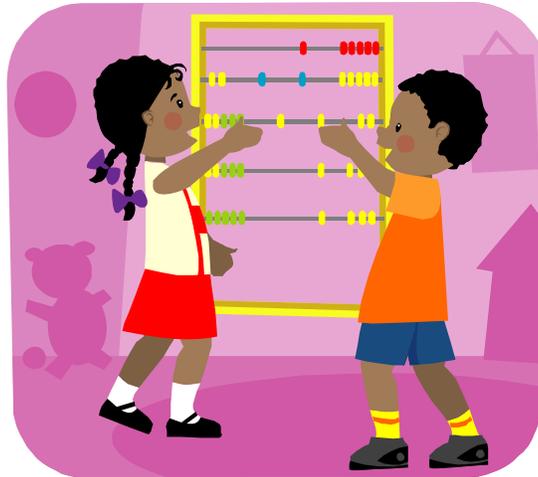


# When Child-Caring Agencies Share Data:

Mental Health Service Use  
By Children and Adolescents in Out-of-Home Placement  
Between July 1, 2002 and June 30, 2008



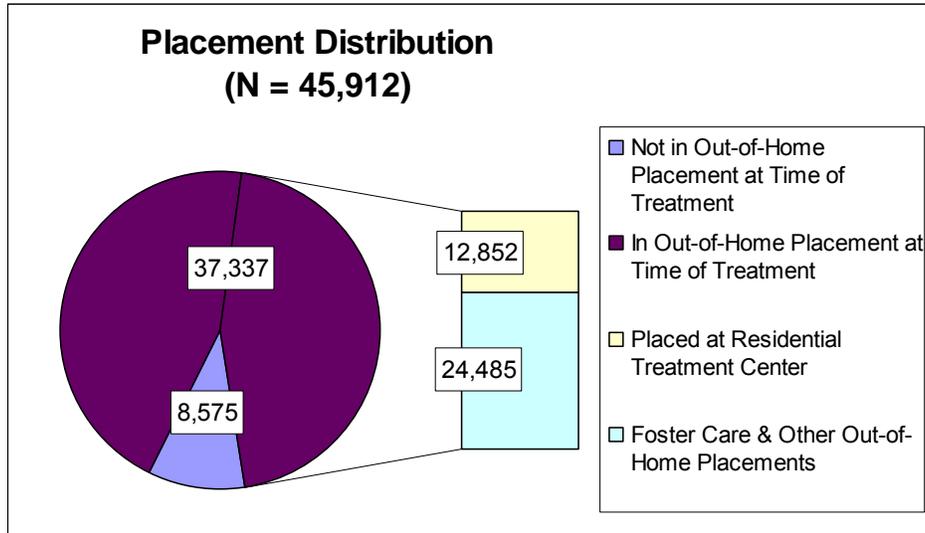
## **Introduction**

In February 2009 the Office of Children and Families at the Department of Job and Family Services' (OCF-JFS) provided an extract of 296,603 records from the Statewide Automated Child Welfare Information (SACWIS) to the Department of Mental Health (DMH). The SACWIS extract, which included children and adolescents placed in out-of-home care between July 1, 2002 and June 30, 2008, was used to calculate a measure in the Department's Balanced Scorecard, defined as the percent of children and adolescents in out-of-home placements who received mental health services during specified time intervals. The inter-agency data sharing agreement with JFS stipulated the measurement of time series data in six-month intervals, in part to meet the requirements of the Balanced Scorecard and in part to reduce administrative burden associated with aggregating and matching several hundred thousand records. The SACWIS extract contained a variable for start and/or end of placement within six-month intervals for all individuals in out-of-home placement. If the individual was placed in a residential treatment center (RTC) licensed by ODMH to provide treatment, the SACWIS extract contained a calculation for total number of days in RTC placement during the six-month period. Thus, the only lengths of stay (LOS) in the present analysis are those associated with placement in an RTC.

This matching of SACWIS records was done by DMH programmer Liping Xin, who compared Medicaid account and social security numbers, dates of birth, gender, and names to individuals enrolled in the Multi-Agency Community Services Information System (MACSIS). The SACWIS/MACSIS records comparison resulted in 51,350 unique cases for individuals in out-of-home placement who received mental health services. Of those 51,350 unique cases, 5,438 appear to have received services before July 1, 2002 or after June 30, 2000. This discrepancy is a matter of continuing analysis. Among other things, it points out the difficulties inherent in matching 300,000 SACWIS records with several million MACSIS records within aggregated time segments. For the present analysis, there were 45,912 confirmed cases where the consumer was in placement and received services during the same six-month interval.

Figure 1 shows the distribution of the matched sample by location of placement at time of services delivery.

**Figure 1**



**Description of Population**

Of the 45,912 matched cases depicted above in Figure 1, about 10% (N = 8,575) received services during the six year period, but not during the out-of-home placement period indicated in the SACWIS extract. On average, 21% of these cases received treatment prior to and 73% received treatment after the placement period indicated in SACWIS. Of entire matched sample, about 90% (N = 37,337) were in out-of-home placement during the same time as treatment delivery. About one-third (N = 12,582, 34%) of the out-of-home group were placed in residential treatment centers and the remaining two-thirds (N = 24,755, 66%) were in foster care or other settings such as group homes.

Mean and median ages and standard deviation (SD) for the three placement/treatment groups are as follows:

	<u>Mean</u>	<u>Median</u>	<u>SD</u>
Residential Treatment Center	14.49	15.00	2.67
Foster / Other Out-of-Home	10.60	10.50	4.49
Not in Placement at Time of Treatment	8.68	7.80	6.83

The differences in mean age in the three placement/treatment groups are statistically significant. This means the mean age distributions between the three conditions are not random, but the result of age being a factor that determines group assignment.

**Figure 2**

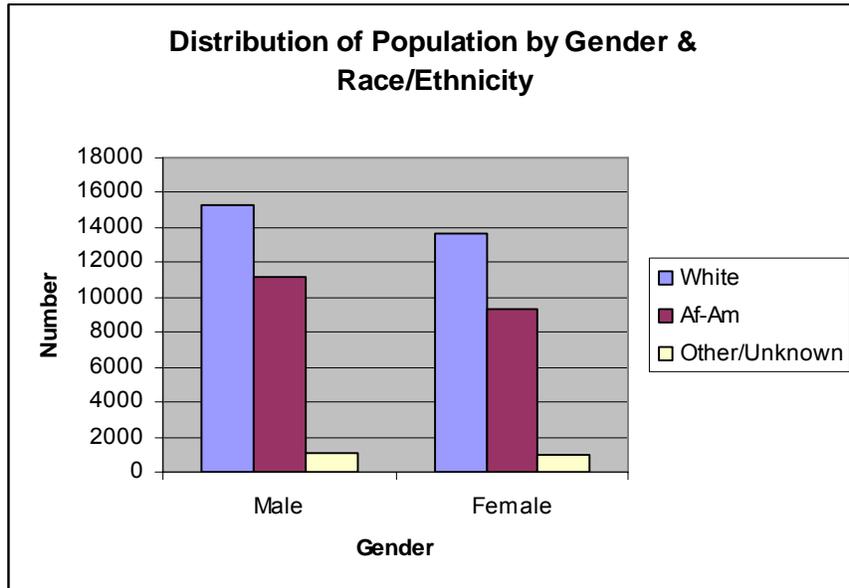
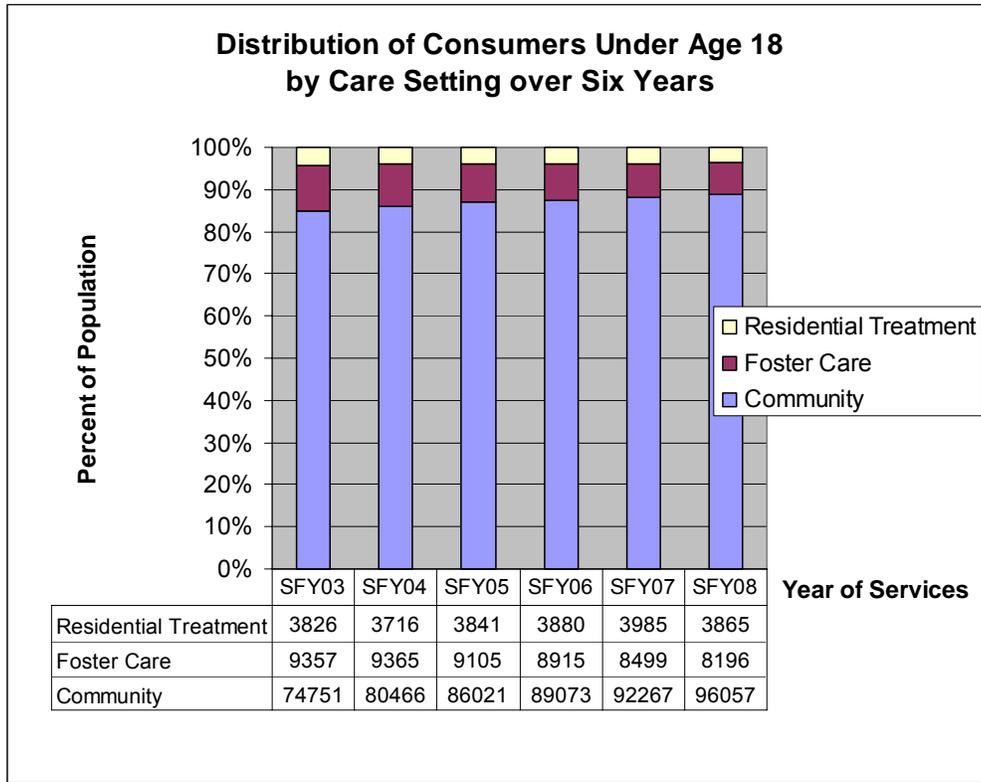


Figure 2 above shows the distribution of the out-of-home population (N = 45,373) by gender and race/ethnicity. Some 56% of the sample are White, 40% are African-American, and about 4% either unknown or “Other,” including Asian and Hispanic. About 53% of the population is male, and 47% is female. On the whole, White males are more likely to be in an out-of-home setting and receiving treatment than White females or African-Americans of either gender. Analyses of the gender by race distribution for each fiscal year did not reveal significant differences across time.

Figure 3 below shows a proportionate distribution of consumers under age 18 over a six-year period by three categories: Residential Treatment, Foster Care or other out-of-home placement, and Community (not in state custody). The “Community” category was derived from an unduplicated count of all consumers under 18 who received services during the fiscal year. (Henceforth in the analysis, the placement/treatment group identified as “Not in Placement at Time of Treatment” is included in the Community category.) The tables below show an unduplicated count of consumers by placement setting for each fiscal year.

**Figure 3**



The proportion of consumers who received services in Residential Treatment decreases from 4.4% in SFY03 to 3.6% in SFY08 in the service population. The proportion of consumers who received services in Foster Care decreases from 10.6% in SFY03 to 7.3% in SYF08. As shown in Figure 3, there is a six-year trend between SFY03 and SFY08 in which the number of consumers receiving treatment in foster care and other out-of-home settings (e.g., group homes) declined. During this time period, there was a decline in the total number of children and adolescents placed in out-of-home settings by child protective agencies. However, during that same time period the number of children and adolescents placed in OMDH-licensed residential treatment centers has remained stable relative to total numbers served in all settings. Over time, an increasingly larger proportion of consumers in out-of-home placements were treated in residential treatment facilities. For example, the proportion of the out-of-home population who received services in Residential Treatment increases from 29% in SFY03 to 32% in SFY08.

Figure 4

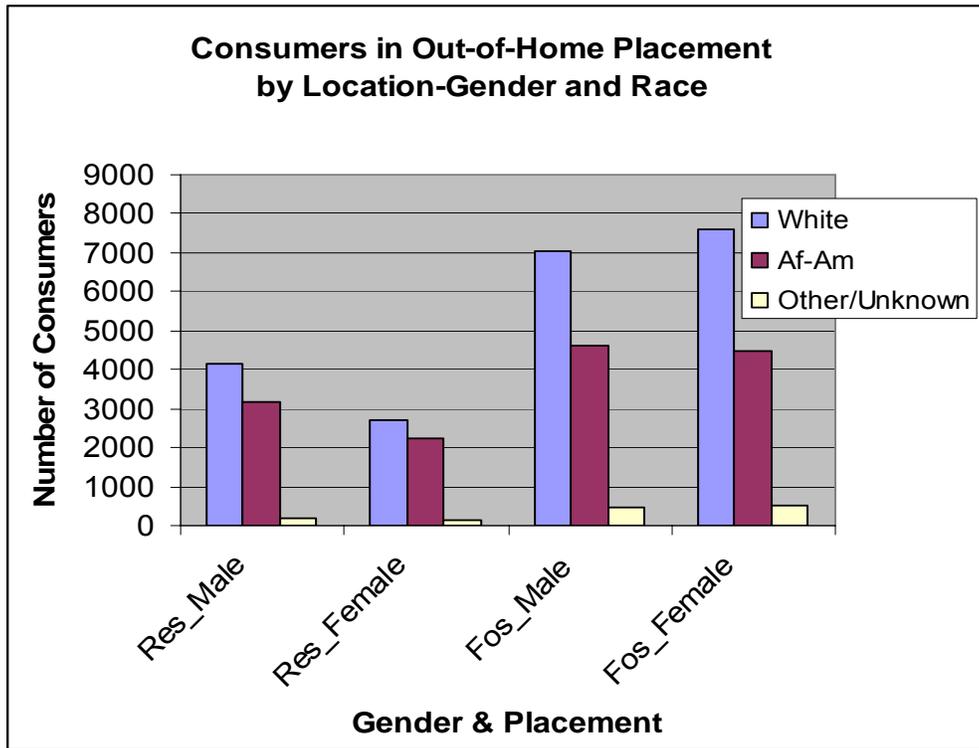


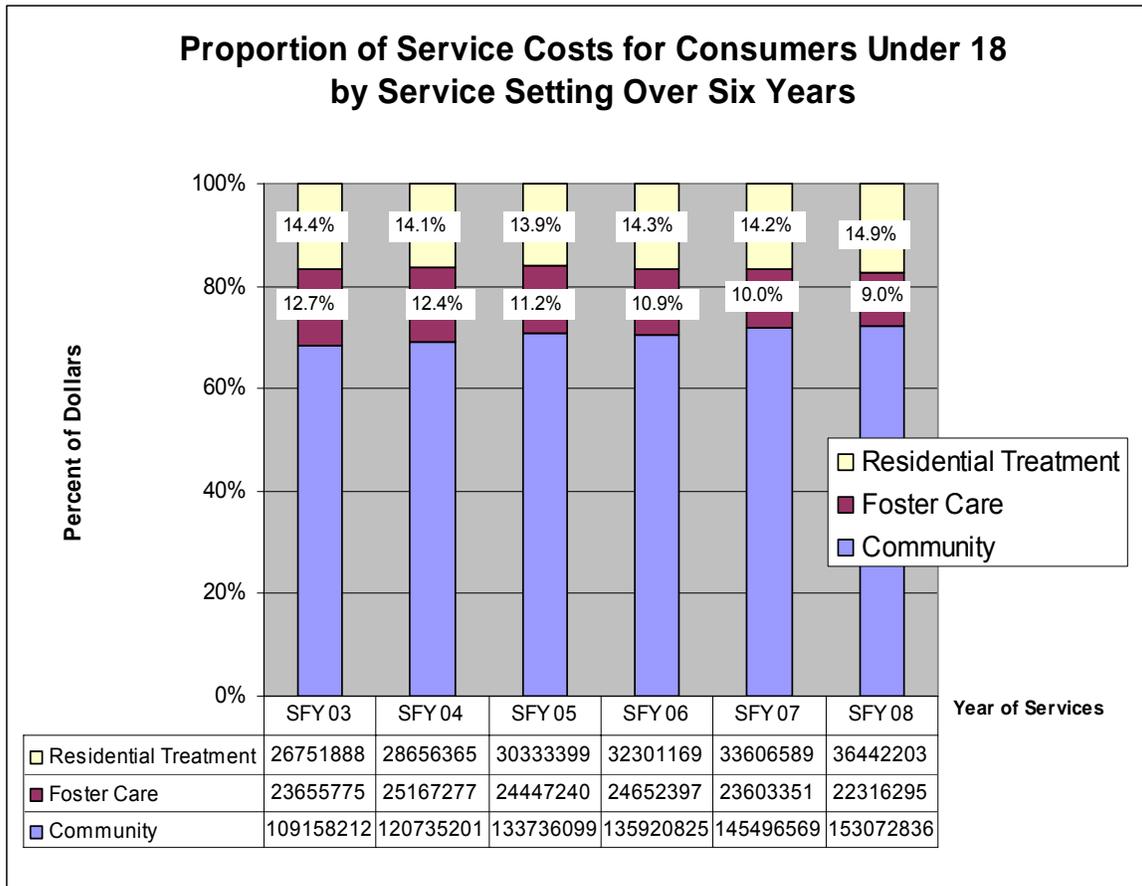
Figure 4 above shows the distribution of consumers who received treatment while in out-of-home care (N = 37,377) according to placement setting-gender and race. The prefixes “Res-“ and “Fos-“ respectively indicate “Residential and “Foster” or other out-of-home setting.

As shown in Figure 4, White males are the most typical consumer in Residential Treatment settings, followed by African-American males. The most typical consumers receiving treatment while in foster care and other out-of-home settings are White females, followed by White males. Analyses of the placement setting and gender by race distribution for each fiscal year did not reveal significant variability over time.

### Description of Costs

Figure 5 below shows the proportion of service costs for consumers under age 18 by three types of settings: Residential Treatment, Foster Care, and Community. The “Community” category was derived from total expenditures for all consumers under 18 who received services during the fiscal year. The tables below show total treatment dollars spent by placement setting for each fiscal year.

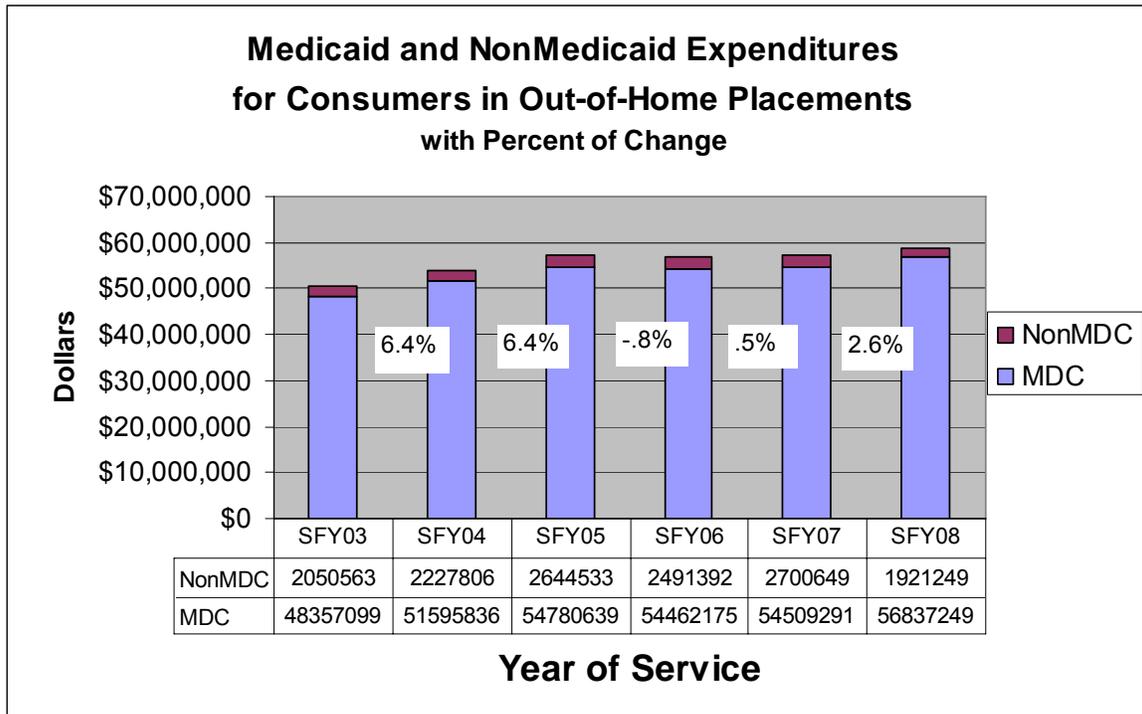
Figure 5



As seen in Figure 5, the proportion of total treatment dollars spent on consumers in foster care has declined over time, but the proportion spent on those in residential settings has remained stable relative to total expenditures.

Figure 6 below shows a six year trend in treatment expenditures for consumers in out-of-home placement. The dollar amounts covered by Medicaid (MDC) and NonMedicaid (NonMDC) sources of funding provide detail about the total expenditure for a fiscal year. Percents of change in total expenditures from one fiscal year to the next are also indicated.

Figure 6



As shown in Figure 6, there was a 6.4% yearly growth in expenditures on consumers in out-of-home placements between SFY03 and SFY05, followed by a decrease of .8% in SFY06. A small increase of .5% occurred in SFY07, followed by a larger increase of 2.6% in SFY08. There has been a steady growth in Medicaid, while the NonMedicaid expenditures have varied from a high of \$2,644,533 in SFY05 to a low of \$1,921,249 in SFY 08. The .8% decrease in SFY06 is due to a drop in both Medicaid and NonMedicaid expenditures that year.

**Residential Treatment**

As indicated in Figure 5, Residential Treatment ranges between 14.1% and 14.9% of all expenditures. As indicated in Figure 3, consumers who receive services in this treatment setting are on average 3.9% of the service population under age 18. For this reason, additional analyses of Residential Treatment are warranted. Figure 7 below shows a six year trend in treatment expenditures for consumers in Residential Treatment. The dollar amounts covered by Medicaid (MDC\_RTC) and NonMedicaid (NonMDC\_RTC) sources of funding provide detail about the total expenditure for a fiscal year. Percents of change in total expenditures from one fiscal year to the next are also indicated.

Figure 7

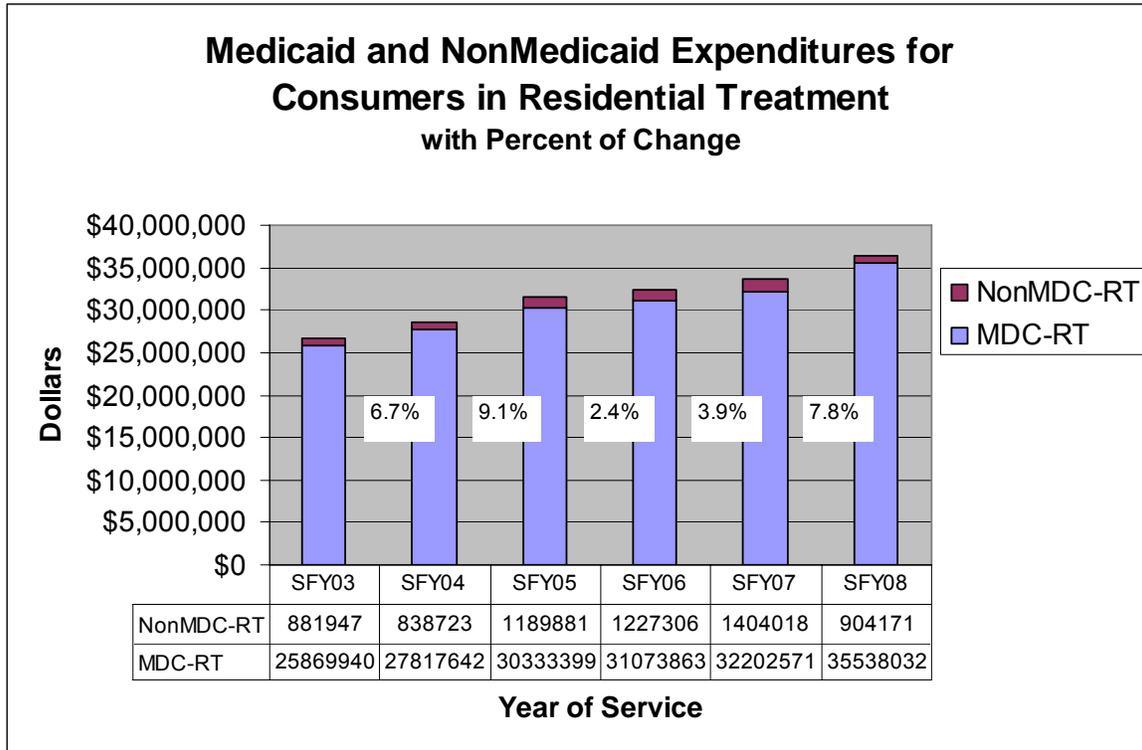
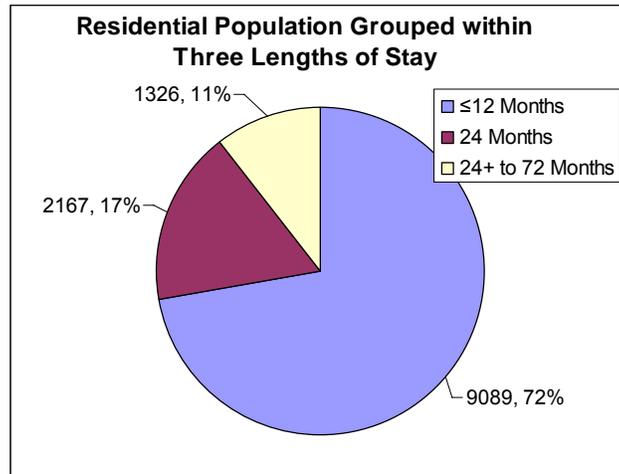


Figure 7 shows a six-year trend of increasing expenditures for treatment of consumers in Residential Treatment Centers (RTCs) licensed by ODMH. During this same period, the total number of consumers placed in RTCs has remained stable (See Figure 3) and there has been no increase in reimbursement rates for services. What might account for this increase in expenditures?

**Lengths of Stay**

Figure 8 below shows the distribution of consumers in the Residential Treatment population grouped in three lengths of stay (LOS): 1) Those with lengths of stay under 12 months; 2) Those with LOS between 12 and 24 months, and 3) Those with LOS greater than 24.1 and 72 months.

**Figure 8**



About 72% of consumers placed in RTCs had a length of stay that was less than 12 months. Another 17% had an RTC treatment episode of 12.1 to 24 months. Finally, 11% of consumers placed in RTCs have lengths of stay ranging from 2 to 6 years (24+ to 72 months).

In Figure 9 below, the distribution of treatment dollars for the three LOS groups is depicted. In this graph, about 34% of all expenditures for Residential Treatment are associated with the group with an LOS of 12 months or less. The group with an LOS of 12 to 24 months accounts for 29% of treatment expenditures, while those with an LOS of 2 to 6 years account for 37%--the largest proportion--of dollars spent on consumers placed in Residential Treatment.

**Figure 9**

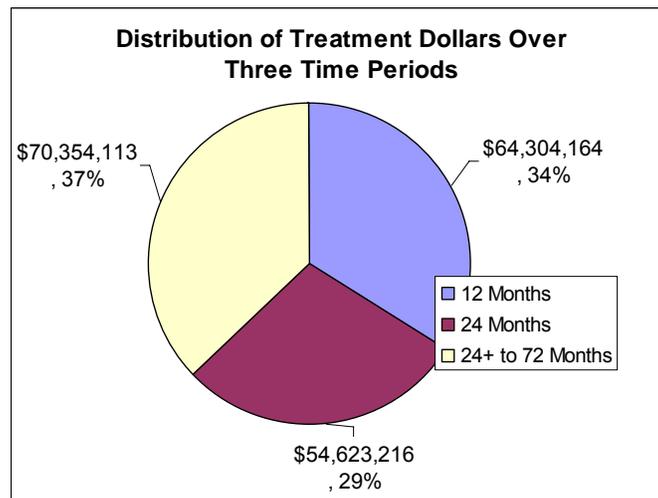
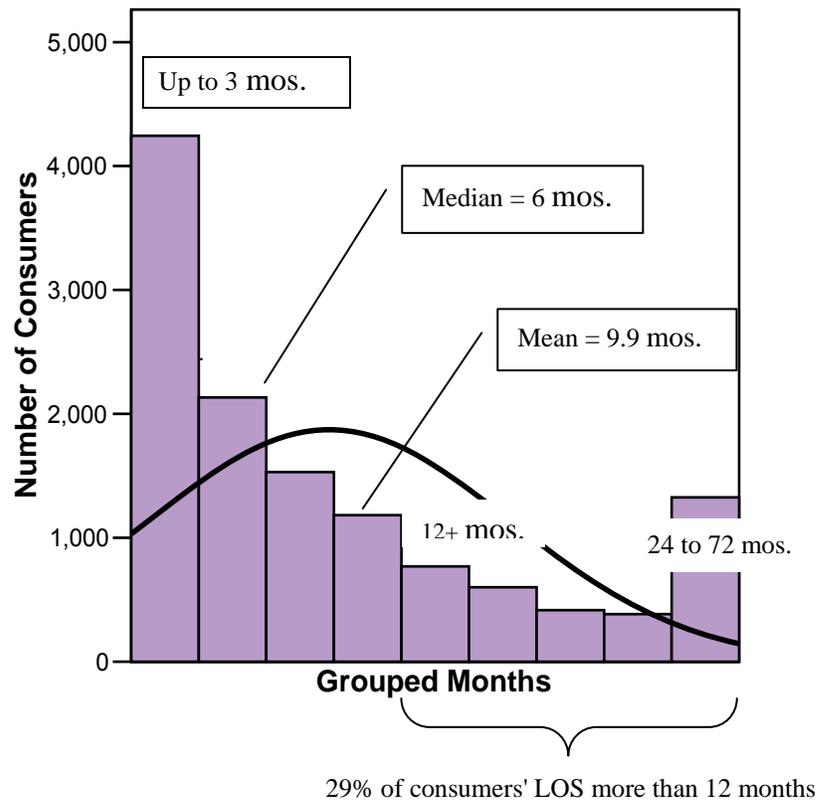


Figure 10 below shows the distribution of consumers (N = 12,852) placed in Residential Treatment between SFY03 and SFY08 by smaller increments of grouped LOS. The histogram's first 8 bars represent three month increments. The 9<sup>th</sup> bar, labeled "24 to 72 mos.," represents the tail of the distribution. As the histogram shows, 39% of consumers (N = 4920/12,852) placed in Residential facilities had a stay of 3 months or less. Another 32% of consumers (N = 4039/12,852) had a stay of 12 months or less, and 29% of the service population (N = 3623/12852) stayed more than 12 months.

**Figure 10**

### Distribution of Lengths of Stay for Consumers in Residential Treatment



The proportion of consumers (29%) with LOS greater than one year is associated with the annual admissions rate for RTCs. In Table 1 below, yearly admissions, total in placement at start of the year, and total served during the year are used to calculate an admission rate.

**Table 1**

<b>Year</b>	<b>Admissions During SFY</b>	<b>Total Served at Start of SFY</b>	<b>Total Served During SFY</b>	<b>Admission Rate</b>
<b>SFY 03</b>	2400	1426	3826	0.63
<b>SFY 04</b>	2253	1463	3716	0.61
<b>SFY 05</b>	2259	1582	3841	0.59
<b>SFY 06</b>	2174	1706	3880	0.56
<b>SFY 07</b>	2252	1733	3985	0.57
<b>SFY 08</b>	1979	1886	3865	0.51

Table 1 above shows the admission rate for Ohio’s RTCs has declined from a high of .63 consumers in SFY03 to a low of .51 consumers in SFY08. As a point of comparison, SAMHSA’s URS Tables<sup>1</sup> for 27 states’ data on Child & Adolescent Residential Treatment Centers reports an average admission rate of .95 consumers.

Table 2 above shows the mean lengths of stay at RTCs by racial grouping and gender.

**Table 2**

	<b>Mean LOS</b>		<b>Mean LOS</b>		<b>Race Totals</b>
	<b>Male</b>	<b>N</b>	<b>Female</b>	<b>N</b>	
<b>White</b>	28.1	4148	22.3	2714	6862
<b>Af-Am</b>	26.0	3149	21.3	2255	5404
<b>Other/Unk</b>	26.3	180	22.2	136	316
<b>Gender Totals</b>		7477		5105	12582

Males have longer LOS than females, and White males have longer LOS than any race/gender combination. This difference is statistically significant in all comparisons except that of White Males and Other/Unknown Males. This suggests that the condition of being a White Male has an influence on the length of stay.

<sup>1</sup> Found on 5/1/09 at <http://mentalhealth.samhsa.gov/cmhs/MentalHealthStatistics/URS2006.asp>  
5/8/09

Service data were analyzed further to look at the relationship between length of stay and the occurrence of a diagnostic assessment. Figure 11 below shows that within 30 days of placement in an RTC, fully 85% of consumers had received a diagnostic assessment. By three months, 91% of consumers had received a diagnostic assessment during their length of stay. By one year in placement, the number of consumers with a diagnostic assessment rose to 94%. Finally, only 4% of consumers placed in an RTC for more than 18 months had not received a diagnostic assessment within their length of stay in treatment.

**Figure 11**

