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## Cost Estimation for the Provision of Psychotherapy Services by Marriage and Family Therapists Under Medicare

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### Executive Summary

#### Background

Within the Medicare program, psychotherapy services are currently provided by physicians, psychiatrists, clinical psychologists, licensed clinical social workers, and certified clinical nurse specialists. Despite being recognized by the federal government as one of the core mental health professions (Code of Federal Regulations, 2000), marriage and family therapists (MFT's) are not eligible for reimbursement from Medicare.

While a number of studies have analyzed the impact of covering additional services under Medicare (e.g., DaVanzo, Dobson, & Sen, 2002; Haber & McCall, 1989), to date no study is known to have examined the cost of adding MFT's as eligible providers for Medicare participants. The purpose of this project, therefore, is to investigate the impact (over five years) of allowing MFT's to provide Medicare services.

#### Findings

The five-year estimated net increase in cost due to the provision of psychotherapy services by MFT's is approximately \$10.5 million (or \$2.1 million per year).

The five-year estimated gross increase in cost due to the provision of psychotherapy services by MFT's is approximately \$13.9 million (or \$2.8 million per year).

Overall, the cost for psychotherapy services provided by marriage and family therapists would account for less than ½ of 1% of mental health expenditures.

## Appendices and Detailed Analysis

### Method and Results

The methodology used first focused on projections for the cost of psychotherapy services as provided under current policy. The cost projections for current policy were then altered to include projections for psychotherapy services provided by MFT's.

### Estimated Cost of Psychotherapy Services under Current Medicare Policy

In order to estimate the cost of services under current coverage, the total number of psychotherapy services expected to be provided from 2002 through 2006 was estimated. Then, using trends found in the proportion of services supplied by the various provider groups (e.g., clinical psychologists, psychiatrists, etc.), the number of services expected to be provided by each specialty was projected. Finally, by multiplying the number of services projected for each specialty by an estimated cost per visit, the expected total cost for the provision of psychotherapy services under current coverage was established.

### Estimated Total Number of Psychotherapy Services to be Provided for 2002 through 2006

Trends in the provision of services between the years 1999 and 2001 were used in order to project the number of services that could be expected to be provided 2002-2006. Since coverage of services provided by marriage and family therapists would only be expected to impact costs in states where MFT's are licensed, only states with marriage and family therapy (MFT) licensure were included in the analysis (Ohio, West Virginia, New York, North Dakota, Montana, and Delaware were excluded).

Data from the National Procedure Summary File, available from the Center for Medicare Services, was used to determine the number of psychotherapy services provided under Medicare Part B from 1999 through 2001. Medicare Part B is also referred to as Supplementary Medical Insurance and covers non-hospital outpatient services. The available data provided information about the number of psychotherapy claims processed by different Medicare carriers. Carriers are agencies used by Medicare to process medical claims submitted by physicians and other providers, and typically only handle claims filed in a single state. Carriers were selected for inclusion in the present analysis only if they processed claims for a state where MFT's are licensed.

In one instance, a single carrier represented both a state with licensure and a state without licensure. In this case, the total number of claims (i.e., for all Medicare services) typically submitted by the state with MFT licensure, was divided by the total number of claims typically submitted by both states represented by the carrier. Doing this allowed for the determination of what proportion of the claims processed by the carrier would characteristically be from the state with MFT licensure. The percentage was then used to determine the number of claims that should be included from the carrier.

The analysis showed that approximately 14 million psychotherapy services are provided annually in the 44 states where MFT's are licensed. When the total number of psychotherapy services was divided by the total number of Medicare Part B beneficiaries in the United States, a ratio of approximately 0.38 was typically observed. The ratio was found to be relatively constant between 1999 and 2001 (Table 1). Employing this ratio in a basic algebraic expression allows the total number of psychotherapy services to be projected for 2002 through 2006. For example, below is an example using data for the year 2002:

$$\text{Number of Psychotherapy Services} = 0.38 * 38,029,000 = 14,451,020$$

Utilizing this equation with projections of total U.S. Medicare Part B beneficiaries, as available from the Center for Medicare Services, a total of 73.7 million psychotherapy services are estimated to be provided from 2002 to 2006 (Appendix A, line C).

Table 1: Ratio of total services over total number of U.S. beneficiaries\*

	1999	2000	2001
Number of psychotherapy services in the 44 states	14,060,251	13,804,580	14,294,737
Total number of beneficiaries in U.S.	37,022,000	37,315,000	37,657,000
Ratio of psychotherapy services in 44 states over the total number of Medicare beneficiaries in U.S.	38%	37%	38%

#### Proportion of Services Expected to be Provided by Mental Health Provider Group

As noted previously, psychotherapy services are currently provided by physicians, psychiatrists, clinical psychologists, licensed clinical social workers, and certified clinical nurse specialists. Table 2 shows that during the years 1999 through 2001 the proportion of services provided by licensed clinical social workers increased (by approximately 0.5% per year) while the proportion of services provided by psychiatrists and other physician specialties tended to decrease.

In the present cost analysis, estimated trends were used to calculate the number of psychotherapy services expected to be delivered based on provider specialty. To minimize extrapolation of the observed change, the full trend was reduced by one-half for the years 2002 through 2006. This resulted in an estimated increase of 0.25% per year for services provided by L.C.S.W.'s and an estimated decrease of 0.25% per year for psychiatrists and other physician specialties, while the proportion of services provided by clinical psychologists was expected to remain constant (Appendix A, lines D, H, and L).

Table 2: Proportion of psychotherapy services provided by profession\*

	1999 (%)	2000 (%)	2001 (%)
Clinical psychologists	22.90	23.30	23.34
Psychiatrists	57.68	55.29	53.39
Licensed clinical social workers	12.42	12.90	13.61
Certified clinical nurse specialists	0.67	1.03	1.23
Physicians of unknown specialty	6.33	7.49	8.44

Applying the proportions to the total number of psychotherapy services expected to be provided showed that of the estimated 73.7 million total services for the five-year period, approximately 11 million would be expected to be provided by L.C.S.W.'s, 17 million by clinical psychologists, and 46 million by psychiatrists and other physician specialties (Appendix A, lines E, I, and M).

#### Estimated Cost Per Visit for Psychotherapy Services

In general, Medicare's allowable charge for each of the various psychotherapy services is based on the figures found in the Physician Fee Schedule. In the fee schedule a basic rate is adjusted according to locality, in order to account for local economic variation (e.g., cost of living of the local area). Localities where MFT's are licensed were selected and the mean charge for each of the different psychotherapy services was calculated. The estimated allowable charges were then weighted against the distribution of the various psychotherapy services provided during 2001 in order to determine the overall average charge for psychotherapy services. Using this methodology, the weighted average price allowed for psychotherapy services was estimated to be approximately \$81.42 per visit.

Under current coverage, beneficiaries are responsible for 50% of the allowed charge for psychotherapy services. In order to make projections, the amount of \$81.42 was reduced by 50% to account for the effect of co-payment required by beneficiaries (leaving \$40.71 to be paid by Medicare). The basic conversion factor used by Medicare to convert payment rates for the 2001 Physician Fee Schedule into the rates used for the 2002 fee schedule was then located. By applying the conversion factor to the reduced average allowable charge (i.e.,  $\$40.71 * 1.026$ ), the average allowable amount for 2002 is calculated as \$41.77. This factor was also used to inflate the average allowable cost per visit for each year thereafter until 2006.

According to the Medicare Carrier Program Manual, physicians are eligible to receive the full amount of the allowed charge. Furthermore, clinical psychologists are reimbursed 80% of the allowed payment for physicians, and L.C.S.W.'s receive 75% of the amount paid to clinical psychologists. For the year 2002, the application of these rules showed an average allowable charge for clinical psychologists of \$33.42 and \$25.06 for L.C.S.W.'s. These figures were also inflated by the conversion factor of 1.026 for each year that followed until 2006 (Appendix A, lines F, J, and N).

#### Total Projected Cost of Psychotherapy Services under Current Medicare Policy

The number of services provided by various mental health providers and the corresponding cost per visit was used to determine estimates for overall costs under current policy. By determining the product of price per visit and number of services, it was estimated that the total cost for psychotherapy services during the five-year period would be approximately \$2.9 billion (Appendix A, line P). An overview of the cost per mental health provider group, as well as the total cost per year is found in Table 3.

Table 3: Gross cost of current coverage for psychotherapy services\*

	2002	2003	2004	2005	2006	Total
Cost of psychotherapy services expected to be provided by L.C.S.W.'s under current coverage	\$51,609,434	\$54,356,300	\$57,324,075	\$60,471,710	\$63,865,028	\$287,626,547
Cost of psychotherapy services expected to be provided by clinical psychologists under current coverage	\$111,065,915	\$114,960,451	\$119,182,258	\$123,631,052	\$128,428,034	\$597,267,710
Cost of psychotherapy services expected to be provided by psychiatrists and other physician specialties under current coverage	\$378,770,989	\$390,490,662	\$403,211,714	\$416,582,893	\$431,001,691	\$2,020,057,949
Total cost of psychotherapy services under current coverage	\$541,446,338	\$559,807,413	\$579,718,047	\$600,685,656	\$623,294,753	\$2,904,952,206

#### Estimated Cost of Psychotherapy Services with MFT's Included as Providers

In order to determine the impact of the inclusion of MFT's on Medicare, the number of services that would be expected to be provided by MFT's was estimated first. Next, the manner that the inclusion of MFT's would affect demand for services was assessed. It was assumed that the provision of services by MFT's would affect demand in two ways. First, the overall demand for services was assumed to increase to some extent solely as a result of more services being offered. This phenomenon is referred to as induced demand (e.g., DaVanzo et al., 2002). Second, demand for services from other providers (e.g., clinical psychologists) was assumed to decrease to a certain extent as some beneficiaries can be expected to switch from other providers to MFT's. A change in provider of services is described as a substitution effect (e.g., DaVanzo et al., 2002). After accounting for the effect of induced demand and substitution, the cost of psychotherapy services was estimated.

#### Number of Services Estimated to be Provided by MFT's

In a recent study examining the fiscal impact that covering mental health counselors (MHC's) would have on Medicare, DaVanzo et al. (2002) used a mathematical equation to determine the number of services that could be expected to be provided by MHC's. Adapted for use in this study, the equation is as follows:

$$\text{Number of Services Estimated to be Provided by MFT's} = \# \text{ of Services Provided by L.C.S.W.'s} * (\# \text{ MFT's} / \# \text{ L.C.S.W.'s}) * (\text{Expected Average Medicare Caseload of MFT's} / \text{Expected Average Medicare Caseload of L.C.S.W.'s})$$

The first term in this equation is the number of services provided by L.C.S.W.'s. Estimates derived for current coverage were used as the source for this term (Appendix A, Line E)

The second term in the equation was filled by dividing the number of MFT's who are not dually licensed by the number of L.C.S.W.'s. The number of MFT's includes only persons not dually licensed since those who hold additional licenses are likely already eligible to receive reimbursement. The American Association of Marriage and Family Therapy estimates that 39,243 MFT's fit these criteria (Appendix A, line R). The number of L.C.S.W.'s (192,814) was determined using estimates from the Substance Abuse and Mental Health Services Administration (SAMSA) (Appendix A, line Q).

The third term factors in the assumption that MFT's will not immediately provide the full number of services that are potentially available to them. Instead it was assumed that the average caseload of Medicare patients seen by MFT's would increase over the five-year period. During the first year of coverage it was assumed that the average caseload of MFT's would only be 40% of the average caseload for L.C.S.W.'s. This percentage was increased incrementally over the five years until the estimated average Medicare caseload of MFT's was 75% of the caseload for L.C.S.W.'s (Appendix A, Line T).

Using the equation it was estimated that for the years 2002 through 2006, MFT's would provide approximately 1.3 million services (Table 6).

#### Estimated Gross Cost of Psychotherapy Services Provided by MFT's

It was assumed that the payment allowable for MFT's would be equal to the amount allowable to L.C.S.W.'s. In order to arrive at the estimation for the full cost, the cost for services that would be expected to be induced was calculated first. Next, the cost for services expected to be substituted was calculated. The sum of these estimations allowed for a determination of the total expected gross cost.

#### Gross cost of induced demand

It was assumed that in the first year of coverage, 50% of the services provided by MFT's would be due to induced demand. For each year thereafter, the percentage of services assumed to be induced was increased by one percent (Table 4).

Table 4: Assumptions for induced demand and substitution for psychotherapy services provided by marriage and family therapists\*

	2002	2003	2004	2005	2006
Proportion of psychotherapy services provided by MFT's that are assumed to be induced	50%	51%	52%	53%	54%
Proportion of psychotherapy services provided by MFT's that are assumed to be substituted	50%	49%	48%	47%	46%

The gross cost of psychotherapy services assumed to be induced is calculated as the number of induced visits (Appendix A, Line W) multiplied by the proposed payment amount for MFT's services (Appendix A, Line X). From this calculation, it was estimated that the gross cost for induced services would be approximately \$18.4 million (Table 5).

#### Gross cost of substituted services

It was assumed that in the first year of coverage, 50% of the services provided by MFT's would be due to substitution. For each year thereafter, the percentage of services assumed to be substituted was decreased by one percent (Table 4). Of the total number of services substituted, the majority was assumed to be substituted from clinical psychologists and L.C.S.W.'s (Appendix A, Line BB and EE), since the services supplied by these providers are most similar to those provided by MFT's. Psychiatrists were assumed to be impacted somewhat less (Appendix A, Line HH).

The gross cost of services assumed to be substituted is calculated as the number of services expected to be substituted from a specific provider (Appendix A, Lines CC, FF, II) multiplied by the payment differential between MFT's and the corresponding provider type. The payment differential is calculated as the amount allowable to the other provider subtracted from the amount allowable to MFT's. Since the majority of MFT's are masters level practitioners, most would be expected to be paid at a lower rate than psychiatrists and clinical psychologists. The product of the number of services substituted and the payment differential returns a negative number. This can be seen as savings resulting from a less expensive provider supplying substituted services. It was found that the total saving resulting from the substitution of services would be approximately \$4.4 million (Table 5)

#### Total Gross Cost of Including MFT's as Medicare Providers

The total gross cost of psychotherapy services provided by MFT's (Table 5) was determined by combining the cost from induced services and the savings due to substitution. It was estimated that the total increase in cost due to the provision of psychotherapy services by MFT's would total approximately \$13.9 million over the five-year period (Table 5).

Table 5: Gross estimation of the cost of proposed coverage of psychotherapy services provided by marriage and family therapists\*

	2002	2003	2004	2005	2006	Total
Gross cost of induced psychotherapy visits expected to be provided by MFT's under proposed coverage policy	\$2,100,790	\$2,821,069	\$3,640,117	\$4,566,146	\$5,264,314	\$18,392,436
Gross cost of psychotherapy visits expected to be substituted from L.C.S.W.'s	\$0	\$0	\$0	\$0	\$0	\$0
Gross cost of psychotherapy visits expected to be substituted from clinical psychologists	(\$280,105)	(\$361,392)	(\$448,014)	(\$539,897)	(\$597,922)	(\$2,227,330)
Gross cost of psychotherapy visits expected to be substituted from psychiatrists	(\$280,105)	(\$361,392)	(\$448,014)	(\$539,897)	(\$597,922)	(\$2,227,330)
Total gross cost of proposed coverage of psychotherapy services provided by marriage and family therapists	\$1,540,580	\$2,098,285	\$2,744,088	\$3,486,353	\$4,068,470	\$13,937,775

#### Total Net Cost of Psychotherapy Services Provided by MFT's

Under Medicare, the total gross cost paid for psychotherapy services is offset by annual premiums paid by Medicare beneficiaries. At the current time, premiums are used to cover 25% of expenditures. Factoring premiums into the gross cost for psychotherapy services provided by MFT's provides an estimation of the overall net cost to Medicare (Appendix A, lines LL and MM). In the cost analysis, the net cost of psychotherapy services provided by MFT's was found to total approximately \$10.5 million over the five-year period (Table 6).

Table 6: Cost estimation for Medicare coverage of the provision of psychotherapy services by marriage and family therapists\*

	2002	2003	2004	2005	2006	Total
Total gross cost of proposed coverage of psychotherapy services provided by marriage and family therapists	\$1,540,580	\$2,098,285	\$2,744,088	\$3,486,353	\$4,068,470	\$13,937,775
Net Cost for Coverage of psychotherapy services provided by MFT's	\$1,155,435	\$1,573,714	\$2,058,066	\$2,614,765	\$3,051,352	\$10,453,332
Number of psychotherapy visits expected to be provided by MFT's under proposed coverage	167,647	215,120	265,339	318,285	351,029	1,317,420

#### Effect of Proposed Coverage on the Provision of Services and Overall Costs

The percentage of total services expected to be provided by different professions is found in Table 7. For MFT's, the proportion of services provided increases from 1% of all services in 2002, to 2% in 2006.



Table 7: Expected proportion of services provided by provider groups under proposed coverage\*

	2002	2003	2004	2005	2006
Clinical psychologists	62%	62%	62%	61%	61%
Psychiatrists and other physicians	23%	23%	22%	22%	22%
Licensed clinical social workers	14%	14%	14%	>14%	15%
Marriage and family therapists	1%	1%	2%	2%	2%
Total number of psychotherapy services	14,534,844	14,688,411	14,869,056	15,062,411	15,269,096

Under proposed coverage, the total cost of psychotherapy services would increase by approximately \$13.9 million. When included in the previously mention \$2.9 billion estimated cost for psychotherapy services in the 44 states, services by MFT's would be estimated to account for less than 0.50% of expenditures. Furthermore, when the average for a single year (\$2.1 -\$2.8 million) is considered against the \$257 billion in projected Medicare spending for 2002, the proposed inclusion of MFT's as Medicare providers would account for less than 0.0015% of all Medicare expenditures.

## References

- Code of Federal Regulations (2000). Title 42, Part 5.
- DaVanzo, J., Dobson, A., & Sen, N. (2002). *Cost estimation of Medicare coverage of the provision of psychotherapy services by mental health counselors*. Research Triangle Park, NC: The Lewin Group
- Haber, S. & McCall, N. (1989). Use of nonphysician providers in the Medicare program. Assessment of the direct reimbursement of clinical social workers demonstration project. *Inquiry*, 26, 158-169.
- Medicare, Medicaid, and SCHIP Benefit Improvement and Protection Act of 2000, Pub. L. 106-554, § 434, 114 Stat. 2763 (2000).

## Appendix A\*

		2002	2003	2004	2005	2006	Totals
<b>Estimates of the Gross Cost of Psychotherapy Services Under Current Coverage</b>							
A	Total number of Part B beneficiaries in the U.S.	38,029,000	38,365,000	38,766,000	39,194,000	39,683,000	194,037,000
B	Ratio of psychotherapy services over the total number of beneficiaries under current coverage	0.38	0.38	0.38	0.38	0.38	
C	Estimated number of psychotherapy visits under current coverage policy	14,451,020	14,578,700	14,731,080	14,893,720	15,079,540	73,734,060
D	Proportion of (C) estimated to be provided by licensed clinical social workers (L.C.S.W.'s) under current coverage	14.25%	14.5%	14.75%	15%	15.25%	
E	Estimated number of psychotherapy visits expected to be provided by L.C.S.W.'s under current coverage	2,059,270	2,113,912	2,172,834	2,234,058	2,299,630	10,879,704
F	Unit cost of psychotherapy visit provided by L.C.S.W.'s	\$25.06	\$25.71	\$26.38	\$27.07	\$27.77	
G	Cost of psychotherapy services expected to be provided by L.C.S.W.'s under current coverage	\$51,609,434	\$54,356,300	\$57,324,075	\$60,471,710	\$63,865,028	\$287,626,547
H	Proportion of (C) estimated to be provided by clinical psychologists under current coverage	23%	23%	23%	23%	23%	
I	Estimated number of psychotherapy visits expected to be provided by clinical psychologists under current coverage	3,323,735	3,353,101	3,388,148	3,425,556	3,468,294	16,958,834
J	Unit cost of psychotherapy visit provided by clinical psychologists	\$33.42	\$34.28	\$35.18	\$36.09	\$37.03	
K	Cost of psychotherapy services expected to be provided by clinical psychologists under current coverage	\$111,065,915	\$114,960,451	\$119,182,258	\$123,631,052	\$128,428,034	\$597,267,710
L	Proportion of (C) estimated to be provided by psychiatrists and other physician specialties under current coverage	62.75%	62.5%	62.25%	62%	61.75%	

M	Estimated number of psychotherapy visits expected to be provided by psychiatrists and other physician specialties under current coverage	9,068,015	9,111,688	9,170,097	9,234,106	9,311,616	45,895,522
N	Unit cost of psychotherapy visit provided by psychiatrists and other physician specialties	\$41.77	\$42.86	\$43.97	\$45.11	\$46.29	
O	Cost of psychotherapy services expected to be provided by psychiatrists and other physician specialties under current coverage	\$378,770,989	\$390,490,662	\$403,211,714	\$416,582,893	\$431,001,691	\$2,020,057,949
P	Total cost of psychotherapy services under current coverage	\$541,446,338	\$559,807,413	\$579,718,047	\$600,685,656	\$623,294,753	\$2,904,952,206
<b>Estimates of the Gross Cost of Psychotherapy Services by Marriage and Family Therapists Under Proposed Coverage</b>							
Q	Number of L.C.S.W.'s	192,814	192,814	192,814	192,814	192,814	
R	Number of marriage and family therapists (MFT's) not dually licensed	39,243	39,243	39,243	39,243	39,243	
S	Number of psychotherapy visits expected to be provided by L.C.S.W.'s under current coverage	2,059,270	2,113,912	2,172,834	2,234,058	2,299,630	10,879,704
T	Caseload of MFT's compared to caseload of L.C.S.W.'s	40%	50%	60%	70%	75%	
U	Number of psychotherapy visits expected to be provided by MFT's under proposed coverage	167,647	215,120	265,339	318,285	351,029	1,317,420
V	Proportion of (U) expected to be induced	50%	51%	52%	53%	54%	
W	Of (U), number of psychotherapy visits expected to be induced	83,824	109,711	137,976	168,691	189,556	689,758
X	Unit cost of psychotherapy visit provided by MFT's	\$25.06	\$25.71	\$26.38	\$27.07	\$27.77	
Y	Gross cost of induced psychotherapy visits expected to be provided by MFT's under current coverage policy	\$2,100,790	\$2,821,069	\$3,640,117	\$4,566,146	\$5,264,314	\$18,392,436
Z	Proportion of (U) expected to be substituted	50%	49%	48%	47%	46%	
AA	Of (U), number of number of psychotherapy visits expected to be substituted	83,824	105,409	127,363	149,594	161,473	627,663

BB	Of (AA), proportion of psychotherapy visits expected to be substituted from L.C.S.W.'s	40%	40%	40%	40%	40%	
CC	Of (AA), the number of psychotherapy visits expected to be substituted from L.C.S.W.'s	33,529	42,163	50,945	59,838	64,589	251,065
DD	Gross cost of psychotherapy visits expected to be substituted from L.C.S.W.'s	--	--	--	--	--	--
EE	Of (AA), proportion of psychotherapy visits expected to be substituted from clinical psychologists	40%	40%	40%	40%	40%	
FF	Of (AA), the number of psychotherapy visits expected to be substituted from clinical psychologists	33,529	42,163	50,945	59,838	64,589	251,065
GG	Gross cost of psychotherapy visits expected to be substituted from clinical psychologists	(\$280,105)	(\$361,392)	(\$448,014)	(\$539,897)	(\$597,922)	(\$2,227,330)
HH	Of (AA), proportion of psychotherapy visits expected to be substituted from psychiatrists	20%	20%	20%	20%	20%	
II	Of (AA), the number of psychotherapy visits expected to be substituted from psychiatrists	16,765	21,082	25,473	29,919	32,295	125,533
JJ	Gross cost of psychotherapy visits expected to be substituted from psychiatrists	(\$280,105)	(\$361,392)	(\$448,014)	(\$539,897)	(\$597,922)	(\$2,227,330)
KK	Total gross cost of proposed coverage of psychotherapy services provided by marriage and family therapists	\$1,540,580	\$2,098,285	\$2,744,088	\$3,486,353	\$4,068,470	\$13,937,775
<b>Estimates of the Net Cost of Psychotherapy Services by Marriage and Family Therapists Under Proposed Coverage</b>							
LL	Percent deducted from premium offsets	25%	25%	25%	25%	25%	
MM	Premium offset	\$385,145	\$524,571	\$686,022	\$871,588	\$1,017,117	\$3,484,444
NN	Net cost for coverage of psychotherapy services provided by MFT's	\$1,155,435	\$1,573,714	\$2,058,066	\$2,614,765	\$3,051,352	\$10,453,332

- A. Projections are from the 2002 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, Center for Medicare Services.
- B. Ratio of psychotherapy services over beneficiaries is based on analysis of Part B carrier claims data from the National Procedure Summary File. From 1999-2001 no consistent trend

was observed. In this estimation a single ratio of 0.38 was used to project the number of psychotherapy services expected to be provided for 2002-2006.

- C. Projected number of expected psychotherapy visits under current coverage =  $A * B$ .
- D. Proportion of total services expected to be provided by L.C.S.W.'s is based on analysis of Part B carrier claims data from the National Procedure Summary File. From 1999-2001 the proportion of services provided by L.C.S.W.'s increased by approximately 0.5% per year. With this trend reduced by one-half, the proportion of services provided by L.C.S.W.'s is expected to increase from 14.25% to 15.25% over five years.
- E. Estimated number of services expected to be provided by licensed clinical social workers =  $C * D$ .
- F. The per visit cost of psychotherapy visits supplied by L.C.S.W.'s is 75% of the weighted average price allowable to clinical psychologists, and is based on the distribution of psychotherapy CPT codes in 2001. The amount per visit is inflated by the 1.026 conversion factor for the 2002 Physician Fee Schedule.
- G. Cost of services estimated to be provided by licensed clinical social workers is equal to  $E * F$ .
- H. Proportion of total services expected to be provided by clinical psychologists is based on analysis of Part B carrier claims data from the National Procedure Summary File. From 1999-2001 the proportion of services provided by clinical psychologists increased slightly and subsequently stabilized. With this trend it was assumed that the proportion of services provided by clinical psychologists would remain approximately 23%.
- I. Estimated number of services expected to be provided by clinical psychologists =  $C * H$ .
- J. The per visit cost of psychotherapy visits supplied by clinical psychologists is 80% of the weighted average price allowable to physicians, and is based on the distribution of psychotherapy CPT codes for 2001. The per visit amount is inflated by the 1.026 conversion factor from the 2002 Physician Fee Schedule.
- K. Cost of services estimated to be provided by clinical psychologists is equal to  $I * J$ .
- L. Proportion of total services expected to be provided by psychiatrists and other physician specialties is based on analysis of Part B carrier claims data from the National Procedure Summary File. From 1999-2001 the proportion of services provided by psychiatrists and other physician specialties decreased consistently. It was estimated that a similar trend would continue through 2006.
- M. Estimated number of services expected to be provided by psychiatrists and other physician specialties =  $C * L$ .
- N. Per visit cost of psychotherapy visits supplied by psychiatrists and other physician specialties is the weighted average price allowable to physicians, and is based on the distribution of psychotherapy CPT codes for 2001. The per visit amount is inflated by the 1.026 conversion factor from the 2002 Physician Fee Schedule.
- O. Cost of services estimated to be provided by psychiatrists and other physician specialties is equal to  $M * N$ .
- P. Total cost of estimated psychotherapy visits under Medicare policy =  $G + K + O$ .
- Q. Number of licensed clinical social workers is from an estimate of the Substance Abuse and Mental Health Services Administration.
- R. Number of marriage and family therapists consists of licensed marriage and family therapists who are not dually licensed in another mental health profession. The figure was provided by the American Association of Marriage and Family Therapy.

- S. Quantity of psychotherapy visits estimated to be provided by L.C.S.W.'s under present policy = E
- T. Average Medicare caseload of marriage and family therapists compared to caseload of L.C.S.W.'s is assumed to increase from 40% in 2002, to 75% in 2006.
- U. Quantity of psychotherapy visits estimated to be provided by marriage and family therapists under anticipated policy =  $S * (R/Q) * T$
- V. Proportion of MFT's services estimated to be induced is expected to begin at 50% in 2002 and increase to 54% in 2006.
- W. Of services provided by marriage and family therapists, number that is estimated to be induced =  $V * U$ .
- X. Per visit cost of psychotherapy visits provided by marriage and family therapists is determined according to the same formula as for L.C.S.W.'s.
- Y. Under proposed coverage the gross cost of induced psychotherapy services estimated to be provided by marriage and family therapists =  $W * X$
- Z. Proportion of services provided by M.F.T.'s estimated to be substituted =  $1 - V$ .
- AA. Number of visits expected to be substituted =  $Z * U$
- BB. Proportion of psychotherapy visits expected to be substituted from L.C.S.W.'s under proposed coverage is assumed to be 40%.
- CC. Of total visits expected to be substituted, the number estimated to be substituted from L.C.S.W.'s =  $AA * BB$ .
- DD. Gross cost of visits anticipated to be substituted from L.C.S.W.'s =  $(X-F) * CC$ .
- EE. Proportion of psychotherapy visits expected to be substituted from clinical psychologists under proposed coverage is assumed to be 40%.
- FF. Of total visits expected to be substituted, the number estimated to be substituted from clinical psychologists =  $AA * EE$ .
- GG. Gross cost of visits anticipated to be substituted from clinical psychologists =  $(X-J) * FF$
- HH. Proportion of psychotherapy visits expected to be substituted from psychiatrists under proposed coverage is assumed to be 20%.
- II. Of total visits expected to be substituted, the number estimated to be substituted from psychiatrists =  $AA * HH$ .
- JJ. Gross cost of visits anticipated to be substituted from psychiatrists =  $(X-N) * II$
- KK. Total gross cost of the proposed coverage of psychotherapy services by MFT's within Medicare =  $Y + DD + GG + JJ$
- LL. Percent of premium offsets deducted is 25%
- MM. Offsets =  $KK * LL$
- NN. Net cost for the proposed coverage of psychotherapy services by MFT's under Medicare =  $KK - MM$

\* all notes are adapted from DaVanzo et al. (2002)