr. Arons
Dr. Gaus
Dr. Kirschstein
Dr. Goodwin
Dr. Leshner
Dr. Norquist
Dr. Rupp

National Institutes of Health
National Institute of Mental Health
5600 Fishers Lane
Rockville, Maryland 20857

Appendix A: Empirical Data**Existing Cost Estimates:**

A. In the Mental Health Workgroup report, costs for the 35 million uninsured (\$575/capita) were allocated from the State and local government, VA, and other federal expenditures. This population was then divided into two groups--16% (5.6 million--\$3,205/capita) considered at higher risk for mental health service use from ECA data, and the remainder (29.4 million--\$75/capita) considered at lower risk. No other insurance category group was risk adjusted in this manner although it was recognized that the State and local expenditures provided catastrophic coverage for all the other insured groups.

B. In response to the request of the Senate Committee on Appropriations, the National Advisory Mental Health Council prepared a report entitled: "Health Care Reform for Americans with Severe Mental Illnesses." This February, 1993 report focuses on the cost of insurance coverage of medical treatment for severe mental illness commensurate with the coverage of other illnesses. It was estimated that an annual cost of \$6.5 billion, representing about a 10% increase over currently total direct costs of mental health care- commensurate benefit for the adult and child SMI population can be provided. If the additional cost of \$6.5 billion is divided by the 250 million population, there would be a per capita cost increase of \$26 per person. It was also estimated that the economic benefits of such coverage will partially offset the cost of the commensurate benefit package.

Newly Compiled Data:

1. According to a nationally representative sample, the distribution of the 5.1 million SMI population (using the Senate Appropriations Committee definition) by insurance status is approximately the following:

Insurance	Number of people
Private	3.3 million people
Medicaid and VA and other fed gov.	1.0 million people
Uninsured:	0.8 million people
<i>Total:</i>	<i>5.1 million people</i>

Source: Data derived from the National Comorbidity Survey, University of Michigan, Ronald Kessler--principal Investigator. The proportion of uninsured SMI is between 16-18% and the proportion of the total population uninsured is 15.6%.

2. Annually, \$20 billion are being spent on treating the severely mentally ill. The distribution of this \$20 billion by payer source is the following:

Annual treatment cost

Private health ins.	\$ 8.4 billion
Medicaid, VA other fed.gov.	\$3.6 billion
State and local gov.	\$8.0 billion
Total:	\$20.0 billion

Source: Data compiled by Dorothy Rice of the Univ. of California-San Francisco. These data exclude nursing home costs.

3. Community based programs: States spend about \$8 billion on the SMI annually. About half of it is spent on inpatient care and the other half is spent on other programs including case management services and Programs in Assertive Community treatment (PACT).

Several states introduced targeted case management for high mental health users. According to a study on a targeted case management program for the high cost SMI in NY State, the distribution of the people in the program (including adults and children) by payment source is the following:

Insurance	Percentage of people
Medicaid only	59%
Medicare only	8%
Medicare and Medicaid	10%
VA	2%
Private insurance	3%
No insurance	18%
Total:	100%

These data also indicate that the public system serves a proportion of the uninsured in various ways. In this population, the cost/person/year is approximately \$25,000 and the typical client is young, unemployed single male. The reason for the introduction of the targeted case management is to reduce the high annual utilization costs through case management.

4. Outpatient utilization of the SMI and the average mental health user:

Data from the ECA study indicate that there is no significant difference between

the SMI and the average mental health user population concerning outpatient utilization (see Table 1.) About 24% of all people who had contact with the mental health system used 50 visits or more in a given year. For the SMI population the corresponding figure is 25%, only slightly higher. There is no reason to believe that those who are currently uninsured will use more visits than the SMI in general, however from these data we do not know.

Data from the NMES 1987 survey (See Table 3) makes it possible to compare the SMI with the non-SMI population. These data indicate that the SMI use more visits than the non-SMI population. A relatively small proportion of the SMI uses a lot of visits. It is possible that the SMI-uninsured will show the same utilization pattern: a relatively small proportion of the people will be high users. Their care can be managed as it will be described below.

5. Inpatient utilization: Data are available from the National Reporting Program on inpatient days by payment source. (see Table 2). According to these data about 60% of the SMI people who cannot pay for their care have at least 30 days hospitalizations which is a lower percentage than for any other payment source. Their average LOS is also higher. This indicates that among the mentally ill uninsured a large proportion of people is being counted who are very sick, require hospitalizations, and already treated by the public system. There is no reason to believe that a large proportion of the SMI uninsured will need hospitalizations. It is most likely that the most severely ill who need hospitalizations are already using the state system. However, empirical data to address this issue are available from the National Co-morbidity Survey of Ronald Kessler. We expect to have additional analyses of SMI by insurance and service use status in the next few weeks.

TABLE 1: AMBULATORY CARE
VISITS TO SPECIALTY MENTAL HEALTH
OR GENERAL MEDICAL SETTINGS FOR MENTAL HEALTH REASONS

	39 VISITS OR LESS PER YR.		31-50 VISITS PER YR.		MORE THAN 50 VISITS PER YR.	
	# OF VISITS	%	# OF VISITS	%	# OF VISITS	%
Severely Mentally Ill	15,018,643	47.5	8,652,238	27.2	8,017,502	25.3
All Persons	31,613,537	58.0	29,084,341	18.4	37,234,640	23.6

Source: ECA Data - 1980-1984

TABLE 2: INPATIENT CARE

**LENGTH OF STAY IN DAYS PER PERSON AT 50TH AND 90TH PERCENTILE OF
CUMULATIVE PERCENT OF PERSONS
AMONG ADULTS WITH SEVERE MENTAL DISORDERS
BY PAYMENT TYPE, IN ONE YEAR**

	PERCENT			
PAYMENT MECHANISM	50TH PERCENTILE	90TH PERCENTILE		PERCENTILE FOR 30 DAYS
NO FEE PAYMENT	23	93		60.3
PERSONAL PAYMENT	9	37		86.3
INSURANCE PAYMENT	15	44		81.7
MEDICARE PAYMENT	16	47		79.9
MEDICAID PAYMENT	10	31		89.3
VA/CAMPUS PAYMENT	25	55		67.3
OTHER PAYMENT SOURCES	11	60		78.7

Source: National Reporting Program

Table 3

Visits to Ambulatory Care Settings - NMES 1987

	30 visits or less py		31 to 50 visits py		More than 50 visits py	
	# of visits	%	# of visits	%	# of visits	%
SMI	3,265,113	40.0	1,101,113	13.5	1,791,836	46.5
All other mental disorders	76,109,318	63.9	22,041,857	18.5	20,959,691	17.6

	30 visits or less py		31 to 50 visits py		More than 50 visits py	
	# of persons	%	# of persons	%	# of persons	%
SMI	278,302	82.4	25,386	7.5	33,814	10.0
All other mental disorders	15,021,121	94.7	579,863	3.7	262,300	1.6

Appendix B

Issues relating to Sen. Wellstone's request:

1. Who are the uninsured Severely Mentally Ill ?

The definition of uninsured in the case of mental illness has to be handled with caution given the large public sector in mental health. The role of the public sector in terms of financing of care and provision of care is twice as large as that in the general medical sector. Those who are uninsured are eligible for using state financed mental health services. During the last few years due to budgetary constraints several states introduced new eligibility criteria for using publicly financed mental health services and gave priority to the severely mentally ill uninsured to be eligible to use state financed mental health services.

A large proportion of the severely mentally ill is actually not without any kind a mental health services, but they are using state financed mental health services.

The public sector provides services for people with various health insurance coverage and also provides services for the SMI uninsured.

Who is served by the public sector who is considered uninsured SMI?

There are about 72,000 people in forensic care and annually \$1 billion is spent on their care. There is no reason to assume that health care reform in any way will have an impact on the cost of care of this population.

Some people who run out of private health care coverage are also served by state agencies. There is no reason to believe that the proportion of these people will increase.

Mentally ill people who are in jail are also get services from the state system. There is no reason to believe that this subpopulation segment will increase.

2. Can the cost of care for the uninsured SMI be managed?

Preliminary findings from a randomized targeted case management program from California indicate that the introduction of case management for the high user population (the top 5% of the people consume about 50% of the total expenditures) can control costs. After the introduction of case management, the cost of \$29,000/patient/year was reduced to \$18,000/patient/year, that is a 40% cost reduction has been realized by reducing the utilization of hospital inpatient care with approximately 50% and reducing the use of skilled nursing facilities also with about 50% (Data are from Teh-wel Hu.)

These data indicate that there are cost-containment mechanisms which are successful in reducing the cost of care for the severely mentally ill who are currently uninsured and use public mental health services.

The coordination type case management costs about 30-80 cents/capita while the more intensive clinical type case management costs about \$3.50 - \$7.16 per capita.

Managed care in private insurance became the key cost-containment mechanism for mental health care. Individual studies indicate various levels of cost reduction ranging from 4.5% to 30% per year. On the average the cost reduction can be expected to be between 14-22% annually in the private sector. However, the service of managed care companies is not restricted to private insurance companies or employers. Several states, e.g. (state of Massachusetts) under budgetary pressures have contracted managed care companies to reduce the mental health cost of their SMI Medicaid and also non-Medicaid population. In Mass. the goal of the managed care program is not only to reduce costs but also to improve outcome for the SMI population. In the State of North Carolina the managed care company only manages the care of high cost severely emotionally disturbed children (according to some information sources).

There is no reason to believe that cost-containment mechanisms are not in place in public programs or cannot be applied to the non-insured SMI who are currently not utilizing any kind of services.

3. How does the cost of the Administration's plan differ from the above described previous estimates concerning the uninsured SMI?

Please see Appendix C. Assumptions and Calculations for estimating costs for the SMI uninsured under the Administration Plan.

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Appendix C

Costs for the SMI uninsured under the Administration Plan

The logic of these calculations is the following:

Assumption I:

None of the .8 million uninsured SMI use any services currently. If the commensurate plan (more generous than current proposals) is introduced for them and they start to use services, the annual cost will be about \$7,462/year/person (data used in the Appropriations Committee report). The total annual cost will be .8 million X \$7,462 = \$6 billion.

Assumption II:

20% Assuming that only 80% will use any kind of services regardless of benefits (e.g. the homeless mentally ill and some other subpopulations are not willing to use any kind of mental health services), then the total cost will be $0.8 \times \$6 \text{ billion} = \4.8 billion .

Assumption III.:

According to Dorothy Rice, approximately half of the \$8 billion is spent on inpatient care and the other half is on community care. Therefore \$4.8 billion will be divided and we assume that 2.4 billion will be spent on inpatient and \$2.4 billion on outpatient care. In the calculations to follow we will see further reductions both in the inpatient and outpatient care costs.

Assumption IV.

The commensurate coverage assumed no limits on inpatient care, the current proposal includes only 30 days. Therefore, the \$2.4 billion has to be reduced by approximately 40% since approximately 40% of the people will have longer than 30 days LOS. (See table 2). Therefore the \$2.4 billion inpatient costs will be reduced by \$.9 billion to \$1.5 billion. (The \$.9 billion will have to be picked up by the State mental health agency.)

Assumption V.

As far as outpatient care is concerned the ECA data (Table 1) indicate that 52.5%, roughly 50% of the SMI has more than 30 visits. In current proposals only 30 visits are allowed. Therefore, the outpatient costs of \$2.4 billion will be reduced by

about 50% to \$1.2 billion. (Again, if current levels of outpatient use are supported, as psychotherapy, the \$1.2 billion would have to be picked up by the state mental health agency. If some part of this outpatient use is medication management, there may be some transfer of this component to the health plan.)

Assumption VI.

So far it is calculated that Health Plans will spend \$1.5 billion on inpatient care and \$1.2 billion for outpatient care for the uninsured SMI, a total of \$2.7 billion. Further, if we assume that half of the need of the non-insured SMI is being served by the public mental health system currently. (or half of the people in need are being served), then the \$2.7 billion total can be reduced by 50% to a total of \$1.4 billion. That is approximately \$1.4 billion would be spent by the Health Plans on the uninsured SMI, and the cost per capita will be \$1.4 billion/1.79 million adults = \$7.8 per capita premium costs. This much additional costs can be expected once the currently uninsured SMI obtain insurance under the new system.

MENTAL HEALTH / SUBSTANCE ABUSE ESTIMATES

Establishing the Baseline

A. Baseline Data

The baseline for the estimates was derived from the Rice et al. (1990)¹ estimates of the costs of alcohol, drug abuse, and mental (ADM) disorders. These estimates are based on utilization and expenditure data and as such exclude administrative costs. Using the estimates prepared by Rice et al which update the 1985 estimates of direct costs to 1990, the following components were subtracted:

- o Research/Support Costs
- o Nursing Home Costs - 90% (which are those accounted for by people 65 years and older)
- o ADM costs that stem from comorbid physical conditions (e.g., a portion of liver transplant can be linked to alcohol abuse). This amounted to \$4.3 billion.
- o Prevention and data development set asides in the federal ADM Block grant. These deductions were \$20.9 million for mental health and \$225.6 million for substance abuse.²

The allocation between alcohol and drug abuse was made according to the distributions reported in the Rice et al study. Costs associated with forensic hospital care in state mental hospitals were also deducted from the state mental health system expenditures. This amounted to \$0.7 billion in 1990.³

¹Rice D.P. et al, "The Economic Costs of Alcohol and Drug Abuse and Mental Illness 1985," Final Report ADAMHA Contract Number 283-87-0007 1990. Rice et al have updated the 1985 estimates to 1990.

² These totals were the 1990 actual allocations under the Block grant.

³ These data were obtained from the National Association of State Mental Health Program Directors.

This yielded an estimate of \$54 billion in 1990 for total ADM costs. A reconciliation with National Health Accounts yielded a similar estimate of approximately \$54 billion dollars in direct costs. (Table 1)

Total expenditures were then divided among sources of payment. Table 2 summarizes the distribution of baseline costs by payer source. Private insurance expenses consists of total spending from private sources estimated by Rice including out-of-pocket payments and philanthropy. Some adjustment was made to the private insurance expenses reported by Rice et al based on more recent data provided to SAMHSA from the Department of Defense.⁴ Medicaid dollars were based on the high estimate of the range identified by Wright and Buck⁵ trended forward to 1990 dollars. The high end was chosen because since 1984 the advent of disproportionate share rules has increased Medicaid payments associated with ADM disorders. The Medicaid total was estimated at \$9.5 billion in 1990. The Medicaid dollars were allocated to Alcohol, Drug Abuse and Mental Health according to the aggregate proportions found by Rice et al. State and local data are based on data from the Center for Mental Health Services (CMHS) Inventory and National Drug and Alcohol Treatment Utilization Survey (NDATUS). Using data from the CMHS Inventory and NDATUS \$2.2 billion was allocated to Medicare. The Veterans Administration share was based on 1990 data from the CMHS' Inventory data and from data on substance abuse care from the VA. An "other" federal category is defined as a residual of federal funds.

B. Population Groups

The total population in 1990 was 248.7 million.

- o 22.1 million Medicaid eligibles in 1990 (CBO calculations 1993)
- o 31.2 million people 65 years and older (Census of Population).

⁴ These data were reported in a memorandum dated April 16, 1993. (copy attached)

⁵ Wright G.E., and Buck J.A., "Medicaid Support of Alcohol, Drug Abuse and Mental Health Services" Health Care Financing Review 13 (1) 117-128 1991

- o 35 million uninsured persons, 16% of whom (or 5.6 million) had a serious mental problem.^{6,7}
- o 160.4 million privately insured population constitutes the remainder

The estimates discussed in this paper focus on three population groups: the privately insured, the uninsured, and a high user population currently served through the public mental health and substance abuse sectors populations. The population figures were used as follows to weight the three components of an estimated premium:

o	Insured	82.0%
o	Uninsured	15.1%
o	High Users	2.9%

C. Baseline Per Capita Estimates

The population groups defined above were used to develop baseline per capita costs for each group. For the privately insured we divided the expenditures estimated from Rice by the size of that group. Costs from the VA, state and local governments and other federal costs were allocated to the uninsured and high users.⁸

⁶ Norquist G., and Wells K., "Mental Health Needs of the Uninsured" Archives of General Psychiatry 48: 476 1991

⁷ This number is consistent with data from the National Comorbidity survey which reports that approximately 23% of those without insurance report any mental disorder. These data were obtained via personal correspondence with Ron Kessler and are available in a draft manuscript by Kessler et al.

⁸ This allocation procedure represents a substantial simplification of the complex relationships between insurance coverage and the use of public programs.

D. Estimating Premium for Privately Insured

The above set of calculations yields a privately insured per capita estimate of \$138. This figure is then further adjusted by \$12 to remove estimated cost of philanthropy⁹, yielding a starting baseline insured premium of \$126.

Starting with the \$126 baseline estimate, the following was done:

$$\$126 * 0.96 * 1.51 * 0.67 * 1.135^{10} = \$138.90 \text{ insured}$$

- o 0.96 to remove 4% of the costs that are associated with prescription drugs. The prescription drug costs were included in the estimates of the drug portion of the benefit package
- o 1.51 aging data to get 1994 number
- o 0.67 to remove 33% effective coinsurance rate.¹¹
- o 1.135 load for administrative costs

⁹Mental health philanthropy calculation - Data from the 1992 / 1993 "Dimensions of the Independent Sector" reports \$1.86 billion in 1988 for public support (gifts, grants, and contributions) to mental health. The report also indicates that in the health area private philanthropy is approximately 62% of public support. Taking 62% of \$1.86 billion yielded \$1.15 billion in 1988 dollars; aging the data to 1994 dollars yields \$12 per capita for philanthropy. Subsequent to the estimating process it was realized that a 1990 estimate rather than a 1994 estimate should have been used, since the \$138 per capita is for 1990.

¹⁰ For purposes of these estimates the earlier adopted administrative load of 13.5% was used. This will be adjusted to 15% during the re-estimating process.

¹¹The 33% effective coinsurance is derived based on the following factors: (1) the inpatient coinsurance rate is 0.26 because 6 - 7% of inpatient days are for first days which have a deductible, and the coinsurance rate for the remaining days is 20%; (2) The effective coinsurance rate for outpatient services is 0.47, which is derived because 90% of outpatient visits are for psychotherapy which has a 50% coinsurance, and 10% of outpatient visits are for medication monitoring. The inpatient and outpatient coinsurance figures are then weighted based on the distribution of costs: 0.65 for inpatient and 0.35 for outpatient ($0.65 * 0.26 + 0.35 * 0.47$) yielding a 33% effective coinsurance rate overall.

E. Estimating Premium for the Uninsured

For purposes of estimating the costs associated with the 35 million uninsured population, the group was divided into the seriously ill/high user category (16%) and the remaining uninsured. Epidemiological data (Norquist) suggest that 33% more uninsured than insured have serious psychiatric disorders (roughly 16% of the uninsured have a serious mental illness while about 12% of the insured have a serious disorder).¹² To explain Norquist's results it was assumed that the mental morbidity curve of the insured would have to be shifted rightward for the uninsured population to give a 33% higher morbidity at the tail; that is utilization for the entire uninsured population, and not just the high users, was assumed to be higher.

The uninsured premium estimate was calculated by adjusting the insured premium number by 33%:

$$\$138.90 * 1.33 = \$184.73 \text{ uninsured}$$

F. Estimating the Baseline for the High User Premium

For purposes of estimating a high user premium, the baseline starting point used was current public sector spending which is discussed in A. above. Specifically the state and local spending (\$15.9 billion) and the Federal sources spending (\$4.2 billion) were used for an estimated total public sector spending of \$20.1 billion in 1990. For purposes of these calculations Medicare and Medicaid sources were excluded.

Public sector spending was divided into inpatient and community based care.

¹²Norquist G., and Wells K., "Mental Health Needs of the Uninsured," Archives of General Psychiatry, 48: 476, 1991.

Inpatient

Mental Health U.S. 1992 reports that 58% of state funds are for state mental hospitals. Using the \$20.1 base gives a figure of \$11.66 billion for inpatient care. Calculation of the portion of the public sector dollars for inpatient care that should be excluded from the premium was done as follows:

- o National Association of State Mental Health Directors (NASMHD) March 15, 1993 memorandum indicates that 21.4% of state inpatient expenditures are for 60 or fewer days. (copy attached)
- o $11.66 \times .786 = \$9.2$ billion should be excluded for stays over 60 days

Community-based services

Community based care is estimated to account for \$8.44 billion in costs. The estimate assumed that 30% of the community-based resources would need to be excluded from the premium estimate. The following information contributed to this assumption:

- Ohio reported that 12% of community based expenditures were for Forensic related care which will remain with the public sector (e.g., halfway houses, counseling, residential).
- Ohio reports 7% administrative costs
- NASMHD data report 7% of dollars are associated with case management. The State of Ohio reports 4% associated with rehabilitation and 12% with case management. This is similar to the Medicaid experience of 9% for these two types of services.
- Partial hospitalization (120 days) and residential treatment (30/60) services both have limits, with the assumption being that public sector resources will continue to fund services beyond the limits. NASMHD reports that 12% of expenditures are associated with partial and 17% with residential. Mental Health U.S. reports the median days of stay in partial care as 115, with individuals with schizophrenia having a median of 153 and accounting for 32% of admissions to partial programs.

Assuming a total of 30% for non-covered community-based services and activities:

$$\$8.44 \text{ B (community based care)} \times .30 = \$ 2.5\text{B to be excluded}$$

Combining the inpatient and community-based services exclusions yielded the following estimate:

$$\$2.5 + 9.2 = \$11.7 \text{ to be excluded or 58\% of public spending}$$

Erring on the conservative side a 55% figure for portion of public dollars to be excluded was picked.

Portion of Public Funds Devoted to High Users

Diagnostic data from U.S. Mental Health 1992 indicates that 80% of inpatient admissions to state and county mental hospitals are for serious mental disorders. However, use of an 80% factor would yield a dollar allocation to the uninsured population that would be counter intuitive (i.e., spending that is higher than when covered by insurance). While high users constitute only 80% of public sector users, they likely constitute much more than 80% of public spending. Thus, 90% of public sector resources were assumed to be associated with high users.

Calculation of High User Premium

The calculation of the high user premium was as follows:

$$\begin{aligned} \$20,100 * 0.9 * 0.96 * 1.45 * / 5.6 &= 4496.66 \\ 4496.66 * 1.51 * 1.135 * 0.45 * 0.67 &= \$2,323.54 \text{ high user} \end{aligned}$$

- o 20,100 total public sector spending, excluding Medicare and Medicaid
- o 0.9 assume 90% goes to high users
- o 0.96 excluding 4% for drugs

- o 1.45 assume 45% increase as a result of plan¹³
- o 5.6 million uninsured are seriously ill
- o 1.51 aging data to get 1994 number
- o 1.135 loading by 13.5% for administrative cost¹⁴
- o 0.45 since 55% of public spending estimated to be excluded under plan
- o 0.67 to remove 33% effective coinsurance rate

G. Philanthropy

It was assumed that health reform would reduce philanthropy by half. It was also assumed that philanthropy would increase by 5% annually so in 1994 the \$6 would grow to \$7.29. However, the rate of growth for services is more than twice that of philanthropy. Thus, it would take \$18.12 in 1994 to cover the same amount of services covered by the \$12 of philanthropy in 1990. The difference of \$10.83 per currently insured (or \$8.88 per enrollee) would need to be made up by the plan. Loading by 13.5% and removing 33% coinsurance gives:

$$8.88 * 1.135 * 0.67 = \$6.75$$

¹³The 45% is based on the assumption that with health reform the cost of the covered services which the public sector will provide would increase to roughly the average of the top 10 states. Since the cost will no longer be limited by the local tax base but would have the entire nation to draw from, poorer states would be able to increase their spending on services covered under health reform. This would result in a 60% increase in national per capita state and local spending. This figure was discounted to 45% to take into account geographical variations other than higher utilization that might partially explain the top 10 states higher mental health spending.

¹⁴For purposes of these estimates the earlier adopted administrative load of 13.5% was used. This will be adjusted to 15% during the re-estimating process.

H. Calculation of Overall Premium

The various population group premiums are then weighted and combined with the philanthropy calculation to yield a total premium estimate:

Population Group	Premium	Weights	Weighted Premium
Insured	138.90	82.0%	113.90
Uninsured	184.73	15.1%	27.89
High User	2323.54	2.9%	67.38
Subtotal			209.17
Philanthropy	6.75	100.0%	6.75
TOTAL:			\$215.92

Estimated change when moving from 30 to 60 day benefit is \$50. We used 50% of this difference for the estimate assuming aggressive utilization review.

$$\$215.92 + \$25 = \$240.92 \text{ rounding to } \$241 \text{ per capita}^{15}$$

The methodology we are using for the estimates under the Health Security Act risk rates premiums by health insurance policy type. Under this approach there is a difference between per capita costs across the nation, and the costs for risk pools within different types of insurance policies.

In order to move to an estimated premium, we pooled singles and couples with no children and calculated a per person premium based on the characteristics of individuals in this risk pool. Single parent families define their own risk pool, as do dual parent families. Under this methodology, a single policy is estimated to have \$285 in mental health and substance abuse costs, a couples policy

¹⁵ Approximately 20% of per capita is for substance abuse.
(20% of \$241 = \$48, or approximately \$50).

\$570, a single parent policy \$567, and a dual parent policy is estimated to include \$636 for those same benefits. In the context of the overall premium estimates, mental health and substance abuse accounts for approximately 15% of the total premium.

TABLE 1: NATIONAL HEALTH ACCOUNTS
DIRECT COST OF ADM DISORDERS
UPDATED TO 1990 (IN MILLION \$) (5/10/93 rev.)

	ALCOHOL ABUSE	DRUG ABUSE	MENTAL ILLNESS	TOTAL
TOTAL DIRECT COST	\$10,142	\$3,156	\$64,201	\$77,499*
ADM ORGANIZATIONS	\$ 3,656	\$1,291	\$19,516	\$24,463
SHORT STAY HOSPITAL	\$ 4,032	\$1,424	\$10,593	\$16,049
OFFICE BASED PHYSICIANS	\$ 240	\$ 88	\$ 3,655	\$ 3,983
OTHER PROFESSIONAL SERVICES	\$ 329	\$ 32	\$ 6,599	\$ 6,960
NURSING HOMES	\$ 1,095		\$16,478	\$17,573**
DRUGS			\$ 2,191	\$ 2,191
SUPPORT COST	\$ 790	\$ 321	\$ 5,169	\$ 6,280**

*Excludes \$4.3 billion direct cost for treatment of co-morbid physical disorders.

**Excluding 90 percent of nursing home costs for those 65+ years, Research/Support Costs, \$0.7 billion for continued State Forensic Psychiatric Services, and \$0.4 billion for prevention and data collection portions of the SAMHSA block grant (25 percent), leaves a total base of \$54.3 billion Direct Treatment Costs for Mental Health and Addictive Disorders (1990).

TABLE 2
 AGGREGATE DISTRIBUTION OF BASELINE FUNDS FOR SUPPORTING
 THE COMPREHENSIVE MENTAL HEALTH AND
 SUBSTANCE ABUSE BENEFIT
 (IN BILLIONS)

	1990	1994
Private Insurance	\$22.2	\$28.0
Medicaid	\$ 9.5	\$12.0
Federal	\$ 5.3	\$ 6.7
State	\$ 4.2	\$ 5.3
Federal Sources	\$ 4.2	\$ 5.3
VA	\$ 2.3	\$ 2.9
Block Grant	\$ 1.0	\$ 1.2
Other	\$ 1.0	\$ 1.3
Medicare (excluded)	\$ 2.2	\$ 2.8
State and Local	\$15.9	\$20.1
State	\$13.0	\$16.5
Local	\$ 2.9	\$ 3.6
Total	\$54.0	\$68.2

APRIL 16, 1993
SUGGESTED CORRECTIONS TO SUBSTANCE ABUSE (S.A.)
EXPENDITURE DATA FROM MODEL
the following data were presented:

	HOSPITALS		S.A. TREATMENT ORGANIZATIONS		ALL OTHER PROVIDERS		TOTALS	
CATEGORY	\$MIL	%	\$MIL	%	\$MIL	%	\$MIL	%
PRIV HI	\$1,632	37.1%	\$1,113	22.5%	\$301	43.7%	\$ 3,047	30.4%
MEDICAID	\$ 814	18.5%	\$ 411	8.3%	\$139	20.2%	\$ 1,364	13.6%
ST & LCL	\$ 977	22.2%	\$3,037	61.4%	\$151	21.8%	\$ 4,165	41.5%
VA	\$ 35	0.8%	\$ 20	0.4%	\$ 0	0.0%	\$ 55	0.5%
MISCELL	\$ 330	7.5%	\$ 317	6.4%	\$ 75	10.9%	\$ 722	7.2%
MEDICARE	\$ 612	13.9%	\$ 49	1.0%	\$ 23	3.4%	\$ 684	6.8%
TOTAL	\$4,400	100.0%	\$4,947	100.0%	\$689	100.0%	\$10,036	100.0%

The corrected data should be:

	HOSPITALS		S.A. TREATMENT ORGANIZATIONS		ALL OTHER PROVIDERS		TOTALS	
CATEGORY	\$MIL	%	\$MIL	%	\$MIL	%	\$MIL	%
PRIV HI	\$1,976	36.2%	\$1,113	22.5%	\$301	43.7%	\$ 3,390	30.6%
MEDICAID	\$ 814	14.9%	\$ 411	8.3%	\$139	20.2%	\$ 1,364	12.3%
ST & LCL	\$ 975	17.9%	\$3,037	61.4%	\$151	21.8%	\$ 4,163	37.5%
VA	\$ 751	13.7%	\$ 20	0.4%	\$ 0	0.0%	\$ 771	6.9%
MISCELL	\$ 330	6.1%	\$ 317	6.4%	\$ 75	10.9%	\$ 722	6.5%
MEDICARE	\$ 610	11.2%	\$ 49	1.0%	\$ 23	3.4%	\$ 683	6.2%
TOTAL	\$5,456	100.0%	\$4,947	100.0%	\$689	100.0%	\$11,092	100.0%

Documentation:

1. PRIV HI/HOSPITALS includes \$344 million for inpatient treatment of substance abuse of military personnel in military hospitals (this was not captured in the NCHS National Hospital Discharge Survey); source - the Department of Defense (Health Affairs).
2. The VA/HOSPITALS has been corrected (this was not captured in the NCHS National Hospital Discharge Survey; the dollar amount is for the substance abuse treatment only in VA hospitals); source the Veterans Affairs (Mental Health).
3. CMHS, has said that there should be almost no overlap in dollar amounts between its data source inventory and the DoD and the VA.

MENTAL HEALTH / SUBSTANCE ABUSE ESTIMATES

Establishing the Baseline

A. Baseline Data

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The allocation between alcohol and drug abuse was made according to the distributions reported in the Rice et al study. Costs associated with forensic hospital care in state mental hospitals were also deducted from the state mental health system expenditures. This amounted to \$0.7 billion in 1990.³

¹Rice D.P. et al, "The Economic Costs of Alcohol and Drug Abuse and Mental Illness 1985," Final Report ADAMHA Contract Number 283-87-0007 1990. Rice et al have updated the 1985 estimates to 1990.

² These totals were the 1990 actual allocations under the Block grant.

³ These data were obtained from the National Association of State Mental Health Program Directors.