

# **Adult Aged, Blind, and Disabled Clients Served by the Mental Health Division**

## **Characteristics and Use of Services, FY 2001**

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# 1 Overview

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This report provides a detailed description of clients served by the Mental Health Division (MHD) who were eligible for medical assistance in the aged, blind, disabled, and state General Assistance (GA-X and GA-U) programs in Fiscal Year (FY) 2001. This report has been prepared to assist the Mental Health Division in program planning activities and to help identify potential treatment and comparison groups to be used in future mental health treatment cost offset analyses.

Clients eligible for medical assistance in the aged, blind, disabled, GA-X, and GA-U programs in FY 2001 were grouped into three categories based on their medical assistance eligibility category and Medicare eligibility status.

- “Medicaid-only” clients include aged, blind, disabled, or presumptively disabled (GA-X) clients who are not simultaneously eligible for Medicare.
- “Dual eligible” clients refer to aged, blind, disabled, or GA-X clients who are simultaneously eligible for both Medicaid and Medicare.
- GA-U clients include those who were only eligible for state-funded medical assistance.<sup>1</sup>

For comparison purposes, MHD clients with high medical costs (based on MAA expenditures in FY 2001) were identified for each of the preceding eligibility groups using the top 10 percent of each group flagged as “high medical cost.”

The major findings in the report are:

- Mental illness diagnoses are available from the MMIS-EDB database for over three-fourths of all clients who receive MHD services. The availability of these diagnoses in the medical record overcomes an enormous deficit in available records for MHD clients in prior years.<sup>2</sup>
- The likelihood that a client with a mental illness diagnosis is served by MHD depends on the diagnosis, with the variation in mental health treatment penetration rates reflecting MHD’s service priorities.
  - About seven out of ten clients who had a diagnosis of psychosis or manic/bipolar recorded in the MMIS-EDB database were served by MHD in FY 2001,
  - By contrast, fewer than half of the clients with a diagnosis of depression or adjustment/stress disorder were served by MHD in FY 2001, and
  - Only one in three clients with a dementia diagnosis were served by MHD in FY 2001.

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<sup>1</sup> Less than 1 percent of months of GA-U eligibility-were simultaneously months of Medicare eligibility. These dual eligible months were excluded from the GA-U analyses.

<sup>2</sup> Beginning in January 2002, the Mental Health Division is collecting mental illness diagnoses for all MHD clients.

- Mental health diagnoses that establish a priority for receiving MHD services do not seem to be especially common among MHD clients with high medical costs in the Medicaid-only and GA-U groups.
  - MHD clients with high medical costs tend to have relatively higher concentrations of depression, dementia, and drug-related diagnoses than mental health clients, in general, who are in the Medicaid-only or GA-U programs.
  - Diagnoses of psychosis or manic/bipolar conditions—diagnoses that are priorities for receiving MHD treatment—are not particularly concentrated among mental health clients with high medical costs compared to MHD clients overall in the Medicaid-only and GA-U groups.
- Dual eligible MHD clients who have high medical costs are more likely to have psychotic diagnoses compared to *dual eligible* MHD clients, in general.
  - This may reflect the important role of anti-psychotic prescription drug costs in defining the high medical cost dual eligible group (i.e., because we do not have data on Medicare expenditures for these clients).
  - Sixty-five percent of the dual eligible MHD clients with high medical costs received prescriptions for anti-psychotic medications in FY 2001, and prescription drug expenditures account for 75 percent of Medical Assistance Administration (MAA) expenditures for this group.
- Most MHD clients use psychotropic prescription drugs, and drug use patterns are consistent with mental illness diagnosis patterns (e.g., groups with high incidence of psychotic diagnoses are prescribed anti-psychotic medications at high rates).
- Clients receiving MHD services are more likely to have received medical care for such illnesses as poisoning by medicinal and biological substances, injuries, infections, headaches, and asthma.
- High medical cost MHD clients are more likely than other MHD clients to have expensive chronic disease conditions such as congestive heart failure, cerebrovascular disease, or ischemic heart disease.
  - However, MHD clients were actually less likely to have most of these chronic conditions than Medicaid-only or GA-U clients as a whole.
  - In addition, the cost of medical care for MHD clients who have such diagnoses is generally lower than the costs for other clients in the eligibility group with the same physical conditions.
- The main factors contributing to high medical costs vary among the three eligibility groups:
  - For Medicaid-only clients with high medical costs, the key cost driver is inpatient hospitalization expenditures of \$1,527 per member per month, which account for 48 percent of MAA expenditures for this group.

- 
- Among dual eligible MHD clients with high medical costs, prescription drug costs of \$978 per member per month account for about 75 percent of their MAA expenditures.
  - GA-U clients receiving MHD services who have high MAA expenditures do not have medical costs concentrated within a single type of service.
  - Medicaid-only and dual eligible MHD clients with high medical care expenses also consume significant amounts of Aging and Adult Services Administration<sup>3</sup> (AASA) services.
    - Medicaid-only MHD clients with high medical costs require services from AASA which cost \$508 per member per month—more than 3 times the average for all Medicaid-only clients. Nursing home costs (\$251 per member per month) and personal care costs (\$182 per member per month) comprise 85 percent of AASA expenditures on high medical cost Medicaid-only MHD clients.
    - Dual eligible MHD clients with high medical costs have higher per member per month AASA service costs than the typical dual eligible client (\$682 vs. \$625), even though they tend to be much younger than the average dual eligible client. Nursing home costs (\$382 per member per month) and personal care costs (\$172 per member per month) comprise 81 percent of AASA expenditures on high medical cost dual eligible MHD clients.

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<sup>3</sup> In October 2002, DDD and AASA were combined into a new agency called the Aging and Disability Services Administration. However, since this report pertains to services provided in FY 2001, the administrative entities and their names at that time are used in this report.



## 2 Methods

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### STUDY POPULATION

The population examined in this report consists of adult clients who were eligible for medical assistance in the aged, blind, disabled, presumptive SSI (GA-X), or General Assistance Unemployable (GA-U) categories for at least one month in state fiscal year 2001. Adults are defined to be those who turned 18 prior to the end of FY 2001. Total Medicaid and state expenditures were obtained for these clients for services administered by five Department of Social and Health Services (DSHS) programs: Mental Health Division (MHD), Medical Assistance Administration (MAA), Aging and Adult Services Administration (AASA), Division of Developmental Disabilities (DDD), and Division of Alcohol and Substance Abuse (DASA).

Clients are grouped into three categories based on their medical assistance eligibility category and Medicare eligibility status (see Table 1):

- Aged, blind, disabled, or GA-X clients who are not simultaneously eligible for Medicare are referred to as “**Medicaid-only**” clients.
- Aged, blind, disabled, or GA-X clients who are simultaneously eligible for Medicare are referred to as “**dual eligible**” clients.
- **GA-U clients** included in this analysis were only eligible for state-funded medical assistance.<sup>4</sup>

**Table 1. Client Subgroups**

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<b>Eligibility Status</b>	<b>Medical Assistance Program</b>	<b>Medicare Eligible?</b>
Medicaid-only	Aged, Blind, Disabled, or GA-X	No
Dual eligible	Aged, Blind, Disabled, or GA-X	Yes
General Assistance-Unemployable	GA-U	No

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### DATA SOURCES

- The Office of Financial Management (OFM) Forecasting Division Medical Assistance Program Eligibility File was used to identify adults who were eligible for medical assistance in the aged, blind, disabled, GA-X, or GA-U categories in FY 2001.

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<sup>4</sup> Less than 1 percent of GA-U eligibility-months were simultaneously months of Medicare eligibility. These dual eligible months were excluded from the GA-U analyses.

- The DSHS MAA Medicaid Management Information System Extended Database (MMIS-EDB) was used to measure clients, costs, types of service, and mental and physical illness diagnoses associated with services administered by MAA.<sup>5</sup>
- The DSHS Research and Data Analysis Client Services Database (CSDB) was used to measure client-level detail on types of services received and associated costs in FY 2001 for MHD, AASA, DDD and DASA.
- Department of Health (DOH) Center for Health Statistics vital statistics data were used to measure client mortality.<sup>6</sup>

The basic unit of analysis for this report is a “client-month” of eligibility, with a focus on months in which clients were eligible for medical assistance as aged, blind, disabled, GA-X, or GA-U clients. Over the course of the fiscal year, some clients changed their eligibility status (e.g., shifted from Medicaid-only to dual eligible), and Table 2 reports the frequency with which this occurred in our study population. Of the 212,322 clients who were Medicaid-only, dual eligible, or GA-U for at least one month in FY 2001, 198,775 clients (94 percent) were only in one eligibility status in the year. Most of the remaining clients were mixed Medicaid-only/dual eligible or mixed Medicaid-only/GA-U.

*Throughout this report, measures of expenditure are calculated for each eligibility status only over the months that clients are in the given status. Although a client will be counted in more than one eligibility status if the client changed status in the fiscal year, expenditures are counted only once based on the status in the month the expenditure was incurred.*

**Table 2. Cross-Program Eligibility in FY2001**

Eligibility Status in FY01	Adult Clients	Percent of Adult Clients
Only dual eligible	106,615	50.2%
Only Medicaid-only	76,717	36.1%
Only GA-U	15,443	7.3%
Mixed Medicaid-only and dual eligible	7,273	3.4%
Mixed Medicaid-only and GA-U	6,119	2.9%
Mixed Medicaid-only, dual eligible, and GA-U	96	0.0%
Mixed dual eligible and GA-U	59	0.0%
<b>Total:</b>	<b>212,322</b>	<b>100%</b>

Source: OFM, Forecasting Division, Medical Assistance Program Eligibility File

Expenditures are reported on a “per member per month” basis. Table 3 illustrates how these calculations are performed. For example, 90,205 clients were in the Medicaid-only eligibility status at some point in FY 2001, with a total of 855,553 months in that status in the fiscal year. Total expenditures for services provided by MHD, MAA, AASA, DDD, and DASA programs while clients were in the Medicaid-only status in FY 2001 were \$963,821,455. This translates

<sup>5</sup> To limit MMIS-EDB data to MAA services only, the category of service codes were restricted to 01-85 and 97.

<sup>6</sup> In addition, DOH mortality data and Department of Corrections conviction data were used to revise OFM eligibility spans to remove months of eligibility observed after a client’s death or while a client was incarcerated.

into “per member per month” expenditures of \$1,127.<sup>7</sup> Thus, the per member per month value represents an average over all months in the eligibility status for all clients in the eligibility group—even those months in which no expenditures were incurred.

**Table 3. Eligible Clients and MHD, MAA, AASA, DASA, and DDD Expenditures, FY2001**

<b>Eligibility Status</b>	<b>Adult Clients Ever in Status in FY01</b>	<b>Total Eligible Months in Status in FY01</b>	<b>Average Months in Status per Client in FY01</b>	<b>Total Paid in Months in Status in FY01</b>	<b>Per Member per Month</b>
Medicaid-only	90,205	855,553	9.5	\$ 963,821,455	\$ 1,127
Dual eligible	114,043	1,134,954	10.0	\$ 1,390,204,715	\$ 1,225
GA-U	21,717	104,000	4.8	\$ 56,445,940	\$ 543

Source: DSHS, Research and Data Analysis Client Services Database and MAA Medicaid Management Information System Extended Database

## IDENTIFICATION OF A HIGH MEDICAL COST MENTAL HEALTH CLIENT GROUP

In order to identify a high medical cost MHD client group for comparison purposes, MHD clients in each eligibility status were ranked according to their MAA expenditures in FY 2001, and the top 10 percent of each group were flagged as “high medical cost.” *Throughout this report the term “high medical cost group” refers to MHD clients with high MAA expenditures.* Table 4 reports the size of the high medical cost group in each eligibility status and the MAA expenditure threshold used to define each group.

**Table 4. High Medical Cost Adult MHD Clients Ranked by MAA Expenditures while in Eligibility Status in FY 2001**

<b>Eligibility Status</b>	<b>Clients Served</b>			<b>High Medical Cost Adult MHD Clients</b>	<b>High Medical Cost Threshold</b>
	<b>Adult Clients ever in Status in FY2001</b>	<b>by MHD While in Status in FY2001</b>	<b>Percent Served by MHD While in Status in FY2001</b>		
Medicaid-only	90,205	21,612	24.0%	2,162	\$ 15,115
Dual eligible	114,043	18,870	16.5%	1,887	\$ 10,030
GA-U	21,717	5,158	23.8%	516	\$ 5,032

Source: DSHS, MAA, Medicaid Management Information System Extended Database

About one in four clients in the Medicaid-only and GA-U eligibility groups were served by MHD in FY 2001, compared to one in six dual eligible clients (Table 4). *Disabled* dual eligible clients were served by MHD at the same rate as *disabled* Medicaid-only clients, and *aged* dual

<sup>7</sup> That is, \$963,821,455 divided by 855,553 eligible months equals \$1,127 per client per (eligible) month.

eligible clients were served at a slightly *higher* rate than *aged* Medicaid-only clients. However, because *aged* clients are served by MHD less frequently than *disabled* clients and aged clients comprise a much larger share of the dual eligible group, the overall percentage of dual eligible clients served by MHD is relatively low (see Table 5).

**Table 5. Percentage of Aged and Disabled\* Adult Clients Served by the Mental Health Division**

	Adult Clients	Adult Clients Served by MHD	Percent Served by MHD
<b>Medicaid-only</b>			
Aged	10,783	620	5.7%
Disabled	79,997	21,034	26.3%
Unduplicated Total**	90,205	21,612	24.0%
<b>Dual eligible</b>			
Aged	68,000	5,872	8.6%
Disabled	47,186	13,094	27.7%
Unduplicated Total**	114,043	18,870	16.5%

Source: DSHS, Research and Data Analysis, Client Services Database

\* Disabled client group includes blind, disabled, and GA-X clients.

\*\* Because some clients were eligible for medical assistance as both aged and disabled clients at different points in the year, the unduplicated total is slightly less than the sum of clients in the aged and disabled categories.

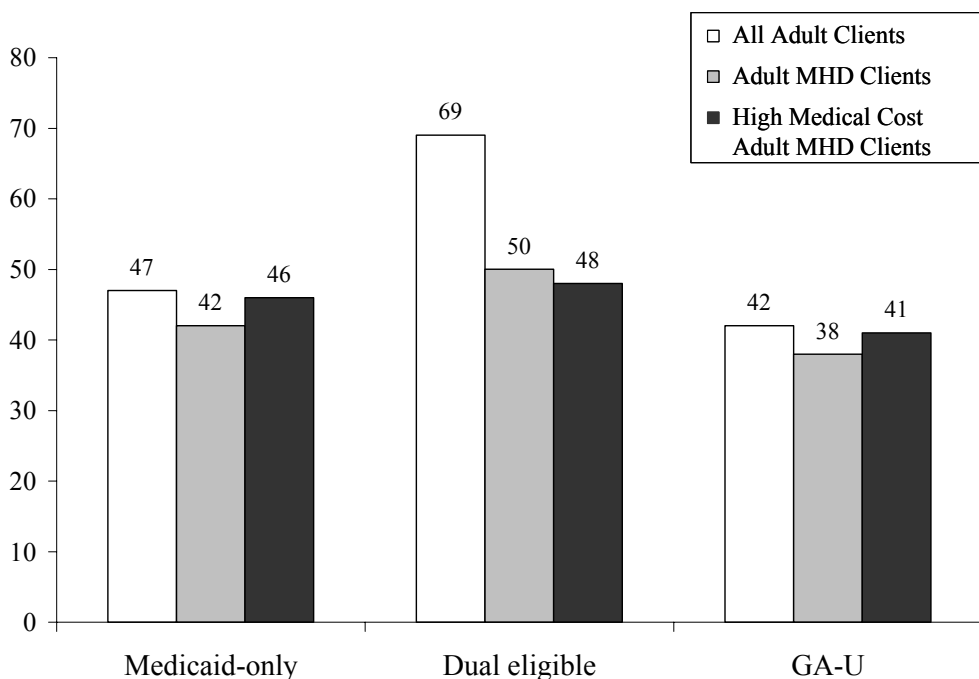


### 3 Findings

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In most of the exhibits that follow we compare three client groups in each of the three eligibility statuses: all clients in the eligibility status, all clients served by MHD in the eligibility status, and high medical cost MHD clients in the eligibility status. At times, comparisons are limited to MHD clients relative to high medical cost MHD clients in each eligibility status. The findings are drawn from tables in Appendices A through D.

**Figure 1: Median Age by Eligibility Status, FY 2001 Clients**

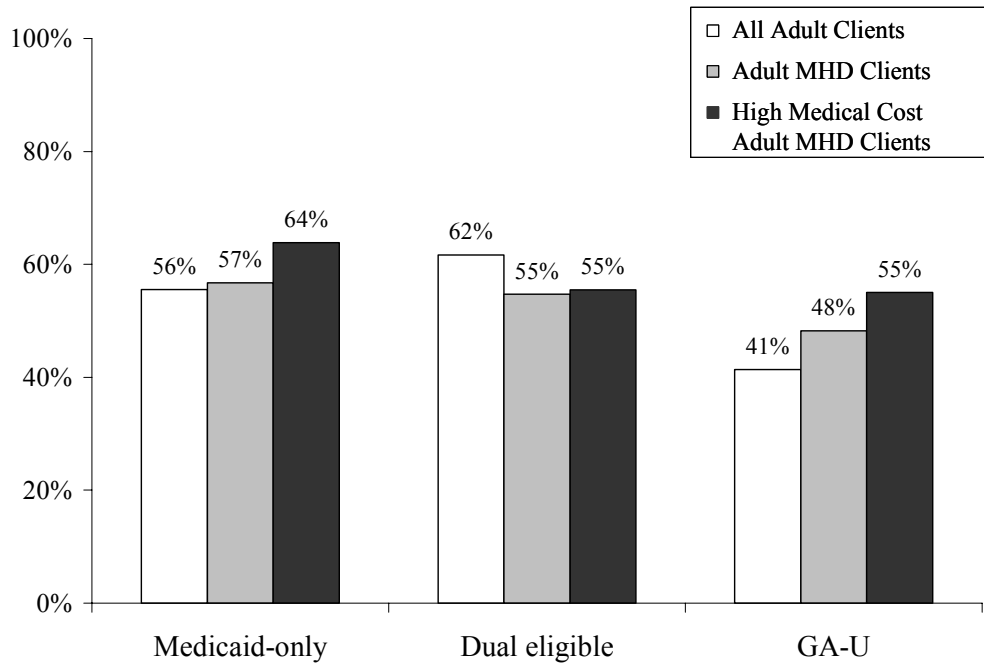


Source: OFM, Forecasting Division, Medical Assistance Program Eligibility File

#### DEMOGRAPHIC CHARACTERISTICS

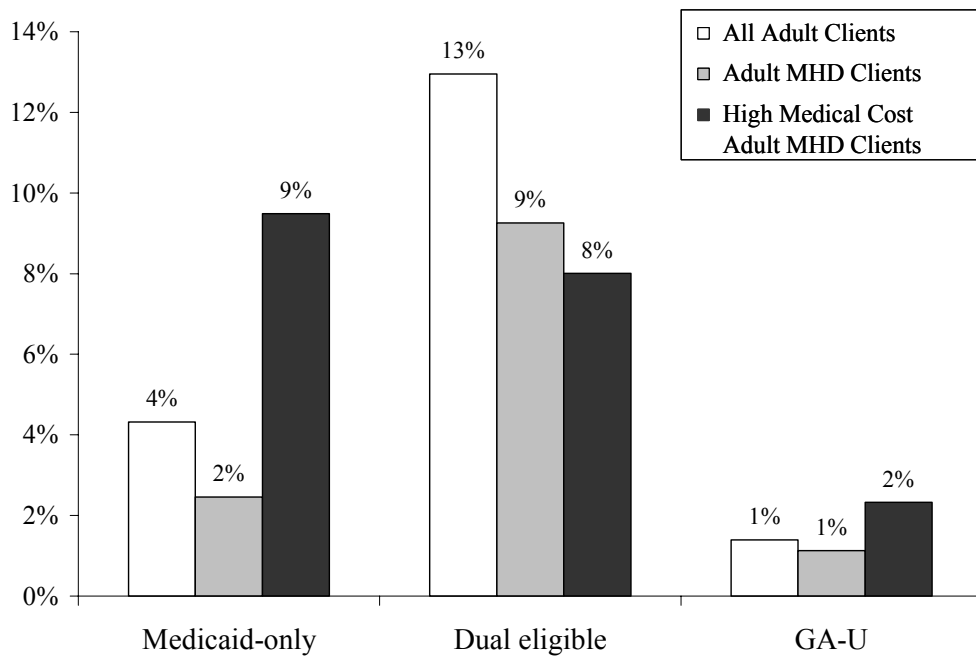
MHD clients tend to be younger than other clients in each eligibility group (Figure 1). The median age of Medicaid-only clients served by MHD is 42 compared to a median of 47 for all Medicaid-only clients. The disparity in age between clients served by MHD compared to all aged, blind and disabled clients is even more striking among dual eligible clients, where the median age is 50 for those served by MHD compared to a median of 69 for all dual eligible clients. These results reflect the fact that disabled clients, who tend to be a younger population than those in the aged program, are served at a much higher rate by MHD than are those in the aged program category (see Table 5).

**Figure 2: Percentage Female by Eligibility Status, FY 2001 Clients**



Source: OFM, Forecasting Division, Medical Assistance Program Eligibility File

**Figure 3: Mortality Rate by Eligibility Status, FY 2001 Clients  
July 2000 – December 2001**



Source: DOH, Center for Health Statistics, Vital Statistics Data

In the Medicaid-only and GA-U eligibility groups, *high medical cost* MHD clients tend to be a few years older than other MHD clients (Figure 1) and are more likely to be female than other MHD clients (Figure 2). However, high medical cost dual eligible MHD clients tend to be slightly younger than other dual eligible MHD clients, and are as likely as other dual eligible MHD clients to be female.

## MORTALITY

Figure 3 reports the percentage of FY 2001 clients who died in the 18-month period from July 2000 to December 2001. In general, the highest mortality rates occurred among dual eligible clients. Variation in these rates reflects both differences in the age distribution of clients in each category and real (age-controlled) differences in mortality, and subsequent mortality analysis will report age-adjusted rates.

## MENTAL ILLNESS DIAGNOSES

Table 6 describes the ICD-9 diagnosis code groupings used to categorize mental illness for this analysis. Diagnosis indicators were constructed using all available diagnosis information in MMIS-EDB over the four-year period from July 1997 to June 2001.<sup>8</sup> In other words, four years of medical claims data history were used to construct diagnosis indicators for clients served in FY 2001. For MMIS-EDB records with multiple diagnosis fields, all fields were used to identify the presence of a mental illness.

Most MHD clients have mental illness diagnoses recorded in MMIS-EDB data (Figure 4). Specifically, 84 percent of Medicaid-only clients, 78 percent of dual eligible clients, and 76 percent of GA-U clients served by MHD in FY 2001 had at least one mental illness diagnosis recorded in MMIS-EDB data over the four-year period from July 1997 to June 2001. Mental illness diagnosis prevalence rates are even higher for high medical cost clients: 93 percent of high medical cost Medicaid-only clients, 87 percent of high medical cost dual eligible clients, and 86 percent of high medical cost GA-U clients served by MHD in FY 2001 had a mental illness diagnosis recorded in MMIS-EDB data in over the four-year period.

The likelihood that a client with a mental illness diagnosis is served by MHD depends on the diagnosis (Figure 5), and the variation in mental health treatment penetration rates is consistent with MHD's service priorities. Approximately 70 percent of all FY 2001 adult Medicaid-only, dual eligible, and GA-U clients with a psychotic or manic/bipolar mental illness diagnosis were served by MHD in FY 2001. By contrast, fewer than half of FY 2001 adult clients with a diagnosis of depression or an adjustment/stress disorder were served by MHD in FY 2001. Only one in three adult clients with a diagnosis in the group including dementia were served by MHD in FY 2001.

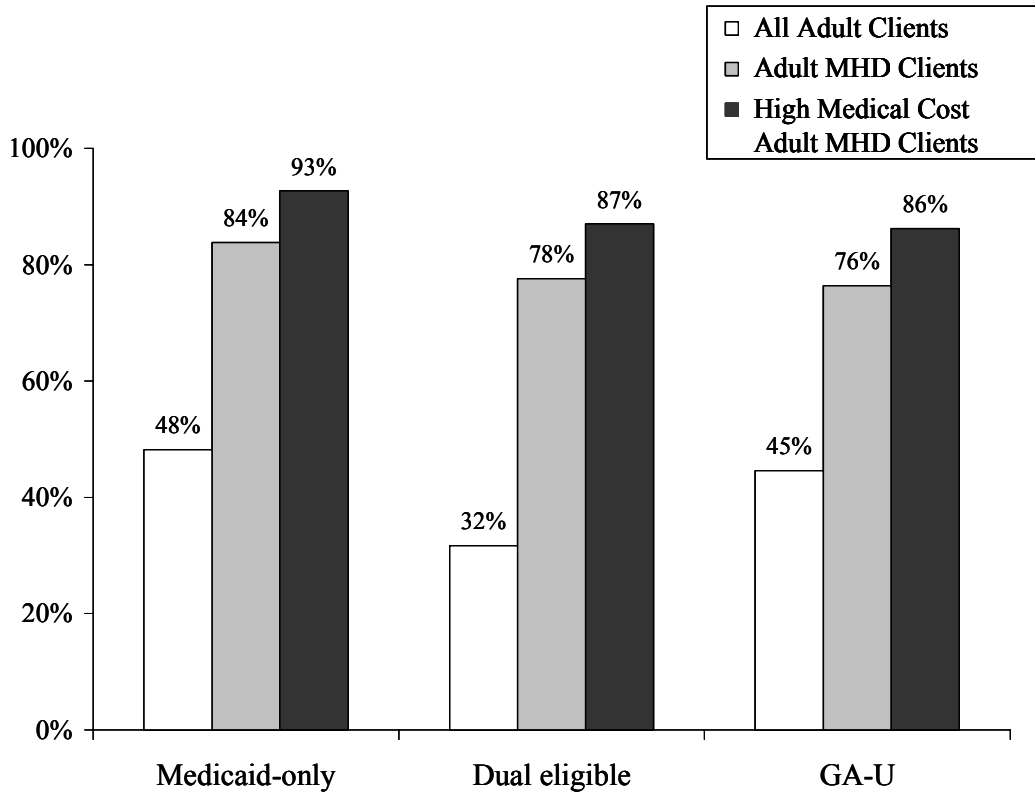
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<sup>8</sup> Beginning in January 2002, the Mental Health Division is collecting mental illness diagnoses for all MHD clients.

**Table 6. Mental Illness Diagnosis Groups**

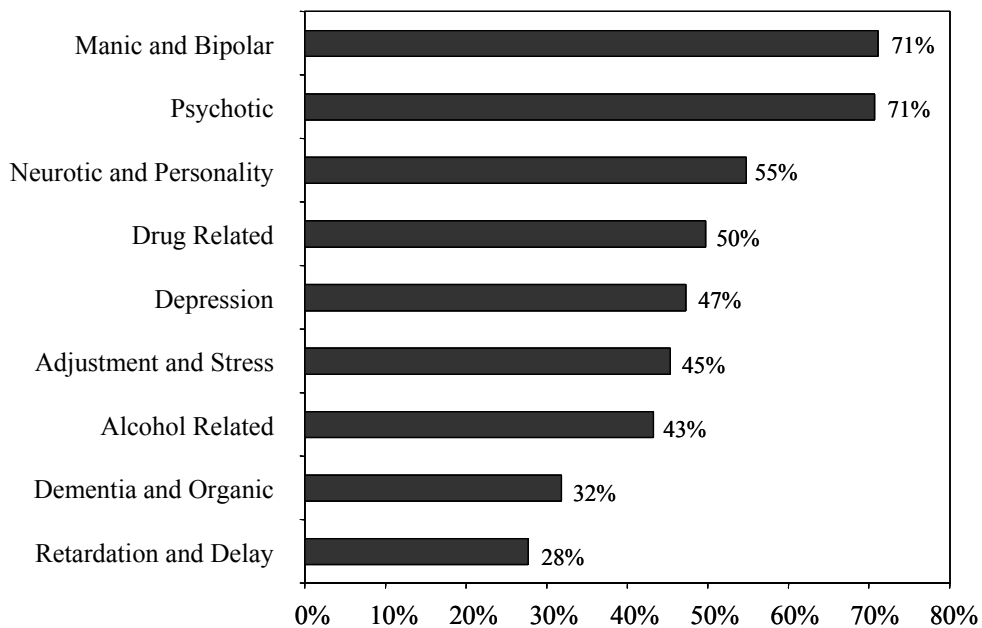
<b>Grouping Name</b>	<b>ICD-9 Codes</b>	<b>ICD-9 Code Category Names</b>
<i>Psychotic</i>	295 297 298.2 to 298.9 299	Schizophrenic disorders Paranoid states Other non-organic Psychoses, childhood origin
<i>Mania &amp; Bipolar</i>	296.0-296.1 296.4-296.9 298.1	Manic Bipolar Excitative-type psychosis
<i>Depression</i>	296.2 296.3 298.0 300.4 311	Major depression, single Major depression, recurrent Depressive type psychosis Neurotic depression Depression, not otherwise classified
<i>Dementia &amp; Organic</i>	290 293 294 310	Dementia Transient organic psychosis Chronic organic psychosis Organic, non-psychotic
<i>Retardation &amp; Delay</i>	315 314.1 317 318 319	Specific develop delays Hyperkinesis with developmental delay Mild Mental Retardation Mental Retardation (moderate, severe, profound) Mental Retardation (unspecified)
<i>Neurotic, Personality, &amp; Childhood Psychiatric</i>	300 (exc 300.0, 300.1 300.4) 301 302 307 312 313 314.0 314.2-314.9	Neurotic (e.g. phobia, obsessive-compulsive, etc) Personality (e.g. anti-social, histrionic, paranoid, etc) Sexual deviation/disorder Symptoms or syndrome not otherwise classified Conduct disturbance Childhood/Adolescent emotion disturbances Attention Deficit Disorder Other Attention Deficit Disorder, ADHD
<i>Adjustment &amp; Stress</i>	300.0 300.1 308 309	Anxiety Hysteria Acute stress reaction Adjustment reaction
<i>Alcohol</i>	303 305.0 291	Dependence Alcohol abuse Alcoholic psychosis
<i>Other Illegal Drugs</i>	304 305.2 to 305.9 292	Dependence Drug abuse Drug psychosis

**Figure 4: Percentage of FY 2001 Clients with a Mental Illness Diagnosis in Medical Records from 7/1997 – 6/2001, by Eligibility Status**



Source: DSHS, MAA, Medicaid Management Information System Extended Database

**Figure 5: Percentage of Adult Clients with Specific Mental Illness Diagnoses Served by the Mental Health Division (FY 2001), by Eligibility Status**



Source: DSHS, MAA, Medicaid Management Information System Extended Database

**Table 7. Mental Illness Odds Ratios: High Medical Cost Adult MHD Clients Relative to All Adult MHD Clients, by Eligibility Status**

Diagnosis	Prevalence Rates		Odds Ratio: High Medical Cost MHD vs MHD Clients
	All MHD Clients	High Medical Cost MHD Clients	
<b>Medicaid-only</b>			
Dementia and Organic	7.6%	16.6%	2.44
Depression	47.0%	64.3%	2.03
Adjustment and Stress	30.5%	45.8%	1.93
Other Drug Related	21.0%	33.2%	1.86
Alcohol Related	18.8%	26.2%	1.53
Neurotic, Personality, & Childhood	34.9%	44.5%	1.50
Retardation and Delay	3.3%	4.4%	1.37
Manic and Bipolar	26.9%	29.7%	1.15
Psychotic	32.8%	34.8%	1.09
<b>Dual eligible</b>			
Psychotic	35.0%	44.9%	1.51
Adjustment and Stress	17.7%	24.5%	1.51
Depression	32.4%	40.8%	1.44
Neurotic, Personality, & Childhood	20.7%	24.3%	1.23
Other Drug Related	7.9%	9.5%	1.22
Retardation and Delay	2.0%	2.3%	1.14
Dementia and Organic	11.8%	13.1%	1.12
Manic and Bipolar	19.7%	21.3%	1.10
Alcohol Related	9.3%	8.5%	0.90
<b>GA-U</b>			
Dementia and Organic	2.9%	5.8%	2.08
Depression	47.0%	64.5%	2.06
Adjustment and Stress	25.8%	39.3%	1.86
Other Drug Related	26.5%	39.1%	1.79
Neurotic, Personality, & Childhood	28.5%	41.1%	1.75
Alcohol Related	22.2%	31.6%	1.61
Manic and Bipolar	22.3%	27.9%	1.35
Psychotic	16.1%	15.3%	0.94
Retardation and Delay	0.6%	0.2%	0.33

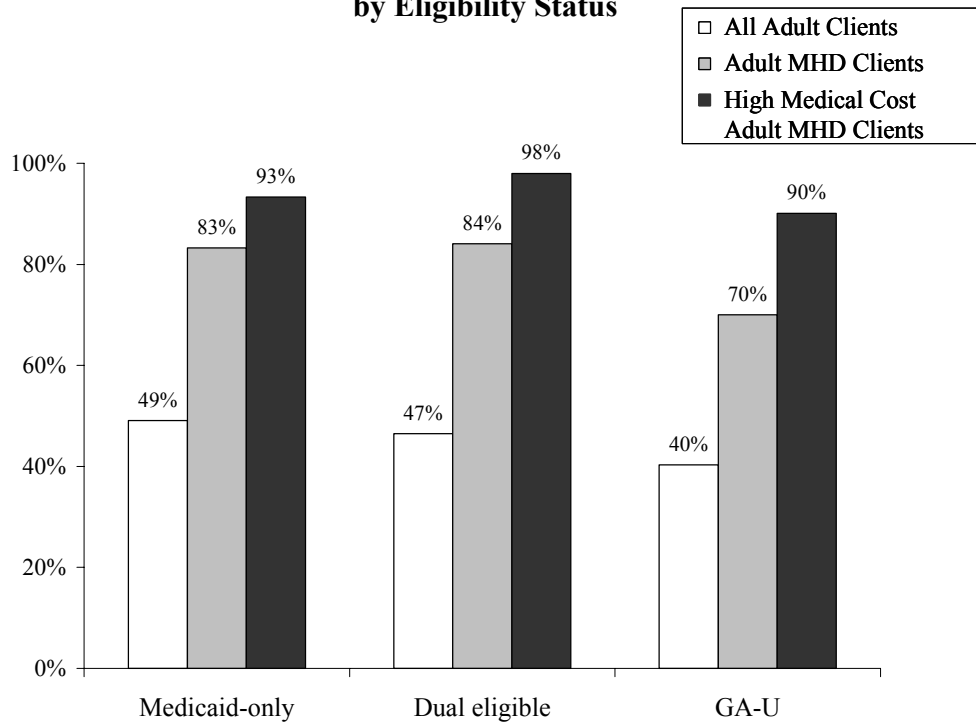
Source: DSHS, MAA, Medicaid Management Information System Extended Database

Odds ratios were calculated for each eligibility status (i.e., Medicaid-only, dual eligible, or GA-U) comparing how often a given diagnosis is present in the high medical cost group relative to how often it is present in all clients served by MHD in the eligibility category (Table 7). An odds ratio equal to 1 with respect to a particular diagnosis would mean that the high medical cost clients have the same “odds” of having the diagnosis as all clients served by MHD in the group. An odds ratio greater than 1 would mean that clients in the high medical cost group have greater odds of having a given diagnosis than all clients served by MHD in the eligibility category.

Surprisingly, the mental illness diagnoses most closely associated with MHD priority populations are not highly concentrated among high medical cost Medicaid-only and GA-U MHD clients. Depression, adjustment and stress, dementia/organic, and drug-related diagnoses are the most concentrated among high medical cost clients in these eligibility categories, with odds ratios in the 1.79 to 2.44 range. The comparable odds ratios for psychotic and manic/bipolar diagnoses are much closer to 1.

By contrast, the odds ratio for psychotic diagnoses is relatively high for high medical cost dual eligible clients, which may reflect the larger role of antipsychotic prescription drug costs in defining the high medical cost dual eligible group. Sixty-five percent of the high medical cost dual eligible group received prescriptions for antipsychotic medications in FY 2001, and prescription drug expenditures account for 75 percent of total MAA expenditures on the high medical cost dual eligible group, compared to only 22 percent of MAA expenditures on the high medical cost Medicaid-only group and 35 percent of expenditures on the high medical cost GA-U group. If *Medicare* expenditures on physician services and hospitalizations were available then we might observe higher rates of depression, adjustment and stress, and dementia/organic diagnoses in a high medical cost dual eligible group defined including these expenditures.

**Figure 6: Percentage of FY 2001 Clients with a Psychotropic Drug Prescription by Eligibility Status**



Source: DSHS, MAA, Medicaid Management Information System Extended Database

## PSYCHOTROPIC DRUG PRESCRIPTIONS

Most MHD clients received psychotropic drug prescriptions in FY 2001 (Figure 6). Specifically, 83 percent of Medicaid-only, 84 percent of dual eligible, and 70 percent of GA-U clients received psychotropic drug prescriptions in the fiscal year. Almost all high medical cost clients received psychotropic drug prescriptions in FY 2001.



**Table 8. Psychotropic Drug Prescription Odds Ratios  
High Medical Cost Adult MHD Clients Relative to All Adult MHD Clients, by  
Eligibility Status**

Diagnosis	Prescription Rates		Odds Ratio: High Medical Cost MHD vs MHD Clients
	All MHD Clients	High Medical Cost MHD Clients	
<b>Medicaid-only</b>			
Anti-Anxiety Drugs (H2F)	28.6%	50.8%	2.58
Anti-Depressant Drugs (H2J)	53.7%	72.5%	2.28
Anti-Convulsants (H4B)	39.5%	59.0%	2.20
Anti-psychotics-Pheno. (H2G)	6.1%	6.2%	1.02
Anti-psychotics-Nonpheno. (H2L)	43.6%	42.2%	0.94
Anti-Mania Drugs (H2M)	8.5%	6.9%	0.79
<b>Dual eligible</b>			
Anti-Depressant Drugs (H2J)	52.5%	76.4%	2.92
Anti-Convulsants (H4B)	39.0%	63.8%	2.75
Anti-Anxiety Drugs (H2F)	29.3%	48.4%	2.27
Anti-psychotics-Nonpheno. (H2L)	50.7%	65.7%	1.87
Anti-Mania Drugs (H2M)	7.7%	9.1%	1.20
Anti-psychotics-Pheno. (H2G)	7.6%	8.4%	1.11
<b>GA-U</b>			
Anti-Anxiety Drugs (H2F)	23.0%	48.6%	3.18
Anti-Depressant Drugs (H2J)	41.8%	68.2%	2.99
Anti-Convulsants (H4B)	31.2%	53.3%	2.52
Anti-psychotics-Pheno. (H2G)	1.5%	2.5%	1.73
Anti-Mania Drugs (H2M)	7.0%	9.3%	1.37
Anti-psychotics-Nonpheno. (H2L)	29.9%	31.4%	1.07

Source: DSHS, MAA, Medicaid Management Information System Extended Database

Table 8 compares the prevalence of psychotropic drug prescriptions among high medical cost clients and other MHD clients in each eligibility status. Use of anti-depressant, anti-anxiety, and anti-convulsant medications is particularly prevalent among high medical cost MHD clients. Anti-manía and anti-psychotic prescriptions are less concentrated among high medical cost clients, which mirrors the findings with regard to the relative prevalence of mental illness diagnoses discussed above.

**Table 9. Disease Prevalence Rates**  
**Odds Ratios: Adult MHD Clients vs. All Adult Clients**  
**Top 10 Ranked by Odds Ratio**

Primary Diagnosis	Prevalence Rates		Odds Ratio:
	All Adult Clients	All Adult MHD Clients	MHD to All Clients
<b>Medicaid-only Clients</b>			
Poisoning by Medicinal & Biological Subst.	1.6%	4.5%	2.95
Headaches	2.7%	4.3%	1.62
Superficial Injuries, Contusions, Abrasions	7.1%	10.6%	1.55
Sprains and Strains	11.8%	16.7%	1.51
Inflammatory Bowel Disease	5.7%	8.2%	1.46
Infections with Public Health Implications	2.2%	3.0%	1.41
Infections, General	11.0%	14.7%	1.40
Non-malignant Disorders of the Breast	3.3%	4.4%	1.37
Endocrine Disorders except Diabetes	5.5%	7.3%	1.36
Asthma	6.6%	8.7%	1.35
<b>GA-U Clients</b>			
Poisoning by Medicinal & Biological Subst.	2.2%	5.8%	2.74
Infections with Public Health Implications	2.5%	3.6%	1.47
Superficial Injuries, Contusions, Abrasions	6.6%	9.2%	1.43
Headaches	2.6%	3.6%	1.43
Diseases of the Upper Respiratory Tract	21.1%	27.5%	1.41
Non-malignant Disorders of the Breast	2.3%	3.0%	1.33
Asthma	4.3%	5.6%	1.30
Inflammatory Bowel Disease	6.4%	8.0%	1.27
Infections, General	7.2%	8.8%	1.26
Endocrine Disorders except Diabetes	3.3%	4.0%	1.22

Source: DSHS, MAA, Medicaid Management Information System Extended Database

## PHYSICAL CONDITIONS

Prevalence rates were calculated for a standard set of disease categories for Medicaid-only and GA-U clients using FY 2001 MMIS-EDB records.<sup>9</sup> Since most of the medical care for dual eligible clients is paid for through Medicare and since we do not have the diagnoses from Medicare-paid claims, the disease incidence analyses were not conducted for dual eligible clients.

Certain conditions and diseases were more prevalent among clients who received mental health treatment than among Medicaid-only and GA-U clients, in general, based on odds ratios calculated for each disease category (Table 9). In particular, clients receiving MHD services were more likely to have gotten medical care for such illnesses as poisoning by medicinal and biological substances, injuries, infections, headaches, and asthma.

<sup>9</sup> In MMIS-EDB records with multiple diagnosis fields, only the primary diagnosis was used to classify physical conditions.

**Table 10. Disease Prevalence Rates**  
**Odds Ratios: High Cost Group vs. All Mental Health Division Clients**  
**Ranked by Odds Ratio**

Primary Diagnosis	Prevalence Rates		Odds Ratio:
	All Adult MHD Clients	High Medical Cost Adult MHD Clients	High Medical Cost MHD to All MHD Clients
<b>Medicaid-only Clients</b>			
Nephritis, Nephrotic Syndrome, Nephrosis	1.2%	8.1%	7.0
Congestive Heart Failure	2.7%	14.5%	6.2
Nutritional Deficiencies	1.1%	5.6%	5.3
Immune Disorders	0.7%	3.2%	4.9
Ischemic Heart Disease	3.1%	13.1%	4.8
Bleeding Disorders	0.7%	3.3%	4.6
Cerebrovascular Disease	2.5%	10.4%	4.5
Peripheral Vascular Disease	1.5%	6.0%	4.2
HIV/AIDS	1.0%	3.9%	4.0
Neoplasm of Uncertain Behavior	2.5%	8.8%	3.8
<b>GA-U Clients</b>			
Peripheral Vascular Disease	0.7%	3.1%	4.4
Ischemic Heart Disease	1.1%	4.8%	4.4
Congestive Heart Failure	0.7%	2.9%	4.4
Cerebrovascular Disease	0.9%	3.5%	4.0
Eating Disorders	1.6%	5.8%	3.8
Neoplasm of Uncertain Behavior	1.2%	4.1%	3.5
Upper Gastro-Intestinal Disorders	7.5%	20.9%	3.3
Peripheral Arthritis Conditions	5.3%	14.9%	3.1
Headaches	3.6%	10.5%	3.1
Diseases of the Upper Respiratory Tract	27.5%	53.9%	3.1

Source: DSHS, MAA, Medicaid Management Information System Extended Database

A very different pattern of diseases emerges among *high medical cost* MHD clients relative to MHD clients overall using odds ratios calculated for each disease category (Table 10). Among the Medicaid-only clients who received mental health services, the high medical cost clients were seven times more likely than the group as a whole to have nephritis, about six times more likely to have congestive heart failure, and about five times more likely to have nutritional deficiencies, immune disorders, or ischemic heart disease. Among the GA-U clients receiving mental health services, the high medical cost clients were about four times more likely to have peripheral vascular heart disease, ischemic heart disease, cerebrovascular disease, or eating disorders.

The particular chronic disease conditions that are more prevalent among high medical cost mental health clients appear to be those that require relatively expensive medical care. These findings, however, do not indicate that mental health clients themselves are more likely to actually have these types of conditions. Indeed, the reverse is true. Additional analyses revealed

**Table 11. Disease Prevalence Rates**  
**Odds Ratios: Adult MHD Clients vs. All Adult Clients**  
**Ranked by Odds Ratio**

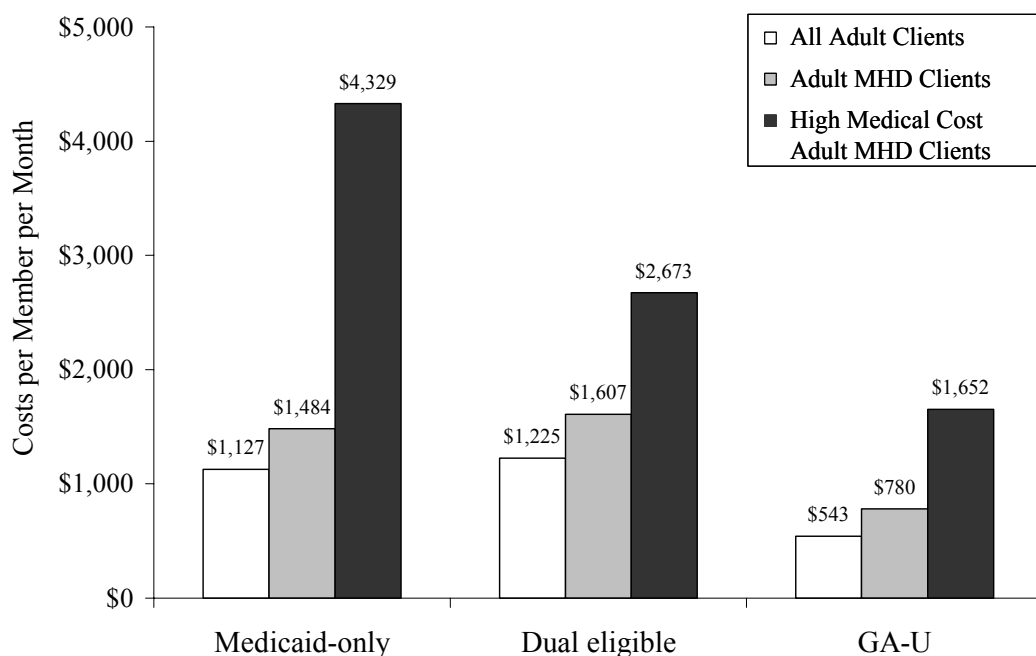
Primary Diagnosis	Prevalence Rates		Odds Ratio: MHD to All Clients
	All Adult Clients	All Adult MHD Clients	
<b>Medicaid-only Clients</b>			
Nephritis, Nephrotic Syndrome, Nephrosis	1.8%	1.2%	0.67
Congestive Heart Failure	3.9%	2.7%	0.68
Nutritional Deficiencies	1.2%	1.1%	0.96
Immune Disorders	0.7%	0.7%	0.96
Ischemic Heart Disease	4.6%	3.1%	0.66
Bleeding Disorders	0.9%	0.7%	0.83
Cerebrovascular Disease	3.4%	2.5%	0.73
Peripheral Vascular Disease	2.0%	1.5%	0.75
HIV/AIDS	1.0%	1.0%	1.04
Neoplasm of Uncertain Behavior	2.7%	2.5%	0.94
<b>GA-U Clients</b>			
Peripheral Vascular Disease	1.1%	0.7%	0.63
Ischemic Heart Disease	2.4%	1.1%	0.46
Congestive Heart Failure	1.6%	0.7%	0.46
Cerebrovascular Disease	1.3%	0.9%	0.66
Eating Disorders	1.3%	1.6%	1.21
Neoplasm of Uncertain Behavior	2.0%	1.2%	0.60
Upper Gastro-Intestinal Disorders	6.4%	7.5%	1.18
Peripheral Arthritis Conditions	7.2%	5.3%	0.73
Headaches	2.6%	3.6%	1.43
Diseases of the Upper Respiratory Tract	21.1%	27.5%	1.41

Source: DSHS, MAA, Medicaid Management Information System Extended Database

that mental health clients were actually less likely to have most of these chronic conditions (e.g., congestive heart failure, ischemic heart disease, cerebrovascular disease) than Medicaid-only or GA-U clients as a whole (see Table 11). In addition, the cost of medical care for clients with these diseases among MHD clients who have such diagnoses is generally lower than the costs for clients with the same conditions in the overall population in these eligibility groups. For example, nephritis is less common among the Medicaid-only clients served by MHD than among all clients in the Medicaid-only category, as shown by the odds ratio of 0.67 (which is less than 1 and, hence, indicates a lower prevalence among the clients served by MHD). Furthermore, the per member per month total MAA expenditures for clients with nephritis were \$4,167 for Medicaid-only clients *served by MHD* and \$4,325 for Medicaid-only clients *overall*.<sup>10</sup> This pattern is repeated for many of the diseases that are particularly prevalent among high medical cost MHD clients.

<sup>10</sup> The per member per month expenditure figures cited here are based on total MAA expenditures in FY 2001, not just the costs associated with the treatment of nephritis.

**Figure 7: Total DSHS Expenditures<sup>a</sup> in MHD, MAA, AASA, DASA, and DDD Programs by Eligibility Status, FY 2001**



Source: DSHS, Research and Data Analysis Client Services Database and MAA Medicaid Management Information System Extended Database

<sup>a</sup> Does not include IMD Exclusion expenditures

The difference in MAA expenditures between clients with nephritis who receive mental health services and those who do not (\$158 per member per month) represents a simple, unadjusted difference that does not take into account other characteristics of these clients. Future analyses predicting cost outcomes associated with different medical conditions and levels of mental health treatment will control for such other factors as age, gender, mental illness diagnoses, comorbid conditions, and prior expenditures.

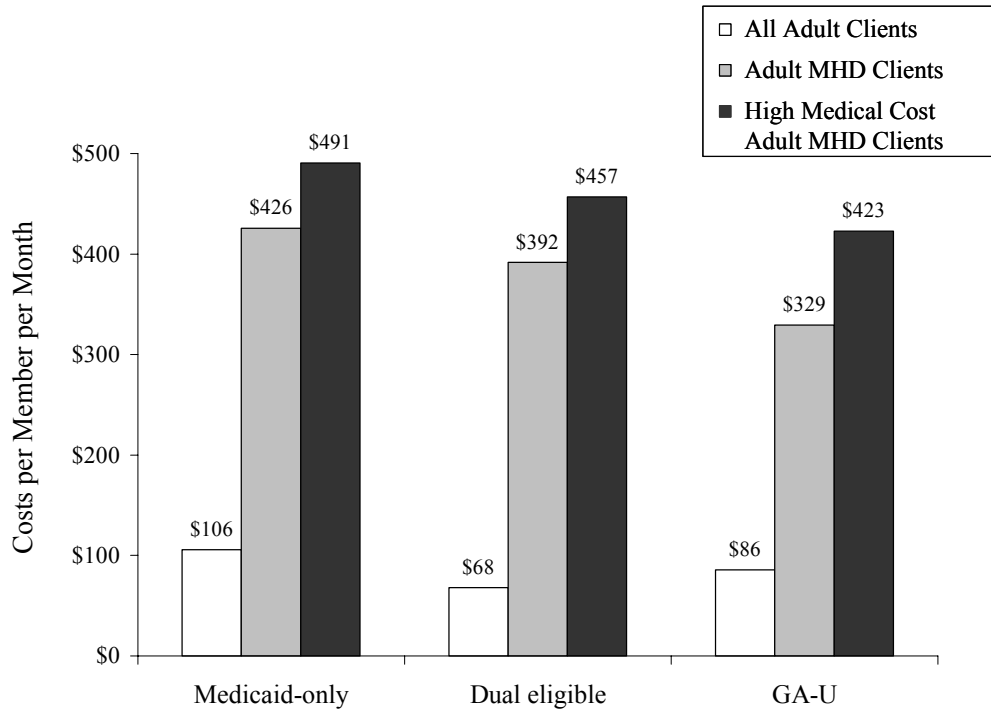
## SERVICE USE<sup>11</sup>

Figure 7 reports per member per month total MHD, MAA, AASA, DDD, and DASA expenditures in FY 2001 for each eligibility group. Per member per month expenditure rates are calculated for each eligibility status over all months that clients are in the given status, including months in which no expenditures are incurred.

Clients served by MHD have somewhat higher expenditures than the average for all clients in each eligibility group and, of course, MHD clients with high medical costs have the highest per member per month expenditure rates. For example, per member per month expenditures on all Medicaid-only clients were \$1,127, rising to \$1,484 among all Medicaid-only MHD clients and \$4,329 among high medical cost Medicaid-only MHD clients. A similar pattern is observed among dual eligible and GA-U clients.

<sup>11</sup> For detailed expenditure information by program and category of service, see Appendix C, pages 49 through 55.

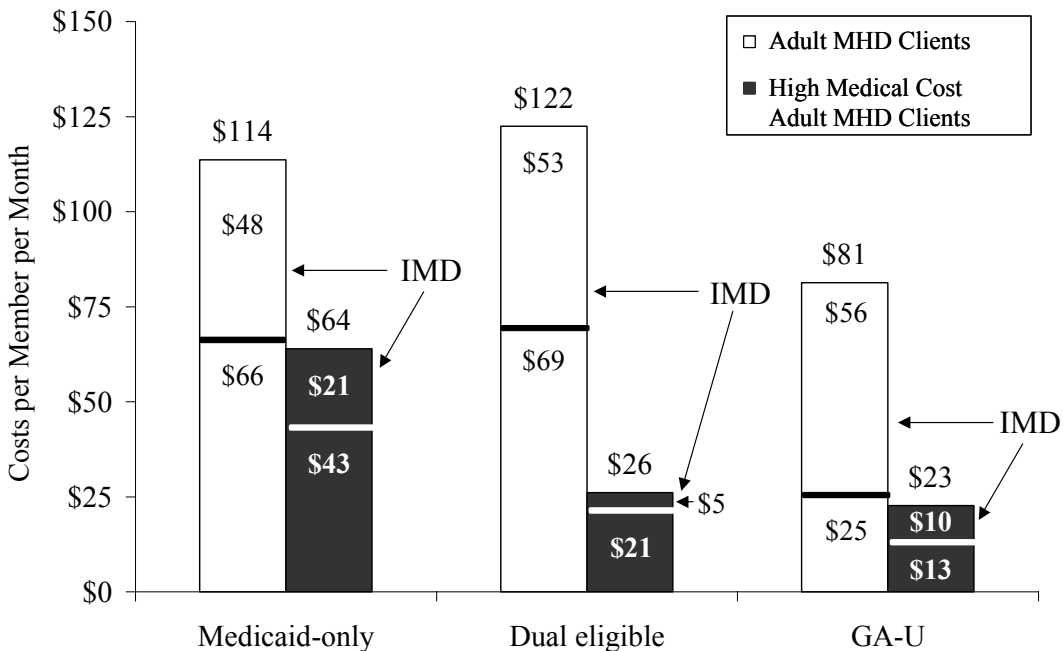
**Figure 8: Mental Health Division Expenditures<sup>a</sup> by Eligibility Status, FY 2001**



Source: DSHS, Research and Data Analysis, Client Services Database

<sup>a</sup> Does not include IMD Exclusion expenditures

**Figure 9: Mental Health Division Expenditures by Type of Service, FY 2001  
State Hospitals<sup>a</sup>**



Source: DSHS, Research and Data Analysis, Client Services Database

<sup>a</sup> Each column contains two state hospital expenditure figures: the figure in the top position includes IMD Exclusion expenditures, and the figure in the bottom position excludes IMD Exclusion expenditures.

However, high medical cost MHD clients are only slightly more intensive users of MHD services than the average MHD client (see Figure 8). For example, per member per month expenditures average \$426 for all Medicaid-only clients served by MHD, compared to an average of \$491 among high medical cost Medicaid-only MHD clients.

The next three figures provide a more detailed breakdown of MHD expenditures into state hospital, community inpatient, and community outpatient service categories. Before describing these figures, it is important to note how MHD state hospital expenditures are handled in Figure 9 to address the complications raised by the Institutions of Mental Disease (IMD) Exclusion. The IMD Exclusion precludes states from using federal funds for most of the care provided in state psychiatric hospitals for adults aged 22-64. Therefore, a large proportion of MHD state hospital expenditures on clients in the study population occur in months when these clients are not eligible for medical assistance in the aged, blind, disabled, GA-X, or GA-U categories. In fact, almost half of state hospital expenditures on clients who were Medicaid-only or dual eligible in FY 2001 occur in months when these clients were not eligible for medical assistance. For clients eligible for GA-U in FY 2001, two-thirds of their state hospital expenditures occurred in months when they were not eligible for medical assistance.

Consequently, calculations based solely on expenditures occurring in Medicaid-only, dual eligible, or GA-U months exclude a significant proportion of state hospital expenditures for each group of clients. Expressed as a per member per month rate, the effect of the exclusion on total MHD expenditures or total DSHS expenditures is relatively small, because only a small percentage of clients receive state hospital services. Consequently, we did not make an adjustment for the IMD Exclusion in Figures 7 and 8 or the Appendix tables.

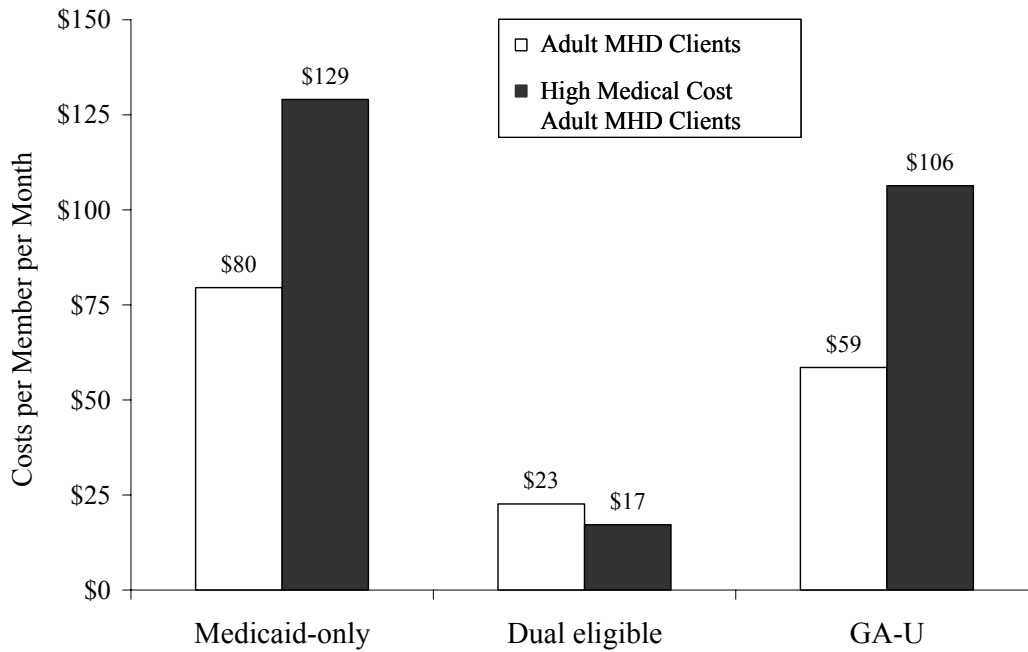
However, when specifically examining state hospital expenditures, the effect of the IMD Exclusion is large. To address this issue in Figure 9, we assigned state hospital expenditures that occurred in months when clients were not eligible for medical assistance to the client's most frequent eligibility status in FY 2001 (i.e., Medicaid-only, dual eligible, or GA-U).<sup>12</sup> Figure 9 reports the per member per month state hospital expenditure calculation both including (top amount) and excluding (bottom amount) the IMD exclusion expenditures.

Independent of whether IMD exclusion expenditures are included or excluded, high medical cost clients have lower state hospital expenditures than other MHD clients in each eligibility group. For example, when we *include* IMD Exclusion expenditures, high medical cost Medicaid-only clients have per member per month state hospital expenditures of only \$64, compared to \$114 per member per month among all Medicaid-only MHD clients. When we *exclude* IMD exclusion expenditures, the same relationship is obtained: high medical cost Medicaid-only clients have per member per month state hospital expenditures of only \$43, compared to \$66 per member per month among all Medicaid-only MHD clients. The same pattern is observed for dual eligible and GA-U clients.

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<sup>12</sup> For example, if a client was Medicaid-only for five months, dual eligible for four months, and in a state hospital in the other three months of FY 2001, the state hospital expenditures in the three months were assigned to the Medicaid-only eligibility status.

**Figure 10: Mental Health Division Expenditures by Type of Service, FY 2001  
Community Inpatient**



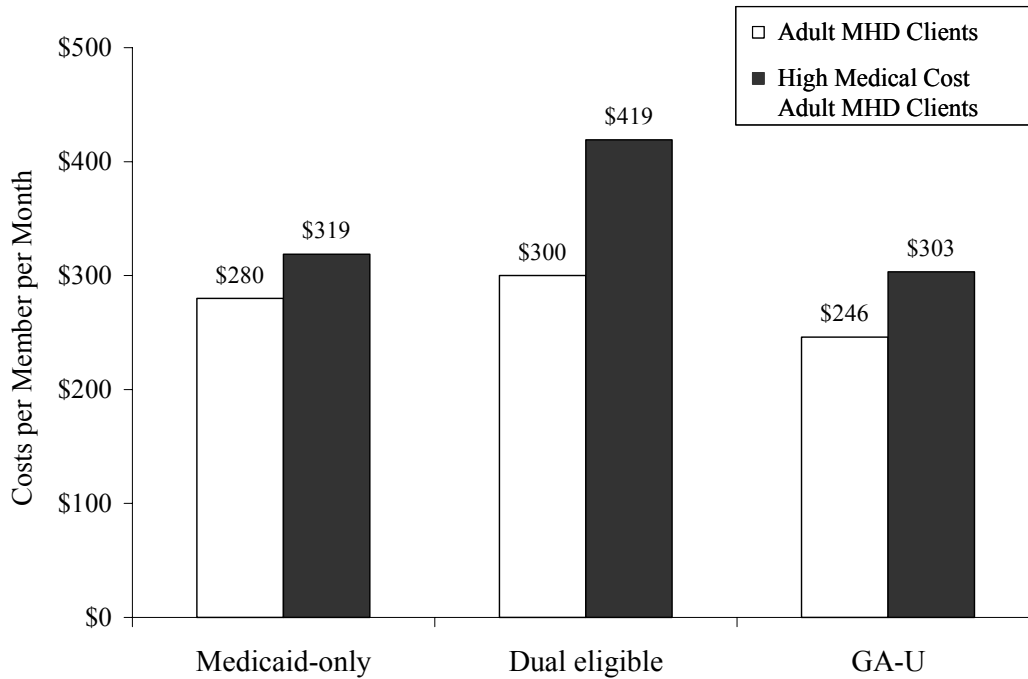
Source: DSHS, Research and Data Analysis, Client Services Database

The finding that high medical cost clients have low state hospital expenditures is at least in part a consequence of the IMD Exclusion, because clients aged 22-64 with long state hospital stays will have a relatively short period of time over which to accumulate MAA expenditures in the fiscal year. Therefore, clients with long state hospital stays will tend to be underrepresented among high medical cost clients.

Medicaid-only and GA-U MHD clients with high medical costs have relatively high community inpatient expenditures, compared to other clients in the eligibility group (Figure 10). For example, high medical cost Medicaid-only MHD clients average \$129 in community inpatient expenditures per member per month, compared to \$80 per member per month among all Medicaid-only MHD clients. High medical cost GA-U MHD clients average \$106 in community inpatient expenditures per member per month, compared to only \$59 per member per month among all GA-U MHD clients. In contrast, among the dual eligible community inpatient expenditures tend to be lower in the high medical cost group (\$17 per member per month) than among all dual eligible MHD clients (\$23 per member per month).



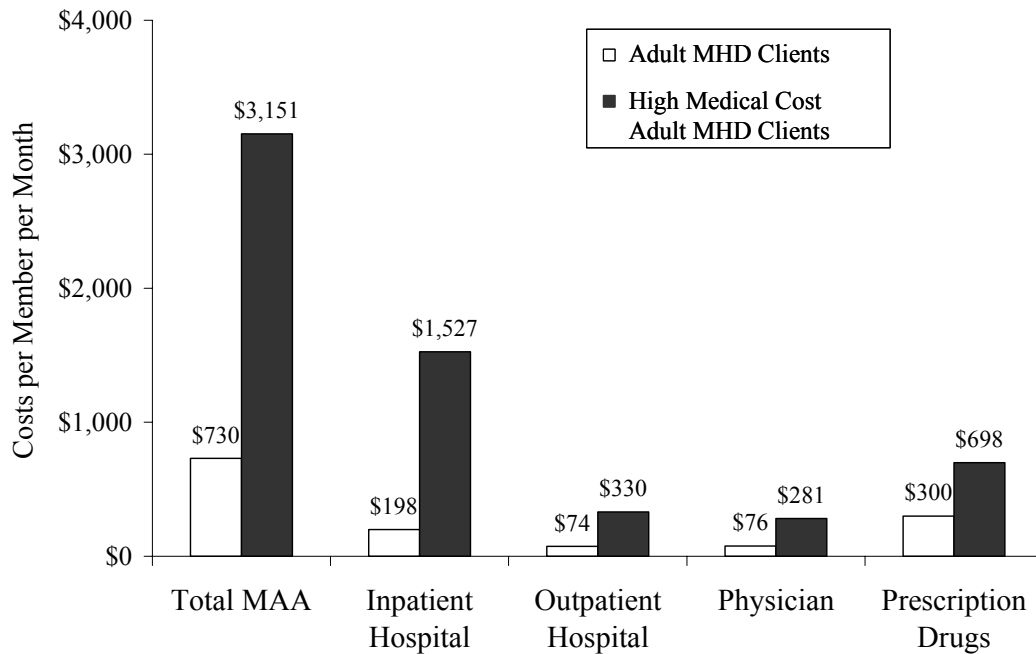
**Figure 11: Mental Health Division Expenditures by Type of Service, FY 2001  
Community Services**



Source: DSHS, Research and Data Analysis, Client Services Database

High medical cost clients have higher community services expenditures than other MHD clients (Figure 11). This relationship is consistent across all eligible groups and is strongest among dual eligible clients, where community services expenditures are 40 percent higher in the high medical cost group (\$419 per member per month) than among dual eligible MHD clients as a whole (\$300 per member per month).

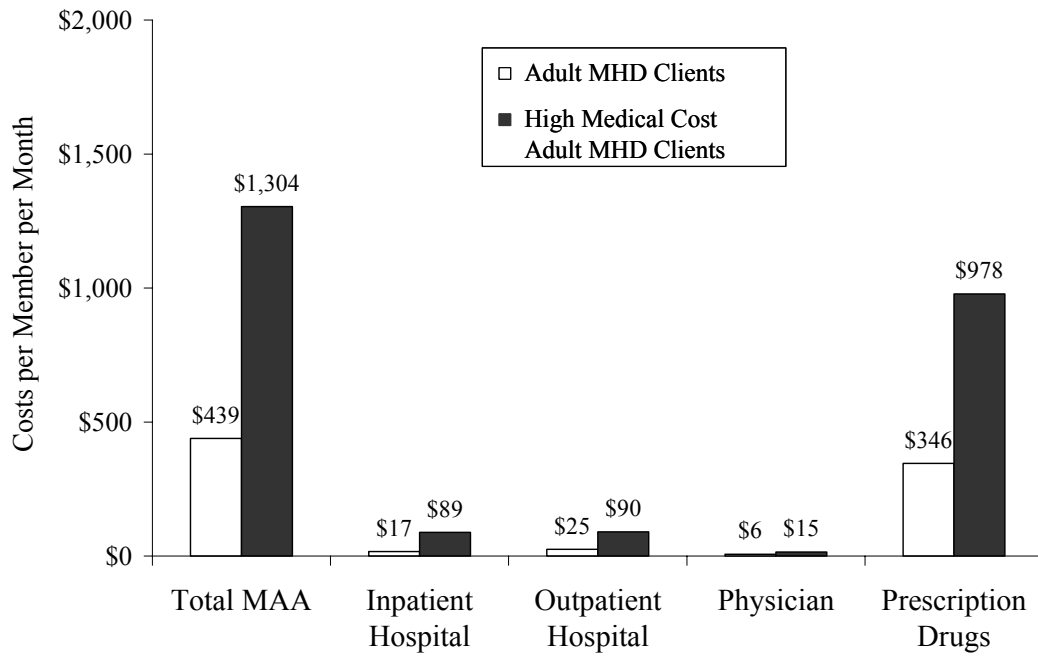
**Figure 12: MAA Expenditures by Type of Service, FY 2001  
Medicaid-only Clients**



Source: DSHS, MAA, Medicaid Management Information System Extended Database

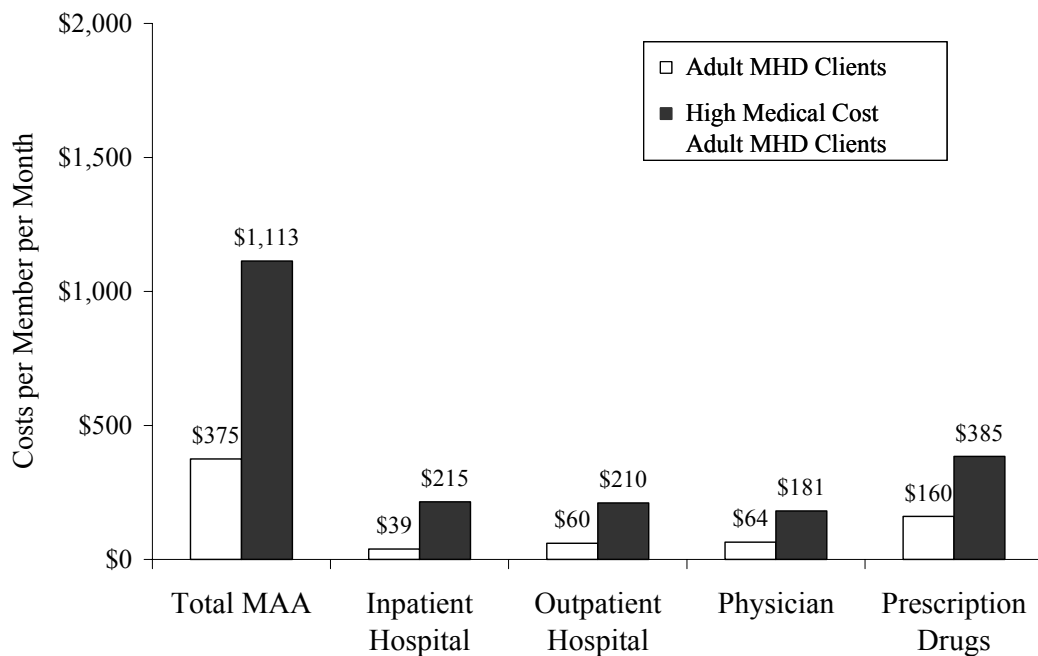
Figures 12-14 provide a detailed comparison between MAA expenditures on high medical cost and all MHD clients separately for each eligibility group. Although the high medical cost group in each eligibility status has higher expenditures in each major category of medical service, there are important differences among the eligibility groups. For high medical cost Medicaid-only MHD clients, the key cost driver is inpatient hospitalization expenditures of \$1,527 per member per month, which accounts for 48 percent of MAA expenditures on this group. Prescription drug costs of \$978 per member per month account for 75 percent of MAA expenditures on high medical cost dual eligible MHD clients. MAA expenditures on high medical cost GA-U clients are less concentrated within a single type of service.

**Figure 13: MAA Expenditures by Type of Service, FY 2001  
Dual Eligible Clients**

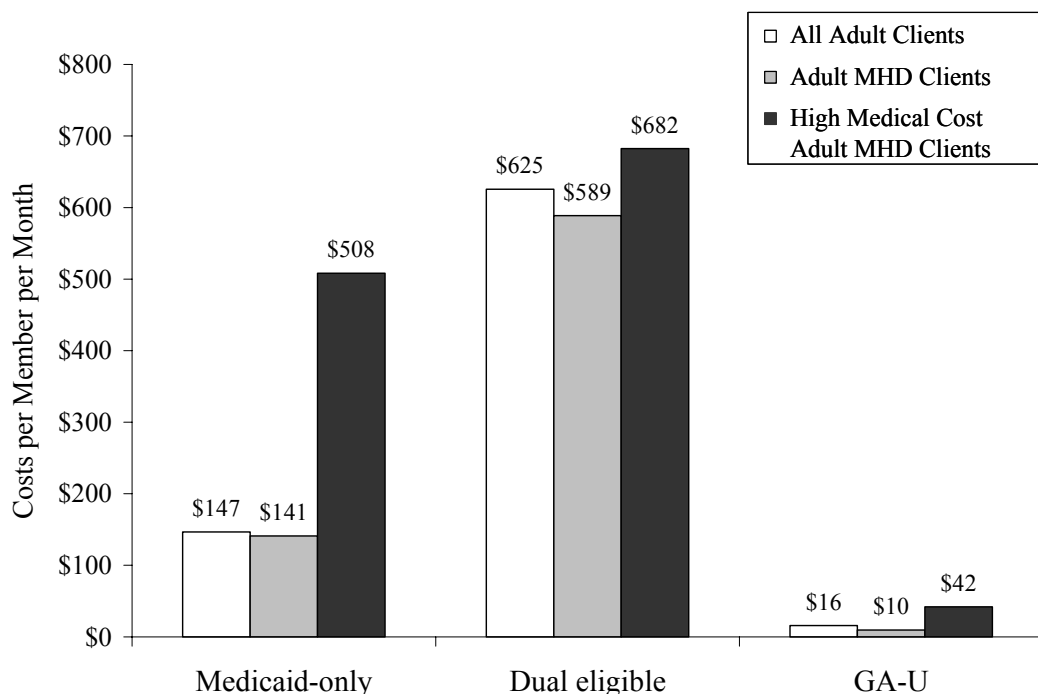


Source: DSHS, MAA, Medicaid Management Information System Extended Database

**Figure 14: MAA Expenditures by Type of Service, FY 2001  
GA-U Clients**



Source: DSHS, MAA, Medicaid Management Information System Extended Database

**Figure 15: Aging Expenditures by Eligibility Status, FY 2001**

Source: DSHS, Research and Data Analysis, Client Services Database

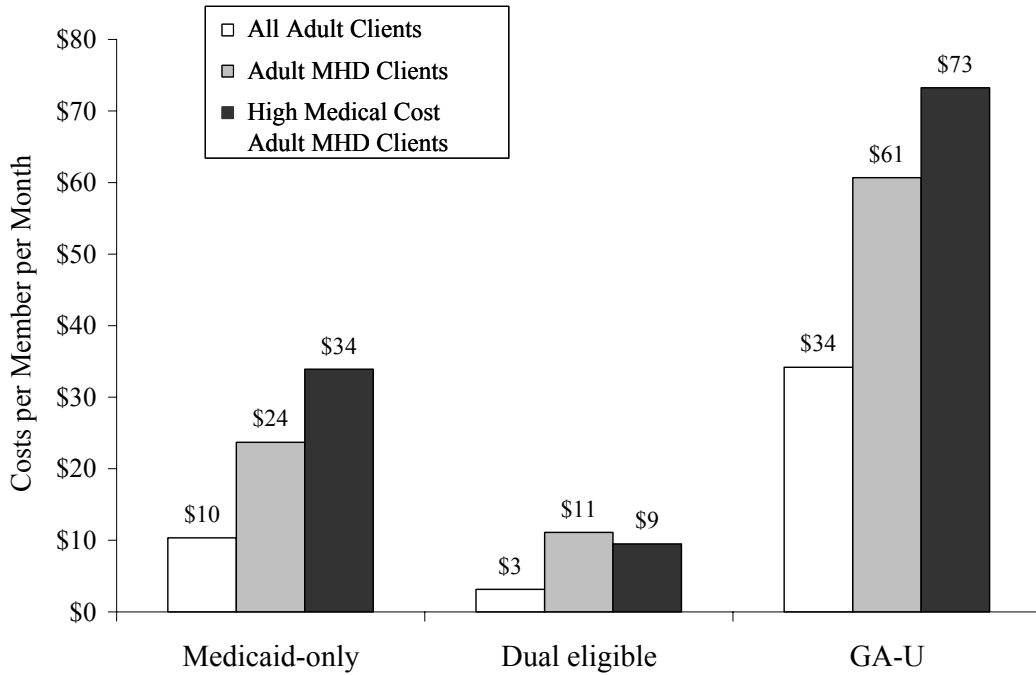
High medical cost Medicaid-only and dual eligible clients are also significant consumers of AASA services (see Figure 15). High medical cost Medicaid-only clients have per member per month AASA costs of \$508 – more than 3 times the average of \$141 for all Medicaid-only clients. Nursing home costs of \$251 per member per month and personal care costs of \$182 per member per month together comprise 85 percent of AASA expenditures on high medical cost Medicaid-only MHD clients.

High medical cost dual eligible clients have higher per member per month AASA service costs than all dual eligible clients (\$682 vs. \$625), even though they tend to be much younger than the average dual eligible client (see Figure 1). Nursing home costs (\$382 per member per month) and personal care costs (\$172 per member per month) together comprise 81 percent of AASA expenditures on high medical cost dual eligible MHD clients.

Among Medicaid-only and GA-U clients, high medical cost MHD clients also use more DASA services (see Figure 16). High medical cost GA-U clients are particularly intensive consumers of DASA services, with a per member per month rate of \$73. In terms of service utilization rates, 15 percent of high medical cost Medicaid-only clients and 34 percent of high medical cost GA-U clients used DASA services in FY 2001.<sup>13</sup>

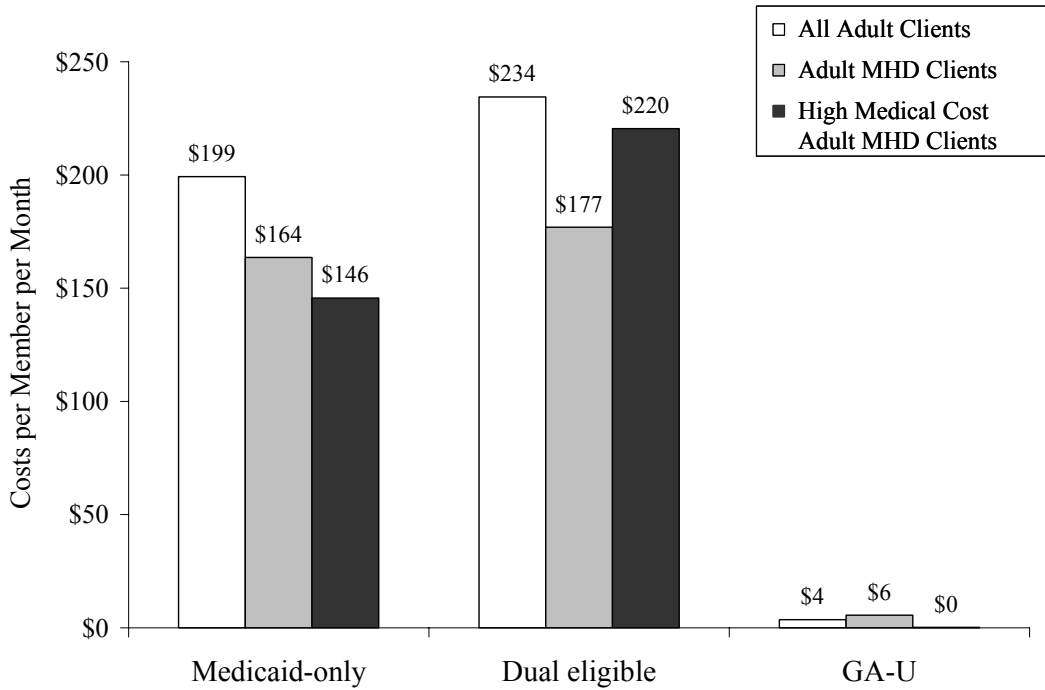
<sup>13</sup> This finding points to the importance of accounting for the presence of chemical dependency treatment in future cost-offset analyses. Because clients receiving mental health treatment are more likely than other clients in their eligibility status to be receiving chemical dependency treatment, it will be important to avoid confounding the effects of the two types of treatment.

**Figure 16: DASA Expenditures by Eligibility Status, FY 2001**



Source: DSHS, Research and Data Analysis, Client Services Database

**Figure 17: DDD Expenditures by Eligibility Status, FY 2001**



Source: DSHS, Research and Data Analysis, Client Services Database

By contrast, per member per month expenditures on DDD services for Medicaid-only and dual eligible clients are lower among high medical cost clients than among all clients in each eligibility group (see Figure 17). For example, per member per month DDD expenditures on high medical cost Medicaid-only clients are \$146, compared to \$199 for all Medicaid-only clients.

## 4 *Next Steps*

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The next phase of analysis will examine whether there are medical cost offsets associated with the provision of MHD services. Some clients may use less medical care if they are able to get mental health services. If this happens, the decrease in the cost of medical care may offset the cost associated with the use of mental health services, and the savings generated would be “cost offsets.” Previous research has shown that the populations most likely to exhibit cost offsets are aged clients and persons with chronic medical conditions and depression.<sup>14</sup>

A critical step in the cost-offset analysis is to develop valid groups against which to compare the medical cost outcomes observed for clients served by MHD. The descriptive analyses presented in the report suggest that it will be possible to define valid comparison groups. For example, although the mental health treatment penetration rates for clients with severe mental illness are about 70 percent (Figure 5), there remain many clients with an indication of severe mental illness who do not receive MHD services and who may constitute a valid comparison group.

Our descriptive analysis also points to the potential for identifying AASA cost offsets. Although AASA clients with depression and/or dementia are not a priority population for MHD services, the data show that many of these clients do receive MHD services. Thus we may be able to develop valid treatment and comparison groups for AASA clients with depression or dementia.

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<sup>14</sup> *Medical Cost Offsets Associated with Mental Health Care: A Brief Review*, Nancy Anderson, M.D. Washington State Department of Social and Health Services, Research and Data Analysis Division. December 12, 2002.





# *Appendices*

*A: Demographic Characteristics and Mortality*

*B: Mental Illness Diagnoses and Psychotropic Prescription Drug Use*

*C: Expenditures by Program and Category of Service*

*D: Disease Prevalence Rates*

## Appendix A: Demographic Characteristics and Mortality

**Table A-1.**

*Adult Medicaid-only Aged, Blind, Disabled or GA-X Clients (Medicaid-only Clients)  
Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
by Age, Gender, Race/Ethnicity, and Mortality  
High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult Medicaid-only Clients				Adult Medicaid-only MHD Clients				High Medical Cost Adult Medicaid-only MHD Clients			
	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Eligible Month
<b>Total Eligible</b>	<b>90,205</b>	<b>100%</b>	<b>\$963,821,455</b>	<b>\$1,127</b>	<b>21,612</b>	<b>100%</b>	<b>\$315,795,100</b>	<b>\$1,484</b>	<b>2,162</b>	<b>100%</b>	<b>\$104,556,358</b>	<b>\$4,329</b>
<b>Age</b>												
18-44	39,194	43.4%	462,010,278	1,221	12,433	57.5%	175,703,021	1,461	963	44.5%	47,068,121	4,367
45-64	39,383	43.7%	422,811,319	1,096	8,466	39.2%	130,516,640	1,496	1,150	53.2%	55,165,900	4,284
65-74	7,240	8.0%	47,592,476	757	473	2.2%	6,768,964	1,736	37	1.7%	1,825,922	4,908
75-84	3,014	3.3%	21,750,558	968	162	0.7%	2,027,769	1,974	9	0.4%	361,331	3,885
85+	1374	1.5%	9,656,824	1,558	78	0.4%	778,705	2,353	3	0.1%	135,083	4,221
<b>Gender</b>												
Female	50,118	55.6%	519,128,676	1,071	12,257	56.7%	177,582,121	1,436	1,380	63.8%	62,111,912	3,951
Male	40,067	44.4%	444,583,982	1,200	9,353	43.3%	138,195,064	1,551	782	36.2%	42,444,445	5,034
<b>Race/Ethnicity</b>												
White	64,540	71.5%	719,735,662	1,178	16,748	77.5%	249,438,879	1,513	1,706	78.9%	81,927,056	4,292
African American	6,381	7.1%	67,611,485	1,139	1,651	7.6%	24,416,567	1,529	189	8.7%	9,206,955	4,378
Asian American	6,821	7.6%	49,091,515	711	966	4.5%	11,868,976	1,170	49	2.3%	2,614,133	4,923
American Indian	2,748	3.0%	32,360,889	1,219	530	2.5%	8,528,952	1,627	75	3.5%	3,954,869	4,714
Hispanic	4,476	5.0%	45,450,932	1,138	781	3.6%	9,817,419	1,301	74	3.4%	3,103,690	3,846
Other/unknown	5,239	5.8%	49,570,973	1,002	936	4.3%	11,724,307	1,300	69	3.2%	3,749,655	4,807
<b>Mortality (by 12/31/01)</b>												
Living	86,306	95.7%	873,426,001	1,046	21,081	97.5%	299,041,824	1,432	1,957	90.5%	91,694,732	4,112
Deceased	3,899	4.3%	90,395,454	4,342	531	2.5%	16,753,275	4,323	205	9.5%	12,861,626	6,941

**Table A-2.**

*Adult Dual Eligible Aged, Blind, Disabled or GA-X Clients (Dual Eligible Clients)  
Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
by Age, Gender, Race/Ethnicity, and Mortality  
High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult Dual Eligible Clients				Adult Dual Eligible MHD Clients				High Medical Cost Adult Dual Eligible MHD Clients			
	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible Month
<b>Total Eligible</b>	<b>114,043</b>	<b>100%</b>	<b>\$1,390,204,715</b>	<b>\$1,225</b>	<b>18,870</b>	<b>100%</b>	<b>\$317,412,721</b>	<b>\$1,607</b>	<b>1,887</b>	<b>100%</b>	<b>\$59,111,290</b>	<b>\$2,673</b>
<b>Age</b>												
18-44	20,583	18.0%	250,916,724	1,187	6,922	36.7%	95,031,608	1,302	714	37.8%	20,742,662	2,467
45-64	25,308	22.2%	320,248,964	1,237	6,056	32.1%	91,514,294	1,416	785	41.6%	23,857,788	2,585
65-74	25,647	22.5%	197,157,567	771	2,179	11.5%	40,332,443	1,781	220	11.7%	8,212,423	3,242
75-84	24,342	21.3%	297,463,176	1,243	2,152	11.4%	50,145,385	2,288	121	6.4%	4,595,593	3,241
85+	18,163	15.9%	324,418,285	1,913	1,561	8.3%	40,388,992	2,643	47	2.5%	1,702,824	3,256
<b>Gender</b>												
Female	70,322	61.7%	870,309,989	1,231	10,322	54.7%	179,999,601	1,649	1,047	55.5%	33,065,521	2,694
Male	43,718	38.3%	519,880,575	1,215	8,548	45.3%	137,413,121	1,556	840	44.5%	26,045,769	2,647
<b>Race/Ethnicity</b>												
White	88,517	77.6%	1,170,314,531	1,337	15,867	84.1%	270,557,640	1,625	1,642	87.0%	51,048,080	2,654
African American	5,137	4.5%	48,401,529	950	1,076	5.7%	14,924,395	1,351	76	4.0%	2,609,103	2,889
Asian American	7,941	7.0%	52,098,453	608	509	2.7%	8,464,914	1,562	31	1.6%	1,034,240	2,803
American Indian	1,850	1.6%	16,174,921	873	254	1.3%	3,719,018	1,403	31	1.6%	831,906	2,304
Hispanic	4,952	4.3%	34,940,923	711	491	2.6%	6,693,348	1,304	52	2.8%	1,527,214	2,554
Other/unknown	5,646	5.0%	68,274,359	1,238	673	3.6%	13,053,406	1,931	55	2.9%	2,060,748	3,190
<b>Mortality (by 12/31/01)</b>												
Living	99,271	87.0%	1,166,512,908	1,135	17,123	90.7%	281,746,433	1,537	1,736	92.0%	53,332,970	2,601
Deceased	14,772	13.0%	223,691,808	2,082	1,747	9.3%	35,666,288	2,516	151	8.0%	5,778,320	3,589

**Table A-3.**

*Adult GA-U Clients  
 Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
 by Age, Gender, Race/Ethnicity, and Mortality  
 High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult GA-U Clients				Adult GA-U MHD Clients				High Medical Cost Adult GA-U MHD Clients			
	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Eligible Month
<b>Total Eligible</b>	<b>21,717</b>	<b>100%</b>	<b>\$56,445,940</b>	<b>\$543</b>	<b>5,158</b>	<b>100%</b>	<b>\$21,081,074</b>	<b>\$780</b>	<b>516</b>	<b>100%</b>	<b>\$6,938,226</b>	<b>\$1,652</b>
<b>Age</b>												
18-44	13,089	60.3%	33,226,984	538	3,792	73.5%	14,986,672	769	325	63.0%	4,486,640	1,706
45-64	8,566	39.4%	23,139,922	551	1,363	26.4%	6,089,429	809	191	37.0%	2,451,586	1,561
65-74	62	0.3%	79,034	293	3	0.1%	4,973	622	-	0.0%	-	-
75-84	-	0.0%	-	-	-	0.0%	-	-	-	0.0%	-	-
85+	-	0.0%	-	-	-	0.0%	-	-	-	0.0%	-	-
<b>Gender</b>												
Female	8,979	41.3%	24,430,975	556	2,488	48.2%	9,977,032	753	284	55.0%	3,565,052	1,512
Male	12,736	58.6%	32,007,358	533	2,669	51.7%	11,099,595	807	232	45.0%	3,373,174	1,830
<b>Race/Ethnicity</b>												
White	16,067	74.0%	42,793,761	555	4,040	78.3%	16,553,698	774	424	82.2%	5,673,568	1,649
African American	2,140	9.9%	4,419,975	430	398	7.7%	1,495,958	756	27	5.2%	332,572	1,526
Asian American	554	2.6%	1,307,588	465	103	2.0%	325,694	690	4	0.8%	42,238	1,083
American Indian	877	4.0%	2,589,501	588	153	3.0%	771,305	849	21	4.1%	323,538	1,788
Hispanic	1,102	5.1%	2,833,136	564	237	4.6%	1,010,724	822	19	3.7%	284,107	1,787
Other/unknown	977	4.5%	2,501,979	572	227	4.4%	923,695	885	21	4.1%	282,203	1,731
<b>Mortality (by 12/31/01)</b>												
Living	21,415	98.6%	54,745,307	532	5,100	98.9%	20,759,110	775	504	97.7%	6,745,643	1,635
Deceased	302	1.4%	1,700,633	1,578	58	1.1%	321,965	1,359	12	2.3%	192,583	2,568

## Appendix B: Mental Illness Diagnoses and Psychotropic Prescription Drug Use

**Table B-1.**

*Adult Medicaid-only Aged, Blind, Disabled or GA-X Clients (Medicaid-only Clients)  
Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
by Mental Illness Diagnosis and Prescription Drug Type  
High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult Medicaid-only Clients				Adult Medicaid-only MHD Clients				High Medical Cost Adult Medicaid-only MHD Clients			
	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Month	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Month	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Eligible Client per Month
<b>Total Eligible</b>	<b>90,205</b>	<b>100%</b>	<b>\$963,821,455</b>	<b>\$1,127</b>	<b>21,612</b>	<b>100%</b>	<b>\$315,795,100</b>	<b>\$1,484</b>	<b>2,162</b>	<b>100%</b>	<b>\$104,556,358</b>	<b>\$4,329</b>
<b>Had Mental Illness Diagnosis 7/97 - 6/01</b>	<b>43,507</b>	<b>48.2%</b>	<b>633,626,642</b>	<b>1,474</b>	<b>18,120</b>	<b>83.8%</b>	<b>286,304,108</b>	<b>1,584</b>	<b>2,005</b>	<b>92.7%</b>	<b>96,928,545</b>	<b>4,326</b>
<b>Had Mental Illness Diagnosis in FY 2001</b>	<b>28,075</b>	<b>31.1%</b>	<b>475,105,809</b>	<b>1,719</b>	<b>14,595</b>	<b>67.5%</b>	<b>247,970,276</b>	<b>1,701</b>	<b>1,789</b>	<b>82.7%</b>	<b>87,192,711</b>	<b>4,370</b>
<b>by Mental Illness Diagnosis (7/97 - 6/01)</b>												
Psychotic	9,613	10.7%	193,289,708	1,998	7,083	32.8%	139,989,402	1,935	752	34.8%	39,120,643	4,592
Manic and Bipolar	8,038	8.9%	125,001,403	1,596	5,813	26.9%	99,227,195	1,722	643	29.7%	30,668,164	4,165
Depression	21,059	23.3%	297,107,261	1,418	10,152	47.0%	169,315,374	1,669	1,390	64.3%	68,124,726	4,365
Dementia and Organic	4,014	4.4%	114,411,782	3,029	1,632	7.6%	47,773,014	2,911	359	16.6%	21,292,381	5,403
Retardation and Delay	2,192	2.4%	97,112,206	3,964	710	3.3%	31,153,364	3,958	96	4.4%	6,701,824	6,049
Neurotic and Personality	13,859	15.4%	220,551,155	1,573	7,532	34.9%	147,708,385	1,951	962	44.5%	48,315,540	4,439
Adjustment and Stress	14,216	15.8%	199,943,375	1,378	6,581	30.5%	115,790,174	1,707	991	45.8%	48,036,372	4,245
Alcohol Related	9,300	10.3%	134,815,544	1,538	4,064	18.8%	69,832,441	1,766	566	26.2%	29,971,250	4,874
Other Drug Related	8,846	9.8%	139,572,347	1,666	4,548	21.0%	81,542,697	1,844	717	33.2%	36,345,141	4,580
<b>Had Psychotropic Drug Prescription in FY 2001</b>	<b>44,226</b>	<b>49.0%</b>	<b>660,264,019</b>	<b>1,517</b>	<b>17,989</b>	<b>83.2%</b>	<b>289,580,606</b>	<b>1,600</b>	<b>2,018</b>	<b>93.3%</b>	<b>97,512,902</b>	<b>4,289</b>
<b>by Psychotropic Drug Prescription FY 2001</b>												
Antipsychotics-Nonphenothiazines (F	11,941	13.2%	220,349,029	1,906	9,431	43.6%	171,502,736	1,815	912	42.2%	44,714,680	4,332
Antipsychotics-Phenothiazines (H2G	1,787	2.0%	35,156,837	1,863	1,310	6.1%	26,667,278	1,890	133	6.2%	7,149,244	4,574
Anti-Anxiety Drugs (H2F)	15,915	17.6%	291,342,052	1,883	6,183	28.6%	125,610,056	2,018	1,099	50.8%	55,391,934	4,460
Anti-Mania Drugs (H2M)	2,457	2.7%	35,048,477	1,473	1,842	8.5%	27,965,669	1,549	149	6.9%	7,213,332	4,263
Anti-Depressant Drugs (H2J)	27,836	30.9%	401,806,379	1,428	11,597	53.7%	192,195,026	1,600	1,568	72.5%	74,457,552	4,165
Anti-Convulsants (H4B)	18,199	20.2%	345,117,329	1,934	8,540	39.5%	169,122,941	1,982	1,275	59.0%	63,277,456	4,380

**Table B-2.**

*Adult Dual Eligible Aged, Blind, Disabled or GA-X Clients (Dual Eligible Clients)  
 Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
 by Mental Illness Diagnosis and Prescription Drug Type  
 High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult Dual Eligible Clients				Adult Dual Eligible MHD Clients				High Medical Cost Adult Dual Eligible MHD Clients			
	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Eligible Client per Eligible Month
<b>Total Eligible</b>	<b>114,043</b>	<b>100%</b>	<b>\$1,390,204,715</b>	<b>\$1,225</b>	<b>18,870</b>	<b>100%</b>	<b>\$317,412,721</b>	<b>\$1,607</b>	<b>1,887</b>	<b>100%</b>	<b>\$59,111,290</b>	<b>\$2,673</b>
<b>Had Mental Illness Diagnosis 7/97 - 6/01</b>	<b>36,098</b>	<b>31.7%</b>	<b>621,934,064</b>	<b>1,641</b>	<b>14,651</b>	<b>77.6%</b>	<b>250,594,402</b>	<b>1,597</b>	<b>1,642</b>	<b>87.0%</b>	<b>51,167,500</b>	<b>2,653</b>
<b>Had Mental Illness Diagnosis in FY 2001</b>	<b>21,289</b>	<b>18.7%</b>	<b>391,112,790</b>	<b>1,716</b>	<b>11,556</b>	<b>61.2%</b>	<b>206,226,570</b>	<b>1,646</b>	<b>1,397</b>	<b>74.0%</b>	<b>43,888,660</b>	<b>2,673</b>
<b>by Mental Illness Diagnosis (7/97 - 6/01)</b>												
Psychotic	9,785	8.6%	196,399,977	1,874	6,608	35.0%	122,587,098	1,709	847	44.9%	26,163,113	2,609
Manic and Bipolar	5,189	4.6%	75,226,744	1,399	3,718	19.7%	55,888,994	1,426	402	21.3%	12,368,448	2,607
Depression	13,538	11.9%	191,093,647	1,342	6,122	32.4%	99,358,452	1,517	770	40.8%	24,136,524	2,677
Dementia and Organic	8,276	7.3%	204,346,785	2,407	2,234	11.8%	59,893,594	2,536	247	13.1%	9,772,309	3,419
Retardation and Delay	1,800	1.6%	89,964,541	4,385	379	2.0%	18,214,870	4,260	43	2.3%	3,203,497	6,369
Neurotic and Personality	7,192	6.3%	122,858,296	1,632	3,907	20.7%	73,341,205	1,790	459	24.3%	15,791,846	2,935
Adjustment and Stress	7,823	6.9%	99,084,516	1,198	3,336	17.7%	53,257,988	1,484	462	24.5%	14,357,969	2,636
Alcohol Related	3,857	3.4%	34,224,441	881	1,763	9.3%	21,420,963	1,175	160	8.5%	4,401,761	2,395
Other Drug Related	2,807	2.5%	29,331,079	1,048	1,498	7.9%	19,045,993	1,244	179	9.5%	4,808,188	2,313
<b>Had Psychotropic Drug Prescription in FY 2001</b>	<b>53,035</b>	<b>46.5%</b>	<b>899,056,333</b>	<b>1,619</b>	<b>15,863</b>	<b>84.1%</b>	<b>293,130,486</b>	<b>1,725</b>	<b>1,849</b>	<b>98.0%</b>	<b>57,963,059</b>	<b>2,672</b>
<b>by Psychotropic Drug Prescription FY 2001</b>												
Antipsychotics-Nonphenothiazines (H2L)	15,818	13.9%	338,874,270	2,050	9,560	50.7%	192,084,169	1,868	1,240	65.7%	39,034,962	2,663
Antipsychotics-Phenothiazines (H2G)	2,367	2.1%	47,630,401	1,838	1,439	7.6%	28,394,571	1,769	159	8.4%	5,675,648	3,013
Anti-Anxiety Drugs (H2F)	19,492	17.1%	349,720,939	1,729	5,520	29.3%	117,227,412	1,988	913	48.4%	30,080,200	2,818
Anti-Mania Drugs (H2M)	1,975	1.7%	30,192,769	1,426	1,452	7.7%	22,377,262	1,426	172	9.1%	4,498,755	2,198
Anti-Depressant Drugs (H2J)	32,342	28.4%	559,674,862	1,615	9,905	52.5%	190,292,146	1,761	1,441	76.4%	45,379,414	2,685
Anti-Convulsants (H4B)	19,251	16.9%	368,417,594	1,825	7,366	39.0%	148,079,760	1,888	1,204	63.8%	38,373,639	2,713

**Table B-3.**

*Adult GA-U Clients  
Total MHD, MAA, AASA, DASA, and DDD Expenditures in FY 2001  
by Mental Illness Diagnosis and Prescription Drug Type  
High-Cost Clients Ranked by MAA Expenditures in FY 2001*

	All Adult GA-U Clients				Adult GA-U MHD Clients				High Medical Cost Adult GA-U MHD Clients			
	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Eligible Client per Month
<b>Total Eligible</b>	<b>21,717</b>	<b>100%</b>	<b>\$56,445,940</b>	<b>\$543</b>	<b>5,158</b>	<b>100%</b>	<b>\$21,081,074</b>	<b>\$780</b>	<b>516</b>	<b>100%</b>	<b>\$6,938,226</b>	<b>\$1,652</b>
<b>Had Mental Illness Diagnosis 7/97 - 6/01</b>	<b>9,680</b>	<b>44.6%</b>	<b>35,218,808</b>	<b>718</b>	<b>3,939</b>	<b>76.4%</b>	<b>18,496,192</b>	<b>879</b>	<b>445</b>	<b>86.2%</b>	<b>6,254,001</b>	<b>1,737</b>
<b>Had Mental Illness Diagnosis in FY 2001</b>	<b>7,104</b>	<b>32.7%</b>	<b>30,152,254</b>	<b>829</b>	<b>3,306</b>	<b>64.1%</b>	<b>16,960,980</b>	<b>958</b>	<b>415</b>	<b>80.4%</b>	<b>5,963,804</b>	<b>1,802</b>
<b>by Mental Illness Diagnosis (7/97 - 6/01)</b>												
Psychotic	1,155	5.3%	5,464,325	1,133	831	16.1%	4,868,171	1,332	79	15.3%	1,513,681	2,481
Manic and Bipolar	1,801	8.3%	7,606,468	887	1,148	22.3%	6,304,993	1,096	144	27.9%	2,186,579	1,893
Depression	4,959	22.8%	19,170,407	741	2,422	47.0%	12,558,922	931	333	64.5%	4,932,694	1,843
Dementia and Organic	347	1.6%	1,959,962	1,140	149	2.9%	1,158,420	1,455	30	5.8%	584,336	2,586
Retardation and Delay	51	0.2%	352,621	1,287	30	0.6%	226,104	1,307	1	0.2%	19,613	2,452
Neurotic and Personality	2,539	11.7%	11,811,488	929	1,470	28.5%	8,863,074	1,170	212	41.1%	3,472,492	2,069
Adjustment and Stress	2,810	12.9%	11,848,413	789	1,333	25.8%	7,402,110	980	203	39.3%	3,122,661	1,891
Alcohol Related	2,984	13.7%	12,876,780	894	1,147	22.2%	6,785,100	1,123	163	31.6%	2,744,575	2,213
Other Drug Related	3,260	15.0%	14,136,811	891	1,365	26.5%	7,874,663	1,118	202	39.1%	3,199,068	2,080
<b>Had Psychotropic Drug Prescription in FY 2001</b>	<b>8,758</b>	<b>40.3%</b>	<b>35,712,751</b>	<b>739</b>	<b>3,612</b>	<b>70.0%</b>	<b>18,184,693</b>	<b>906</b>	<b>465</b>	<b>90.1%</b>	<b>6,476,215</b>	<b>1,689</b>
<b>by Psychotropic Drug Prescription FY 2001</b>												
Antipsychotics-Nonphenothiazines (H2L)	1,983	9.1%	10,052,982	1,097	1,541	29.9%	8,911,980	1,193	162	31.4%	2,741,836	2,109
Antipsychotics-Phenothiazines (H2G)	104	0.5%	598,844	1,361	76	1.5%	505,609	1,478	13	2.5%	215,549	2,661
Anti-Anxiety Drugs (H2F)	3,144	14.5%	15,476,015	892	1,184	23.0%	7,770,180	1,147	251	48.6%	3,856,806	1,838
Anti-Mania Drugs (H2M)	564	2.6%	2,354,013	837	360	7.0%	1,939,474	1,052	48	9.3%	849,469	2,027
Anti-Depressant Drugs (H2J)	5,071	23.4%	21,985,752	706	2,155	41.8%	11,791,822	872	352	68.2%	4,802,952	1,575
Anti-Convulsants (H4B)	3,494	16.1%	17,223,087	921	1,608	31.2%	9,892,787	1,126	275	53.3%	4,125,692	1,832

## Appendix C: Expenditures by Program and Category of Service

**Table C-1.**

*Adult Medicaid-only Aged, Blind, Disabled or GA-X Clients (Medicaid-only Clients)  
Services Provided by Department of Social and Health Services in FY2001  
by Program and Category of Service  
High-Cost Clients Ranked by MAA Expenditures in FY 2001*

Program and Category of Service	All Adult Medicaid-only Clients					Adult Medicaid-only MHD Clients					High Medical Cost Adult Medicaid-only MHD Clients				
	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served	Per Eligible
				Client per Eligible Month	Client per Eligible Month				Client per Eligible Month	Client per Eligible Month					
<b>Total Eligible</b>	<b>90,205</b>	<b>100%</b>	<b>\$963,821,455</b>	<b>\$1,205</b>	<b>\$1,127</b>	<b>21,612</b>	<b>100%</b>	<b>\$315,795,100</b>	<b>\$1,484</b>	<b>\$1,484</b>	<b>2,162</b>	<b>100%</b>	<b>\$104,556,358</b>	<b>\$4,329</b>	<b>\$4,329</b>
<b>Mental Health Division</b>	<b>21,612</b>	<b>24.0%</b>	<b>90,565,641</b>	<b>426</b>	<b>106</b>	<b>21,612</b>	<b>100.0%</b>	<b>90,592,468</b>	<b>426</b>	<b>426</b>	<b>2,162</b>	<b>100.0%</b>	<b>11,848,533</b>	<b>491</b>	<b>491</b>
Community Inpatient	2,611	2.9%	16,897,516	641	20	2,611	12.1%	16,927,371	641	80	421	19.5%	3,116,536	667	129
State Institution	808	0.9%	13,934,524	1,926	16	808	3.7%	13,934,524	1,926	66	71	3.3%	1,035,115	1,358	43
Child Study Treatment	3	0.0%	160,406	5,347	0	3	0.0%	160,406	5,347	1	-	0.0%	-	-	-
Community Services	21,113	23.4%	59,573,194	287	70	21,111	97.7%	59,570,166	287	280	2,081	96.3%	7,696,881	330	319
<b>Medical Assistance Administration</b>	<b>80,552</b>	<b>89.3%</b>	<b>568,480,071</b>	<b>724</b>	<b>664</b>	<b>20,932</b>	<b>96.9%</b>	<b>155,368,816</b>	<b>744</b>	<b>730</b>	<b>2,162</b>	<b>100.0%</b>	<b>76,098,532</b>	<b>3,151</b>	<b>3,151</b>
Inpatient Hospitalization	11,617	12.9%	199,076,015	1,766	233	2,867	13.3%	42,205,810	1,407	198	1,629	75.3%	36,871,570	2,063	1,527
Outpatient Hospitalization	45,492	50.4%	71,249,240	152	83	13,213	61.1%	15,671,464	113	74	1,994	92.2%	7,973,747	356	330
Emergency Room	11,903	13.2%	6,366,982	51	7	4,556	21.1%	2,743,977	57	13	886	41.0%	1,007,971	101	42
Physician	69,749	77.3%	62,869,385	89	73	18,733	86.7%	16,229,231	84	76	2,155	99.7%	6,795,082	282	281
Other Provider	50,260	55.7%	14,243,477	27	17	13,884	64.2%	3,518,207	24	17	1,835	84.9%	879,419	42	36
Prescription Drugs	74,509	82.6%	167,668,592	227	196	20,274	93.8%	63,808,846	312	300	2,148	99.4%	16,847,626	699	698
Durable Medical Equipment	17,968	19.9%	17,905,687	94	21	4,952	22.9%	3,508,235	65	16	1,258	58.2%	2,002,316	140	83
Transportation	10,938	12.1%	3,559,479	32	4	4,436	20.5%	1,502,983	32	7	1,236	57.2%	734,668	54	30
All Other	40,196	44.6%	25,541,214	59	30	10,870	50.3%	6,180,062	53	29	1,621	75.0%	2,986,133	162	124
<b>Aging and Adult Services Administratio</b>	<b>13,248</b>	<b>14.7%</b>	<b>125,401,294</b>	<b>1,052</b>	<b>147</b>	<b>2,726</b>	<b>12.6%</b>	<b>29,986,682</b>	<b>1,087</b>	<b>141</b>	<b>920</b>	<b>42.6%</b>	<b>12,274,653</b>	<b>1,202</b>	<b>508</b>
Nursing Homes	3,839	4.3%	46,705,221	1,728	55	883	4.1%	13,631,118	1,724	64	415	19.2%	6,053,501	1,359	251
In-Home Services	8,706	9.7%	61,688,209	717	72	1,606	7.4%	11,230,585	645	53	560	25.9%	4,398,911	689	182
Adult Family Homes	842	0.9%	6,264,516	914	7	292	1.4%	2,282,014	808	11	94	4.3%	765,095	740	32
Assisted Living	601	0.7%	2,810,162	865	3	126	0.6%	914,813	889	4	37	1.7%	370,348	903	15
Adult Residences	446	0.5%	1,984,841	572	2	178	0.8%	950,238	549	4	49	2.3%	213,022	392	9
Miscellaneous	1,162	1.3%	5,948,344	523	7	328	1.5%	977,914	283	5	133	6.2%	473,775	313	20



Program and Category of Service	All Adult Medicaid-only Clients					Adult Medicaid-only MHD Clients					High Medical Cost Adult Medicaid-only MHD Clients				
	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served Client per	Per Eligible Client per	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served Client per	Per Eligible Client per	Clients	Percent of Clients	Total Paid in Medicaid-only Months	Per Served Client per	Per Eligible Client per
				Month	Month				Month	Month				Month	
<b>Division of Alcohol and Substance Abuse</b>	<b>4,958</b>	<b>5.5%</b>	<b>8,862,232</b>	<b>184</b>	<b>10</b>	<b>2,633</b>	<b>12.2%</b>	<b>5,042,985</b>	<b>195</b>	<b>24</b>	<b>314</b>	<b>14.5%</b>	<b>818,941</b>	<b>235</b>	<b>34</b>
Outpatient Treatment	3,169	3.5%	3,127,323	98	4	1,641	7.6%	1,770,450	108	8	187	8.6%	211,112	100	9
Residential Treatment	744	0.8%	2,532,411	347	3	465	2.2%	1,784,159	377	8	69	3.2%	342,400	448	14
Opiate Substitution Treatment	982	1.1%	1,861,513	183	2	331	1.5%	591,847	170	3	66	3.1%	111,168	148	5
Detoxification	799	0.9%	724,251	92	1	520	2.4%	534,512	102	3	78	3.6%	100,374	121	4
Outpatient Assessment	1,928	2.1%	327,251	16	0	1,130	5.2%	199,225	17	1	132	6.1%	26,096	18	1
ADATSA Assessment	1,030	1.1%	164,219	17	0	649	3.0%	103,875	17	0	75	3.5%	12,159	15	1
Miscellaneous	922	1.0%	125,264	13	0	324	1.5%	58,916	17	0	62	2.9%	15,632	22	1
<b>Division of Developmental Disabilities</b>	<b>7,869</b>	<b>8.7%</b>	<b>170,512,218</b>	<b>1,955</b>	<b>199</b>	<b>1,347</b>	<b>6.2%</b>	<b>34,804,149</b>	<b>2,301</b>	<b>164</b>	<b>103</b>	<b>4.8%</b>	<b>3,515,699</b>	<b>2,915</b>	<b>146</b>
Community Residential	1,911	2.1%	69,274,027	3,213	81	532	2.5%	21,069,808	3,479	99	45	2.1%	2,492,404	4,667	103
Personal Care	3,524	3.9%	31,832,630	796	37	544	2.5%	4,793,525	767	23	48	2.2%	514,906	905	21
Residential Habilitation Center	404	0.4%	40,204,080	8,596	47	34	0.2%	970,143	2,419	5	5	0.2%	51,162	853	2
Voluntary Placement	171	0.2%	8,574,896	4,681	10	72	0.3%	4,581,073	5,821	22	4	0.2%	195,250	4,339	8
County Services	2,607	2.9%	12,189,003	410	14	437	2.0%	1,909,171	381	9	28	1.3%	126,955	387	5
Case Management	7,513	8.3%	5,169,790	62	6	1,330	6.2%	948,908	64	4	101	4.7%	78,135	66	3
Family Support Services	1,183	1.3%	2,085,079	154	2	107	0.5%	150,170	121	1	6	0.3%	7,160	99	0
Professional Support Services	1,547	1.7%	1,182,467	66	1	357	1.7%	381,168	93	2	37	1.7%	49,543	117	2
Miscellaneous	2	0.0%	246	10	0	1	0.0%	184	15	0	1	0.0%	184	15	0

**Table C-2.**

*Adult Dual Eligible Aged, Blind, Disabled or GA-X Clients (Dual Eligible Clients)  
 Services Provided by Department of Social and Health Services in FY2001  
 by Program and Category of Service  
 High-Cost Clients Ranked by MAA Expenditures in FY 2001*

All Adult Dual Eligible Clients						Adult Dual Eligible MHD Clients					High Medical Cost Adult Dual Eligible MHD Clients				
Program and Category of Service	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible
				Client per Eligible Month	Client per Eligible Month				Client per Eligible Month	Client per Eligible Month					
<b>Total Eligible</b>	<b>114,043</b>	<b>100%</b>	<b>\$1,390,204,715</b>	<b>\$1,336</b>	<b>\$1,225</b>	<b>18,870</b>	<b>100%</b>	<b>\$317,412,721</b>	<b>\$1,607</b>	<b>\$1,607</b>	<b>1,887</b>	<b>100%</b>	<b>\$59,111,290</b>	<b>\$2,673</b>	<b>\$2,673</b>
<b>Mental Health Division</b>	<b>18,870</b>	<b>16.5%</b>	<b>77,347,541</b>	<b>392</b>	<b>68</b>	<b>18,870</b>	<b>100.0%</b>	<b>77,347,541</b>	<b>392</b>	<b>392</b>	<b>1,887</b>	<b>100.0%</b>	<b>10,103,990</b>	<b>457</b>	<b>457</b>
Community Inpatient	726	0.6%	4,467,816	583	4	726	3.8%	4,467,816	583	23	66	3.5%	379,035	494	17
State Institution	711	0.6%	13,625,653	2,140	12	711	3.8%	13,625,653	2,140	69	39	2.1%	460,037	1,043	21
Child Study Treatment	-	0.0%	-	-	-	-	0.0%	-	-	-	-	0.0%	-	-	-
Community Services	18,596	16.3%	59,254,072	304	52	18,596	98.5%	59,254,072	304	300	1,868	99.0%	9,264,918	423	419
<b>Medical Assistance Administration</b>	<b>98,989</b>	<b>86.8%</b>	<b>333,382,158</b>	<b>327</b>	<b>294</b>	<b>17,973</b>	<b>95.2%</b>	<b>86,707,219</b>	<b>455</b>	<b>439</b>	<b>1,887</b>	<b>100.0%</b>	<b>28,830,100</b>	<b>1,304</b>	<b>1,304</b>
Inpatient Hospitalization	8,759	7.7%	15,158,271	164	13	2,160	11.4%	3,338,344	143	17	504	26.7%	1,964,213	337	89
Outpatient Hospitalization	44,586	39.1%	28,125,304	58	25	9,637	51.1%	4,885,367	46	25	1,422	75.4%	1,983,944	119	90
Emergency Room	457	0.4%	151,351	35	0	167	0.9%	58,627	37	0	30	1.6%	20,150	63	1
Physician	61,673	54.1%	5,494,428	8	5	12,055	63.9%	1,267,213	9	6	1,565	82.9%	323,161	18	15
Other Provider	45,153	39.6%	11,840,873	24	10	8,226	43.6%	1,727,498	19	9	1,248	66.1%	529,378	36	24
Prescription Drugs	91,842	80.5%	232,874,709	244	205	17,393	92.2%	68,248,839	368	346	1,886	99.9%	21,625,546	978	978
Durable Medical Equipment	25,126	22.0%	22,182,957	81	20	5,221	27.7%	3,664,875	63	19	1,033	54.7%	1,217,917	100	55
Transportation	3,226	2.8%	623,084	19	1	1,263	6.7%	241,326	18	1	238	12.6%	59,173	22	3
All Other	42,060	36.9%	16,931,181	36	15	8,867	47.0%	3,275,130	33	17	1,231	65.2%	1,106,617	76	50
<b>Ageing and Adult Services Administr:</b>	<b>45,946</b>	<b>40.3%</b>	<b>709,875,759</b>	<b>1,561</b>	<b>625</b>	<b>6,609</b>	<b>35.0%</b>	<b>116,218,616</b>	<b>1,688</b>	<b>589</b>	<b>869</b>	<b>46.1%</b>	<b>15,091,569</b>	<b>1,494</b>	<b>682</b>
Nursing Homes	20,079	17.6%	441,642,872	2,355	389	3,511	18.6%	81,788,029	2,332	414	346	18.3%	8,439,137	2,145	382
In-Home Services	19,595	17.2%	164,880,025	804	145	2,213	11.7%	16,494,042	681	84	412	21.8%	3,807,086	788	172
Adult Family Homes	4,390	3.8%	41,376,514	948	36	797	4.2%	7,541,323	881	38	116	6.1%	1,320,889	968	60
Assisted Living	4,505	4.0%	39,869,267	889	35	683	3.6%	6,055,148	836	31	69	3.7%	741,445	913	34
Adult Residences	1,692	1.5%	12,197,826	710	11	403	2.1%	2,470,392	578	13	45	2.4%	304,147	578	14
Miscellaneous	3,217	2.8%	9,909,255	290	9	654	3.5%	1,869,681	256	9	121	6.4%	478,865	341	22

All Adult Dual Eligible Clients						Adult Dual Eligible MHD Clients					High Medical Cost Adult Dual Eligible MHD Clients				
Program and Category of Service	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible	Clients	Percent of Clients	Total Paid in Dual Eligible Months	Per Served	Per Eligible
				Client per Eligible Month	Client per Eligible Month				Client per Eligible Month	Client per Eligible Month					
<b>Division of Alcohol and Substance At</b>	<b>1,953</b>	<b>1.7%</b>	<b>3,556,093</b>	<b>177</b>	<b>3</b>	<b>1,097</b>	<b>5.8%</b>	<b>2,196,425</b>	<b>191</b>	<b>11</b>	<b>92</b>	<b>4.9%</b>	<b>209,827</b>	<b>195</b>	<b>9</b>
Outpatient Treatment	1,268	1.1%	1,300,088	97	1	694	3.7%	762,695	102	4	68	3.6%	81,492	103	4
Residential Treatment	296	0.3%	1,149,104	382	1	196	1.0%	858,351	419	4	17	0.9%	97,491	480	4
Treatment	292	0.3%	576,470	183	1	105	0.6%	205,126	178	1	6	0.3%	8,885	143	0
Detoxification	360	0.3%	304,362	83	0	257	1.4%	227,153	86	1	17	0.9%	12,624	63	1
Outpatient Assessment	796	0.7%	135,265	16	0	515	2.7%	89,609	16	0	45	2.4%	7,435	14	0
ADATSA Assessment	302	0.3%	47,885	16	0	186	1.0%	29,721	15	0	9	0.5%	1,651	16	0
Miscellaneous	256	0.2%	42,919	15	0	101	0.5%	23,769	21	0	4	0.2%	248	5	0
<b>Division of Developmental Disabilitie</b>	<b>7,887</b>	<b>6.9%</b>	<b>266,043,164</b>	<b>2,973</b>	<b>234</b>	<b>1,316</b>	<b>7.0%</b>	<b>34,942,920</b>	<b>2,324</b>	<b>177</b>	<b>107</b>	<b>5.7%</b>	<b>4,875,804</b>	<b>3,836</b>	<b>220</b>
Community Residential	3,004	2.6%	101,808,505	2,930	90	690	3.7%	25,190,739	3,147	128	71	3.8%	4,161,388	4,925	188
Personal Care	2,957	2.6%	27,731,153	819	24	503	2.7%	4,712,246	804	24	31	1.6%	305,031	820	14
Center	861	0.8%	111,381,404	10,978	98	17	0.1%	543,865	2,706	3	-	0.0%	-	-	-
Voluntary Placement	16	0.0%	417,268	2,898	0	5	0.0%	89,090	1,782	0	-	0.0%	-	-	-
County Services	3,637	3.2%	17,760,174	425	16	640	3.4%	3,056,648	411	15	54	2.9%	276,446	427	13
Case Management	7,025	6.2%	4,906,095	62	4	1,297	6.9%	924,198	62	5	104	5.5%	77,413	63	4
Family Support Services	405	0.4%	604,428	132	1	35	0.2%	48,833	122	0	2	0.1%	2,055	86	0
Professional Support Services	2,248	2.0%	1,433,951	54	1	466	2.5%	377,115	69	2	44	2.3%	53,283	101	2
Miscellaneous	1	0.0%	187	16	0	1	0.0%	187	16	0	1	0.1%	187	16	0

**Table C-3.**

*Adult GA-U Clients  
 Services Provided by Department of Social and Health Services in FY2001  
 by Program and Category of Service  
 High-Cost Clients Ranked by MAA Expenditures in FY 2001*

Program and Category of Service	All Adult GA-U Clients					Adult GA-U MHD Clients					High Medical Cost Adult GA-U MHD Clients				
	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per Eligible Month	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per Eligible Month	Per Eligible Client per Eligible Month	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per Eligible Month	Per Eligible Client per Eligible Month
<b>Total Eligible</b>	<b>21,717</b>	<b>100%</b>	<b>\$56,445,940</b>	<b>\$588</b>	<b>\$543</b>	<b>5,158</b>	<b>100%</b>	<b>\$21,081,074</b>	<b>\$780</b>	<b>\$780</b>	<b>516</b>	<b>100%</b>	<b>\$6,938,226</b>	<b>\$1,652</b>	<b>\$1,652</b>
<b>Mental Health Division</b>	<b>5,158</b>	<b>23.8%</b>	<b>8,902,897</b>	<b>329</b>	<b>86</b>	<b>5,158</b>	<b>100.0%</b>	<b>8,902,897</b>	<b>329</b>	<b>329</b>	<b>516</b>	<b>100.0%</b>	<b>1,775,795</b>	<b>423</b>	<b>423</b>
Community Inpatient	537	2.5%	1,581,463	548	15	537	10.4%	1,581,463	548	59	110	21.3%	446,784	520	106
State Institution	133	0.6%	676,172	1,269	7	133	2.6%	676,172	1,269	25	11	2.1%	54,992	859	13
Child Study Treatment	-	0.0%	-	-	-	-	0.0%	-	-	-	-	0.0%	-	-	-
Community Services	5,090	23.4%	6,645,262	249	64	5,090	98.7%	6,645,262	249	246	502	97.3%	1,274,019	313	303
<b>Medical Assistance Administration</b>	<b>18,085</b>	<b>83.3%</b>	<b>41,975,438</b>	<b>447</b>	<b>404</b>	<b>4,694</b>	<b>91.0%</b>	<b>10,129,418</b>	<b>393</b>	<b>375</b>	<b>516</b>	<b>100.0%</b>	<b>4,677,485</b>	<b>1,113</b>	<b>1,113</b>
Inpatient Hospitalization	1,592	7.3%	7,795,852	774	75	325	6.3%	1,060,649	476	39	195	37.8%	901,160	608	215
Outpatient Hospitalization	9,394	43.3%	8,749,782	156	84	2,363	45.8%	1,633,770	110	60	445	86.2%	884,266	241	210
Emergency Room	2,634	12.1%	1,142,628	68	11	972	18.8%	478,974	77	18	218	42.2%	209,282	119	50
Physician	15,016	69.1%	8,183,420	98	79	3,828	74.2%	1,734,793	77	64	513	99.4%	760,932	182	181
Other Provider	8,339	38.4%	1,164,405	23	11	2,373	46.0%	327,681	22	12	396	76.7%	81,806	24	19
Prescription Drugs	15,825	72.9%	12,389,315	144	119	4,333	84.0%	4,325,666	177	160	513	99.4%	1,615,409	386	385
Durable Medical Equipment	1,690	7.8%	453,288	41	4	367	7.1%	54,085	22	2	114	22.1%	30,022	31	7
Transportation	1,439	6.6%	326,894	36	3	656	12.7%	147,214	35	5	193	37.4%	62,827	41	15
All Other	5,859	27.0%	1,769,853	48	17	1,440	27.9%	366,587	38	14	271	52.5%	131,782	56	31
<b>Aging and Adult Services Administration</b>	<b>336</b>	<b>1.5%</b>	<b>1,640,413</b>	<b>923</b>	<b>16</b>	<b>44</b>	<b>0.9%</b>	<b>258,316</b>	<b>1,013</b>	<b>10</b>	<b>28</b>	<b>5.4%</b>	<b>176,174</b>	<b>890</b>	<b>42</b>
Nursing Homes	255	1.2%	1,409,281	1,030	14	37	0.7%	243,158	1,121	9	22	4.3%	163,711	1,004	39
In-Home Services	67	0.3%	113,259	353	1	7	0.1%	8,123	198	0	6	1.2%	6,197	163	1
Adult Family Homes	6	0.0%	18,172	757	0	1	0.0%	769	256	0	-	0.0%	-	-	-
Assisted Living	4	0.0%	21,597	1,350	0	1	0.0%	4,694	1,173	0	1	0.2%	4,694	1,173	1
Adult Residences	8	0.0%	50,663	724	0	-	0.0%	-	-	-	-	0.0%	-	-	-
Miscellaneous	37	0.2%	27,442	115	0	4	0.1%	1,573	56	0	4	0.8%	1,573	56	0

Program and Category of Service	All Adult GA-U Clients					Adult GA-U MHD Clients					High Medical Cost Adult GA-U MHD Clients				
	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per	Per Eligible Client per	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per	Per Eligible Client per	Clients	Percent of Clients	Total Paid in GA-U Months	Per Served Client per	Per Eligible Client per
				Month	Month				Month	Month				Month	
<b>Division of Alcohol and Substance Abuse</b>	<b>3,583</b>	<b>16.5%</b>	<b>3,554,419</b>	<b>174</b>	<b>34</b>	<b>1,348</b>	<b>26.1%</b>	<b>1,639,513</b>	<b>199</b>	<b>61</b>	<b>176</b>	<b>34.1%</b>	<b>307,694</b>	<b>211</b>	<b>73</b>
Outpatient Treatment	1,542	7.1%	958,260	103	9	639	12.4%	437,261	106	16	96	18.6%	60,782	72	14
Residential Treatment	689	3.2%	1,529,146	366	15	307	6.0%	734,618	351	27	51	9.9%	151,058	316	36
Opiate Substitution Treatment	259	1.2%	124,644	78	1	38	0.7%	22,920	79	1	10	1.9%	5,027	55	1
Detoxification	559	2.6%	509,111	149	5	289	5.6%	279,584	150	10	52	10.1%	62,903	137	15
Outpatient Assessment	601	2.8%	99,181	26	1	288	5.6%	48,882	26	2	59	11.4%	10,852	22	3
ADATSA Assessment	1,887	8.7%	305,621	27	3	660	12.8%	107,778	26	4	86	16.7%	16,212	22	4
Miscellaneous	225	1.0%	28,456	20	0	50	1.0%	8,470	25	0	14	2.7%	859	7	0
<b>Division of Developmental Disabilities</b>	<b>136</b>	<b>0.6%</b>	<b>372,774</b>	<b>566</b>	<b>4</b>	<b>24</b>	<b>0.5%</b>	<b>150,930</b>	<b>1,086</b>	<b>6</b>	<b>2</b>	<b>0.4%</b>	<b>1,078</b>	<b>57</b>	<b>0</b>
Community Residential	11	0.1%	156,783	3,074	2	3	0.1%	44,670	2,792	2	-	0.0%	-	-	-
Personal Care	11	0.1%	55,864	980	1	2	0.0%	15,330	1,394	1	-	0.0%	-	-	-
Residential Habilitation Center	1	0.0%	3,170	3,170	0	-	0.0%	-	-	-	-	0.0%	-	-	-
Voluntary Placement	3	0.0%	97,332	10,815	1	1	0.0%	78,830	15,766	3	-	0.0%	-	-	-
County Services	14	0.1%	16,542	301	0	1	0.0%	1,217	243	0	-	0.0%	-	-	-
Case Management	123	0.6%	33,662	61	0	21	0.4%	7,148	61	0	1	0.2%	978	122	0
Family Support Services	3	0.0%	1,330	121	0	1	0.0%	144	36	0	-	0.0%	-	-	-
Professional Support Services	20	0.1%	8,091	57	0	5	0.1%	3,591	100	0	1	0.2%	100	9	0
Miscellaneous	-	0.0%	-	-	-	-	0.0%	-	-	-	-	0.0%	-	-	-

## Appendix D: Disease Prevalence Rates

**Table D-1.**

*Adult Medicaid-Only Aged, Blind, and Disabled Clients  
Disease Prevalence Rates*

*Odds Ratios: Disease in High Medical Cost Group vs. All Mental Health Division Clients*

Primary Diagnosis	Prevalence Rates			Odds Ratio:	Primary Diagnosis	Prevalence Rates			Odds Ratio:
	All Adult Clients	All Adult MHD Clients	High Medical Cost Adult MHD Clients	High Medical Cost MHD to All MHD		All Adult Clients	All Adult MHD Clients	High Medical Cost Adult MHD Clients	High Medical Cost MHD to All MHD
Nephritis, Nephrotic Syndrome, Nephrosis	1.8%	1.2%	8.1%	6.97	Diabetes	11.7%	10.2%	23.9%	2.77
Congestive Heart Failure	3.9%	2.7%	14.5%	6.22	Epilepsy	2.9%	3.4%	8.7%	2.72
Gastro-intestinal Malignancies	0.8%	0.3%	1.6%	6.08	Childhood Neurologic Problems	1.3%	0.8%	2.1%	2.60
Disease of the Pulmonary Circulation	0.3%	0.3%	1.5%	5.99	Peripheral Arthritis Conditions	9.0%	7.6%	17.3%	2.53
Leukemia	0.3%	0.2%	1.0%	5.43	Infections, General	11.0%	14.7%	30.3%	2.52
Respiratory Malignancies	1.0%	0.4%	2.3%	5.35	Headaches	2.7%	4.3%	9.9%	2.44
Nutritional Deficiencies	1.2%	1.1%	5.6%	5.28	Congenital Anomalies	1.1%	1.1%	2.6%	2.42
Congenital Cardiovascular Anomalies	0.4%	0.4%	1.8%	5.10	Upper Gastro-Intestinal Disorders	9.2%	10.7%	21.9%	2.35
Immune Disorders	0.7%	0.7%	3.2%	4.89	Hypertension	15.5%	12.5%	24.8%	2.31
Ischemic Heart Disease	4.6%	3.1%	13.1%	4.79	Ovarian Dysfunction	0.4%	0.4%	0.9%	2.28
Bleeding Disorders	0.9%	0.7%	3.3%	4.61	Inflammatory Bowel Disease	5.7%	8.2%	16.7%	2.27
Cerebrovascular Disease	3.4%	2.5%	10.4%	4.49	Asthma	6.6%	8.7%	17.5%	2.23
Hereditary Anemia	0.1%	0.1%	0.4%	4.21	Superficial Injuries, Contusions, Abrasions	7.1%	10.6%	20.7%	2.19
Peripheral Vascular Disease	2.0%	1.5%	6.0%	4.20	Diseases of the Spine	17.8%	21.2%	37.0%	2.17
Breast Cancer	0.8%	0.5%	2.0%	4.04	Gynecological Diseases	0.7%	0.9%	1.9%	2.15
HIV/AIDS	1.0%	1.0%	3.9%	4.01	Endocrine Disorders except Diabetes	5.5%	7.3%	14.1%	2.08
Neoplasm of Uncertain Behavior	2.7%	2.5%	8.8%	3.78	Diseases of the Upper Respiratory Tract	28.1%	34.6%	51.9%	2.04
Perinatal Problems	0.4%	0.6%	1.9%	3.35	Diseases of Peripheral Nervous System	11.8%	13.5%	24.1%	2.04
Connective Tissue Disorders, Polymyalgia	0.7%	0.6%	1.9%	3.23	Male Genital Tract Disease	1.9%	1.8%	3.2%	1.85
Fractures	4.8%	5.8%	16.6%	3.20	Infections with Public Health Implications	2.2%	3.0%	5.3%	1.77
Eating Disorders	3.3%	4.0%	11.5%	3.10	Sprains and Strains	11.8%	16.7%	25.9%	1.74
Poisoning by Medicinal & Biological Subst.	1.6%	4.5%	12.7%	3.10	Disorders of the Eyes	25.2%	25.4%	35.8%	1.64
Chronic Obstructive Pulmonary Disease	8.4%	8.9%	23.1%	3.08	Non-malignant Disorders of the Breast	3.3%	4.4%	6.9%	1.62
Hepatitis and Liver Diseases	2.9%	3.6%	10.1%	3.01	Lipid Disorders	7.5%	7.4%	11.1%	1.56
Poisoning by Non-medicinal Substances	0.6%	1.3%	3.6%	2.91	Complications of Pregnancy	1.9%	2.3%	3.0%	1.32
Skin Diseases	21.9%	27.1%	51.1%	2.81					

**Table D-2.**

*Adult GA-U Clients*

*Disease Prevalence Rates*

*Odds Ratios: Disease in High Medical Cost Group vs. All Mental Health Division Clients*

Primary Diagnosis	Prevalence Rates			Odds Ratio:	Primary Diagnosis	Prevalence Rates			Odds Ratio:
	All Adult Clients	All Adult MHD Clients	High Medical Cost Adult MHD Clients	High Medical Cost MHD to All MHD		All Adult Clients	All Adult MHD Clients	High Medical Cost Adult MHD Clients	High Medical Cost MHD to All MHD
Gastro-intestinal Malignancies	0.4%	0.1%	1.0%	9.79	Fractures	8.6%	5.6%	14.0%	2.72
Congenital Cardiovascular Anomalies	0.3%	0.2%	1.0%	6.11	Skin Diseases	15.4%	17.4%	36.4%	2.71
Immune Disorders	0.5%	0.3%	1.7%	6.09	Sprains and Strains	14.6%	16.5%	34.9%	2.71
Respiratory Malignancies	0.4%	0.1%	0.6%	4.86	Hepatitis and Liver Diseases	3.2%	3.1%	8.0%	2.70
Leukemia	0.1%	0.0%	0.2%	4.76	Asthma	4.3%	5.6%	13.6%	2.67
Disease of the Pulmonary Circulation	0.1%	0.0%	0.2%	4.76	Superficial Injuries, Contusions,	6.6%	9.2%	21.1%	2.63
Nephritis, Nephrotic Syndrome,	0.7%	0.3%	1.4%	4.74	Inflammatory Bowel Disease	6.4%	8.0%	18.6%	2.62
Gynecological Diseases	0.8%	0.6%	2.5%	4.43	Hypertension	8.8%	6.7%	15.3%	2.52
Peripheral Vascular Disease	1.1%	0.7%	3.1%	4.41	Poisoning by Medicinal & Biological	2.2%	5.8%	13.2%	2.48
Ischemic Heart Disease	2.4%	1.1%	4.8%	4.41	Chronic Obstructive Pulmonary Disease	5.1%	5.5%	12.4%	2.43
HIV/AIDS	0.9%	0.5%	2.3%	4.39	Childhood Neurologic Problems	0.1%	0.1%	0.2%	2.38
Cerebrovascular Disease	1.3%	0.9%	3.5%	4.03	Male Genital Tract Disease	1.6%	1.7%	3.7%	2.28
Congestive Heart Failure	1.6%	0.7%	2.9%	4.02	Infections with Public Health	2.5%	3.6%	7.6%	2.16
Nutritional Deficiencies	0.4%	0.4%	1.6%	3.82	Diseases of Peripheral Nervous System	8.9%	9.3%	18.2%	2.16
Eating Disorders	1.3%	1.6%	5.8%	3.77	Infections, General	7.2%	8.8%	16.9%	2.10
Bleeding Disorders	0.5%	0.4%	1.4%	3.71	Epilepsy	1.2%	1.3%	2.7%	2.05
Neoplasm of Uncertain Behavior	2.0%	1.2%	4.1%	3.49	Non-malignant Disorders of the Breast	2.3%	3.0%	5.6%	1.93
Congenital Anomalies	0.8%	0.7%	2.3%	3.29	Diabetes	5.7%	4.2%	7.8%	1.91
Upper Gastro-Intestinal Disorders	6.4%	7.5%	20.9%	3.26	Lipid Disorders	3.7%	3.4%	6.2%	1.86
Peripheral Arthritis Conditions	7.2%	5.3%	14.9%	3.13	Endocrine Disorders except Diabetes	3.3%	4.0%	6.8%	1.73
Headaches	2.6%	3.6%	10.5%	3.12	Disorders of the Eyes	17.0%	18.9%	28.7%	1.73
Diseases of the Upper Respiratory Tract	21.1%	27.5%	53.9%	3.09	Complications of Pregnancy	1.7%	2.4%	1.9%	0.80
Poisoning by Non-medicinal Substances	0.8%	1.6%	4.7%	2.94	Perinatal Problems	0.2%	0.3%	0.2%	0.70
Diseases of the Spine	20.9%	19.5%	41.5%	2.92	Ovarian Dysfunction	0.2%	0.3%	0.2%	0.65
Breast Cancer	0.4%	0.1%	0.4%	2.79	Hereditary Anemia	0.0%	0.0%	0.0%	-
Connective Tissue Disorders,	0.4%	0.4%	1.0%	2.79					

