

**Delmarva Foundation**  
**Florida Statewide Quality Assurance Program**

**Psychotherapeutic Medication Use in Persons with Developmental Disabilities in  
Florida's Developmental Services Home and Community-Based Services Waiver**

**July 7, 2003**

**Submitted by the Delmarva Foundation  
Marcia F. Hill, M.S., Vice President for Florida Programs  
Linda Tupper, RN, CDDN, Nurse Reviewer  
and conducted in cooperation with MEDSTAT  
Jan Kelm, RHIA  
Rachel Thompson, M.P.H.**

**Funded by the State of Florida, Agency for Health Care Administration, Under Contract  
#M0225, "Statewide Quality Assurance Program for the Florida Home and Community-  
Based Services Waiver."**

## Introduction and Background

This study describes the use of psychotherapeutic medications in Florida's population of persons with developmental disabilities who receive services from the Developmental Services Home and Community Based Services (DS HCBS) Medicaid Waiver. This study is a component of a larger quality assurance/improvement initiative, the Florida Statewide Quality Assurance Project (FSQP), to address all services offered to consumers receiving services under the waiver program. The Delmarva Foundation through a contract with the Florida Agency for Health Care Administration administers this project. Medstat is a partner with the Delmarva Foundation providing data reporting and analytic support for this project through a sub contractual agreement

The use of psychotherapeutic drugs in persons with developmental disabilities is a complex issue that requires both policy-makers and front line treatment staff to navigate between two competing landscapes. On the one hand, psychotherapeutic drugs can be very effective for persons that have a "dual diagnosis" of a psychiatric or behavioral disorder and a developmental disability. On the other hand, greater care is needed in prescribing to this population given that 1) the differential effects of psychotherapeutic drugs on this population are not always well documented (Reiss, et. al, 1998), 2) individuals may be less able to communicate problems and side effects from these drugs and 3) distinguishing whether a given problem is a function of mental illness or the developmental disability can be difficult (Antochi, et. al, 2003). In addition, there is a history of inappropriate medicating of this population, particularly in using drugs as "chemical restraints" for a difficult individual. For this reason, it is especially important for practitioners to use caution in determining a treatment protocol.

There is some evidence that the prevalence of mental illness is higher in those with developmental disabilities than in the general population (Antochi, et. al, 2003, and Lovell, et. al, 1993). Over the past several decades, those with developmental disabilities who have been placed on psychotherapeutic medications have faced the same challenges as other persons on these drugs. Drug regimens, particularly for the older antipsychotics, have had serious and potentially long lasting side effects, despite early clinical indications of high levels of effectiveness. However, diagnoses of anxiety disorders, schizophrenia, specific mood disorders, and ADHD have all proven quite amenable to drug treatment, particularly using the newer drug regimens.

More recently, newer medications have been developed that are very effective for specific mental health disorders in persons with and without developmental disabilities. As a result, the indications for the use of psychotherapeutic medications have become more specific, and in particular mood disorders, anxiety disorders, schizophrenia and attention deficit hyperactivity disorders (ADHD) have all proven quite amenable to drug treatment (Antochi, et. al., 2003). Furthermore, there have also been advances in the understanding of and management of maladaptive behavior in persons with developmental disabilities. Development and use of behavior management techniques has lessened the need to manage maladaptive behavior with medication.

While this study assesses the use of psychotherapeutic drugs in Florida's developmental disability waiver population, it should be noted that there are still gaps in the research literature regarding treatment protocols for those with mental illnesses or behavioral problems and a developmental disability. A new article in the March, 2003, Postgraduate Medical Journal – “*Psychopharmacological Treatments in Persons with Dual Diagnosis of Psychiatric Disorders and Developmental Disabilities*” – reviews the major studies of pharmacological treatment of mental illness in persons with developmental disabilities and notes several difficulties in determining medication appropriateness based on the current literature. These include conflicting definitions of study populations (some studies include persons with milder illnesses, like learning disabilities, in their clinical trials), difficulties in attributing behaviors to the mental illness as opposed to the developmental disability, and limitations in the mental disorders that are included in the research studies of this population.

In an attempt to synthesize research findings in this area and to develop best practices, the International Consensus Handbook was created in 1998. The handbook was developed out of an international group of expert clinicians and researchers who were brought together to develop evidenced based and expert consensus guidelines for psychotherapeutic medication usage in persons with developmental disabilities. From this meeting of experts, a consensus statement was developed, with in-depth discussions of each class of psychotherapeutic medication.

In addition, the American Academy of Child and Adolescent Psychiatry recently published guidelines for the care of persons with developmental disabilities and mental illness or behavior problems (AACAP, 1999). Their recommendations overlap significantly with those of the Consensus Handbook. Therefore, we incorporated the major recommendations from the AACAP guidelines with those from the Handbook to form the synthesized guidelines referenced in *Appendix 1*.

As has been previously reported, evidence from the limited literature indicates that there are several potential problems in the prescribing of psychotherapeutic medications for persons with developmental disabilities. The following are examples of the types of medication errors found by researchers in the population of persons with developmental disabilities.

- Inappropriately high dosing of antipsychotic and anti-seizure medications (Buck and Sprague, 1989; Aman et al., 1986—in Reiss and Aman, 1998)
- Use of complex combinations of multiple medications which lead to behavioral and psychiatric complications from drug interactions and/or side effects (Buck and Sprague, 1989; Gadow and Poling, 1988—in Reiss and Aman, 1997)
- Use of sedative medications as chemical restraints, despite regulatory prohibition of the practice since the 1970's (Reiss and Aman, 1998)
- Increased mortality and hospitalizations due to drug overdosing or medication complications
- Under diagnosis or misdiagnosis of psychiatric illness in persons with developmental disabilities leading to lack of treatment or inappropriate treatment. (Santos and Baird, 1999)

Many of these “medication errors” were first identified in the 1970s and 1980s. During that period there was an increased awareness of the problem described in the medical literature, but it is not clear how much these problems still exist. It is clear that, as persons with developmental disabilities have steadily moved from large, self-contained institutional programs to community-based programs, more medical and psychiatric care and treatment are now provided in the community. As a result, there are not always an adequate number of general or specialty physicians with extensive training or experience in treating persons with developmental disabilities. (Reiss and Aman, 1998).

This study describes the use of psychotherapeutic drugs in the overall population, and then attempts to look at whether “medication errors” are a problem in the population by examining several drug profiles that could indicate a potential problem for a consumer.

## Study Goals

1. We describe the frequency of use of psychotherapeutic medications in persons enrolled in the DS HCBS Waiver. We describe the medication use by type of anti-seizure or psychotropic class of medications and then show the frequency of use for each class of medication by:
  - Age
  - Gender
  - Living situation (see definition below)
  - Developmental Disabilities Program Districts
  - Disability
2. Using the Consensus Handbook (Reiss and Aman 1998), an international consensus process among experts in the management of persons with developmental disabilities and mental health/behavioral problems, as a guideline, we identified several specific multiple medication profiles that could possibly put individuals with developmental disabilities at increased risk for complications and/or decreased quality of life.

## Study Design.

### *Dataset Development*

This study is based on Medicaid claims data from the Florida Medical Management Information System (FMMIS) and on consumer demographic data from the Department of Children and Families, Allocation, Budget and Contract (ABC) Control System. The FMMIS database contains all Medicaid claims for persons in the State of Florida, including claims for outpatient professional services, prescription medications, hospitalizations, emergency room visits, durable medical equipment and medical supplies. The database also includes all claims for Medicaid waiver services.

The facility and medical claims include the dates of service, primary and secondary diagnoses, procedures and treating provider. The pharmacy claims include the date and quantity dispensed,

the National Drug Code (NDC) for the medication prescribed, and the prescribing and dispensing providers. For this study, only claims data for individuals who are eligible for services through the Developmental Services Home and Community Based Services (DS HCBS) Waiver were used for analysis. Demographic data about individuals served through the DS HCBS Waiver was available through the ABC database, including primary disability, district and residential setting.

The FMMIS database from which we compiled the data for this study included all Medicaid claims paid over a continuous 39-month period, from September 1999 through March 2003, for persons in the DS HCBS Waiver program. This study included only claims for services incurred during the calendar year 2002 (January 1, 2002 through December 31, 2002). A 90-day lag period, between the end of the study period and paid date of the most recent available data, allows time for most claims to be received, processed and entered.

It is important to note that this study only analyzes services that were paid through Medicaid. Claims data or other medical expenditure or health care utilization data from any funding source other than Medicaid (such as Medicare and third party insurance) is not available to the Delmarva Florida Statewide Quality Assurance Program (FSQAP) for this study. As a result, we do not know how much consumers use other sources of payment for health care services and are unable to estimate the size of the bias introduced by looking at only Medicaid as the source of payment for health care services.

#### *Medication classification*

Redbook® and First DataBank® therapeutic classes were used to identify pharmacy claims for psychotherapeutic medications. The drugs were organized into the following groups (refer to Appendix 2 for a complete listing of the therapeutic classes used):

- ADHD Medication
- Anticholinergics
- Antidepressants– SSRI, tricyclic and other
- Antipsychotic – atypical and typical
- Anti-seizure medications
- Lithium
- Sedatives/Hypnotics - benzodiazapine and non-benzodiazapine

#### *Population Characteristics*

Based on demographic information available in FMMIS and the ABC databases, five demographic characteristics were selected for analysis:

- Age
- Gender
- Primary disability
- Developmental Disabilities Program Districts
- Living situation.

*Age* was displayed using the following groupings consistent with those recommended by the Data Work Group of the Interagency Quality Council (IQC):

- 3 to 17 years
- 18 to 21 years
- 22 to 25 years
- 26 to 44 years
- 45 to 64 years
- 65 + years

*Primary qualifying condition* refers to the disability category under which the person qualified for the Developmental Disabilities Program. Those with Cerebral Palsy (CP) often have Mental Retardation, however they are left in the CP category because it is their qualifying condition. Similarly, if any children with Spina Bifida, Autism or Prader Willi also had a diagnosis of Mental Retardation, they would be categorized by their other diagnosis.

A consumer's *living situation* was grouped into one of six categories and includes:

- Family Home
- Independent living or supported living
- Small Group Home (4-6 persons)
- Large Group Home (7 or more persons)
- Foster home (0-3 persons)
- Other/Unknown

## **Analysis Methods**

### *Psychotherapeutic medication descriptive analysis*

We profiled psychotherapeutic drug use by each of the drug groups and subgroups listed above, tabulating the percent of consumers who were prescribed drugs in each of the categories. We further analyzed the data by using the selected demographic characteristics of the consumers who received these medications during calendar year 2002 to create a profile of drug use by age, district and living arrangement.

### *Identification of individuals for medication profiles*

Using Guideline 2 from the International Consensus Handbook and Practice Parameters from the American Academy of Child and Adolescent Psychiatry (AACAP) (Appendix 1), we identified five specific medication-use profiles. These medication profiles or use patterns carry an increased risk for complications, such as impaired affect and/or intellectual functioning. We identified the frequency of these by age group, district and living situation.

1. On two or more sedative/hypnotic medications concurrently
2. On two or more antipsychotic medications concurrently

3. On Phenobarbital and another anti-seizure medication concurrently. (high potential for side effect, lack of effectiveness).
4. On two or more Selective Serotonin Reuptake Inhibitors (SSRI)
5. On Mellaril – greater than 25 milligrams

#### *Additional Analysis of Selected Medications*

For consumers who were 1) on greater than 25 milligrams of Mellaril or 2) receiving Phenobarbital and a second anti-seizure medication concurrently, a cross-tabulation by district and age group and district and living situation was compiled. These analyses will be provided to districts as individual profiles.

## **Results**

### *Demographic Characteristics*

As background information on the study population, Figure 1 presents the DS HCBS Waiver population (2002) by age grouping, gender, primary qualifying diagnosis, district and living situation. Within each characteristic, the total number of consumers is listed.

The majority of the waiver population is between 22 and 64 years old (68.6 percent), with a large minority being under 21 (30 percent). Males are overrepresented in the group as a whole, comprising 57 percent of the population.

The vast majority of people served on the DS HCBS Waiver qualify by having Mental Retardation (MR) as their primary disability; eighty-four percent of all waiver consumers qualified with a MR diagnosis. Only 9 percent qualified with Cerebral Palsy, 4 percent with Spina Bifida and 3 percent with Autism.

About two-thirds of the consumers (62 percent) live in the Family Home. Small group homes and independent living/supported living were the next most common living situation, representing 15 percent and 13 percent of consumers respectively. Few consumers reside in Foster Homes, but almost 6 percent were in large group homes (7-16 residents per home).

**Figure 1**  
**Florida Waiver Population Demographic Characteristics (2002)**

Population Characteristic	Number of Consumers	Proportion of Total Waiver Population
<b>Age Group</b>		
3 TO 17 years	5,303	21.7%
18 TO 21 years	1,968	8.0%
22 TO 25 years	2,502	10.2%
26 TO 44 years	9,984	40.8%
45 TO 64 years	4,302	17.6%
65 years and older	426	1.7%
<b>Total Children</b>	<b>7,271</b>	<b>29.7%</b>
Adults 22 to 64 years	16,788	68.6%
Adults 65 years and older	426	1.7%
<b>Total Adults</b>	<b>17,214</b>	<b>70.3%</b>
<b>Gender</b>		
Total Female	10,561	43.1%
Total Male	13,924	56.9%
<b>Primary Disability</b>		
Mental Retardation	20,543	83.9%
Cerebral palsy	2,108	8.6%
Autism	1,074	4.4%
High Risk	72	0.3%
DD PL Eligible	1	0.0%
Spina bifida	666	2.7%
Prader Willi	21	0.1%
<b>District</b>		
1 - Pensacola	1,353	5.5%
2 - Tallahassee	1,952	8.0%
3 - Gainesville	1,102	4.5%
4 - Jacksonville	1,954	8.0%
7 - Orlando	2,280	9.3%
8 - Fort Meyers	800	3.3%
9 - West Palm Beach	1,381	5.6%
10 - Fort Lauderdale	2,038	8.3%
11 - Miami	3,326	13.6%
12 - Daytona Beach	819	3.3%
13 - Ocala	1,277	5.2%
14 - Lakeland	814	3.3%
15 - Stuart/Fort Pierce	749	3.1%
23 - Tampa/St. Petersburg	4,328	17.7%
0 - Invalid	312	1.3%
<b>Living Situation</b>		
Family Home	15,082	61.6%
Independent/Supported Living	3,074	12.6%
Small Group Home	3,645	14.9%
Large Group Home	1,551	6.3%
Foster Home	453	1.9%
Other/Unkown	680	2.8%
<b>Total Waiver Population</b>	<b>24,485</b>	<b>100.0%</b>

*Medication Usage by Drug Group*

The percentage of consumers on psychotherapeutic drugs is displayed by medication type in Figure 2. About half (51.6 percent) of the individuals on the DS HCBS Waiver were on some type of psychotherapeutic medication. Over thirty percent of the population was on anti-seizure medications, the largest percentage in our profile. The high prevalence of these medications is expected given that they are used both for seizures and for several behavioral disorders. The second most common psychotherapeutic was antipsychotic medication, with 24 percent receiving either atypical or typical antipsychotics. As noted earlier, this data represents only those claims paid by Medicaid and does not include any medications paid through other payers or out of pocket.

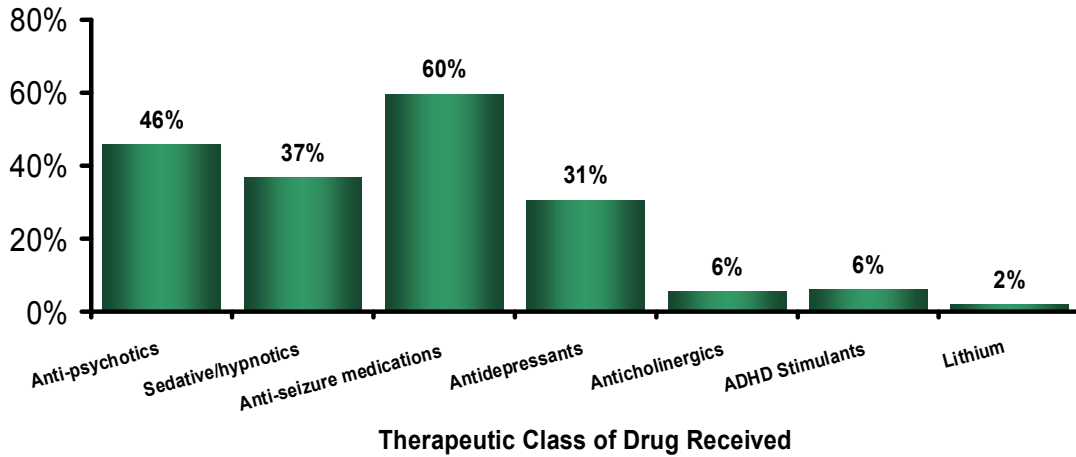
**Figure 2**  
**Psychotropic/Anti-seizure Medication Usage for Calendar Year 2002**

<b>Medication</b>	<b>Number of Consumers On Medication</b>	<b>Proportion of Total DD HCBS Waiver Population</b>
ANTIPSYCHOTICS – ANY	5,796	23.7 percent
- TYPICAL	1,694	6.9 percent
- ATYPICAL	4,921	20.1 percent
SEDATIVE/HYPNOTICS – ANY	4,649	19.0 percent
- BENZODIAZAPINE	3,372	13.8 percent
- NON-BENZODIAZAPINE	1,814	7.4 percent
ANTIDEPRESSANTS – ANY	3,868	15.8 percent
- SSRI	598	2.4 percent
- TRICYCLIC	3,443	14.1 percent
- OTHER	1,371	5.6 percent
ADHD MEDICATION	747	3.1 percent
LITHIUM	232	0.9 percent
ANTI-SEIZURE MEDICATIONS	7,532	30.8 percent
ANTICHOLINERGICS	710	2.9 percent
<b>ANY ANTI-SEIZURE OR PSYCHOTROPIC MEDICATION</b>	<b>12,646</b>	<b>51.6 percent</b>

*Distribution of Psychotherapeutic Drugs Among Those Receiving Them*

Figure 3 shows the distribution of psychotherapeutic drugs among those consumers who received at least one such drug. It is interesting to note that of those receiving psychotherapeutic drugs, close to two-thirds (60 percent) received anti-seizure drugs. Also, almost half of all consumers receiving a psychotherapeutic drug got at least one prescription for an antipsychotic (46 percent total).

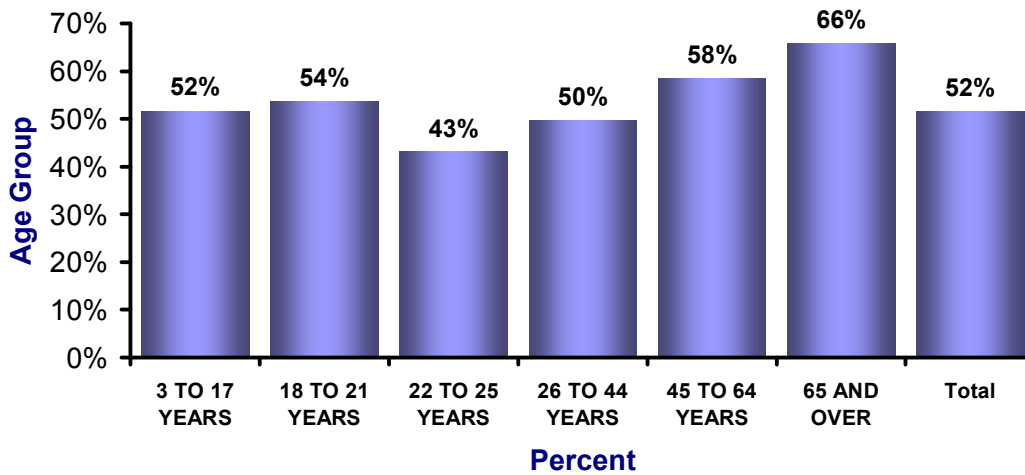
**Figure 3**  
**Distribution of Psychotherapeutic Drugs**  
**Among Those Receiving Them**



*Percentage of Medication Usage by Demographic Characteristics - Age*

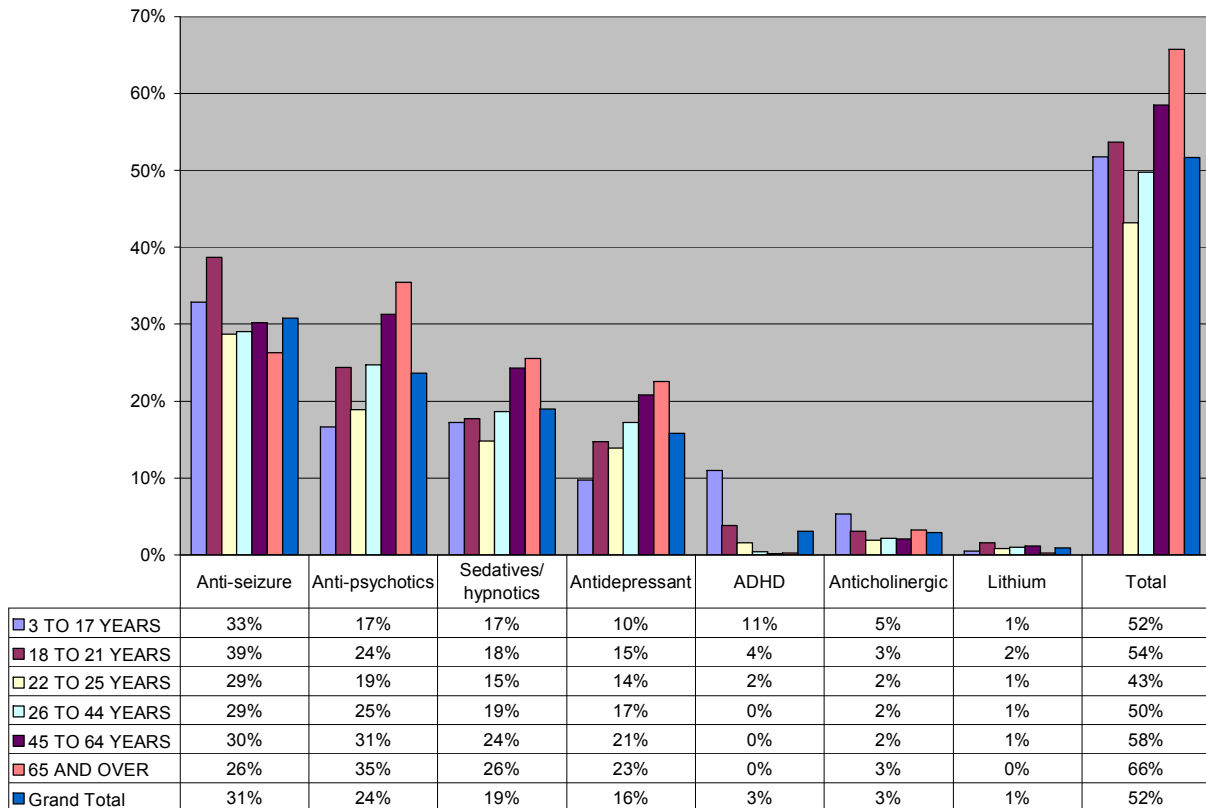
Figure 4 shows the overall distribution of psychotherapeutic drug use by age group. While about half of all consumers received a psychotherapeutic drug, those over 65 were most likely to receive a prescription (66 percent), and those between 22 and 25 had the lowest utilization (43 percent).

**Figure 4**  
**DD Waiver Consumers Receiving a**  
**Psychotherapeutic Drug in 2002**



A more detailed picture of psychotherapeutic drug use by age group and drug class is displayed in Figure 5. The use of sedatives and hypnotics appears to be most common in the older population, with twenty-six percent of those over 65 receiving such a drug compared with seventeen to nineteen percent in the under 44 population. Conversely, the use of ADHD medication is most common in the younger population, with eleven percent of 3 to 17 year olds receiving such a prescription but almost no usage in the older populations. The prevalence of both antipsychotic and antidepressant medication appear to increase with age.

**Figure 5**  
**Percent of Persons on Psychotropic Medication**  
**by Type and by Age Group**

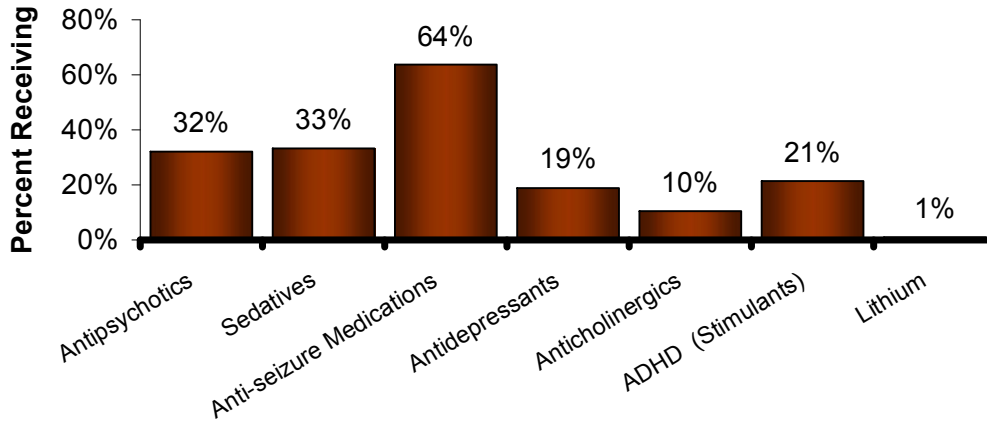


In order to provide more detail on a specific population of interest, children aged 3 to 17, Figure 6 displays the distribution of psychotherapeutics for this age group. Of all children receiving psychotherapeutic drugs, sixty-four percent received at least one prescription for an anti-seizure medication. Children are less likely to receive antipsychotics than other waiver participants, but they are still prescribed at a high level (33 percent versus 46 percent for the group overall)

**Figure 6**

**Distribution of Psychotherapeutics  
Among 3 to 17 Year Olds**

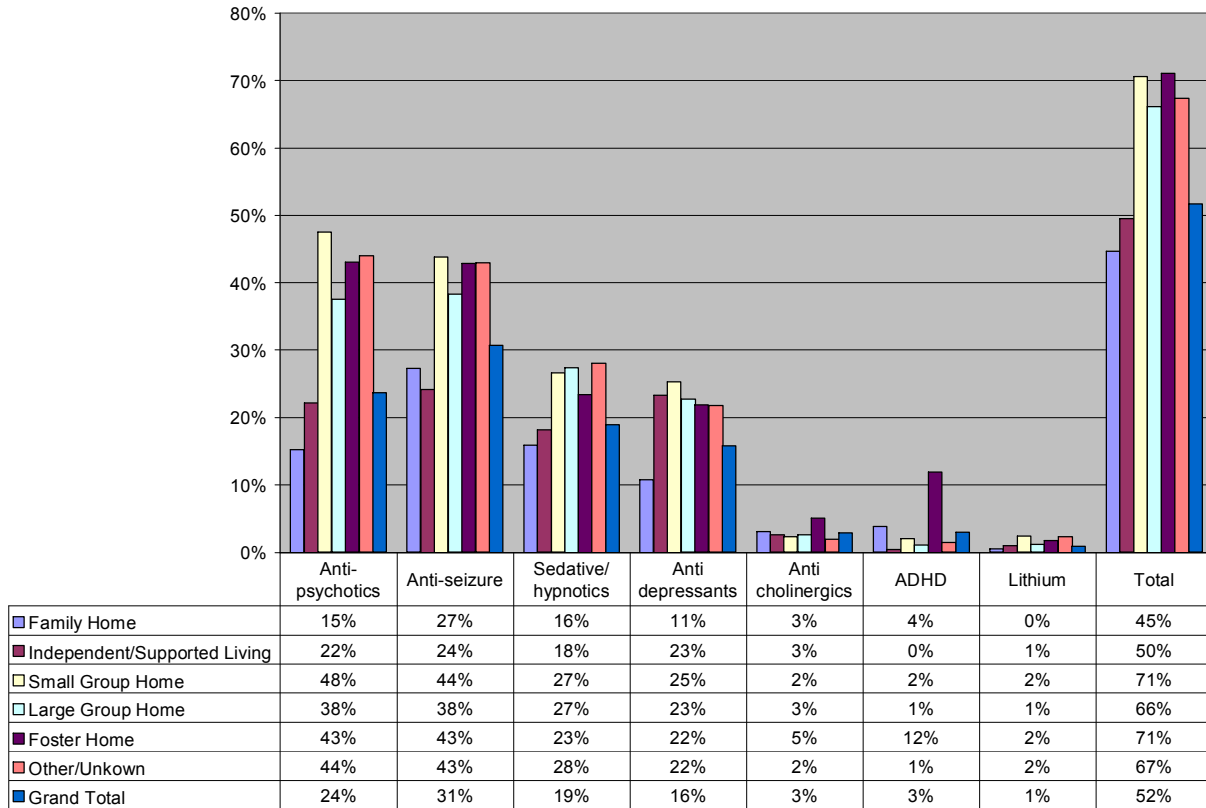
Receiving Any Psychotherapeutic Drug



*Percentage of Medication Usage by Demographic Characteristics – Living Arrangement*

Figure 7 shows the percent of persons on medication by type of medication and by living situation. Those residing in family homes and in independent/family living situations are least likely to be on psychotherapeutic medications (45 and 50 percent, respectively). Consumers in other living arrangements, including group homes and foster homes, have a much higher proportion of psychotherapeutic drug use, ranging from sixty-six to seventy-one percent. This may be an indication of more severe behavior problems among persons in group homes compared to family homes, or it may be related to an increased use of medicating by those in group homes versus family members in order to control behavior.

**Figure 7**  
**Percent of Persons on Psychotherapeutic Medication**  
**By Living Situation**



*Usage rate of Selected Multiple Medication Profiles*

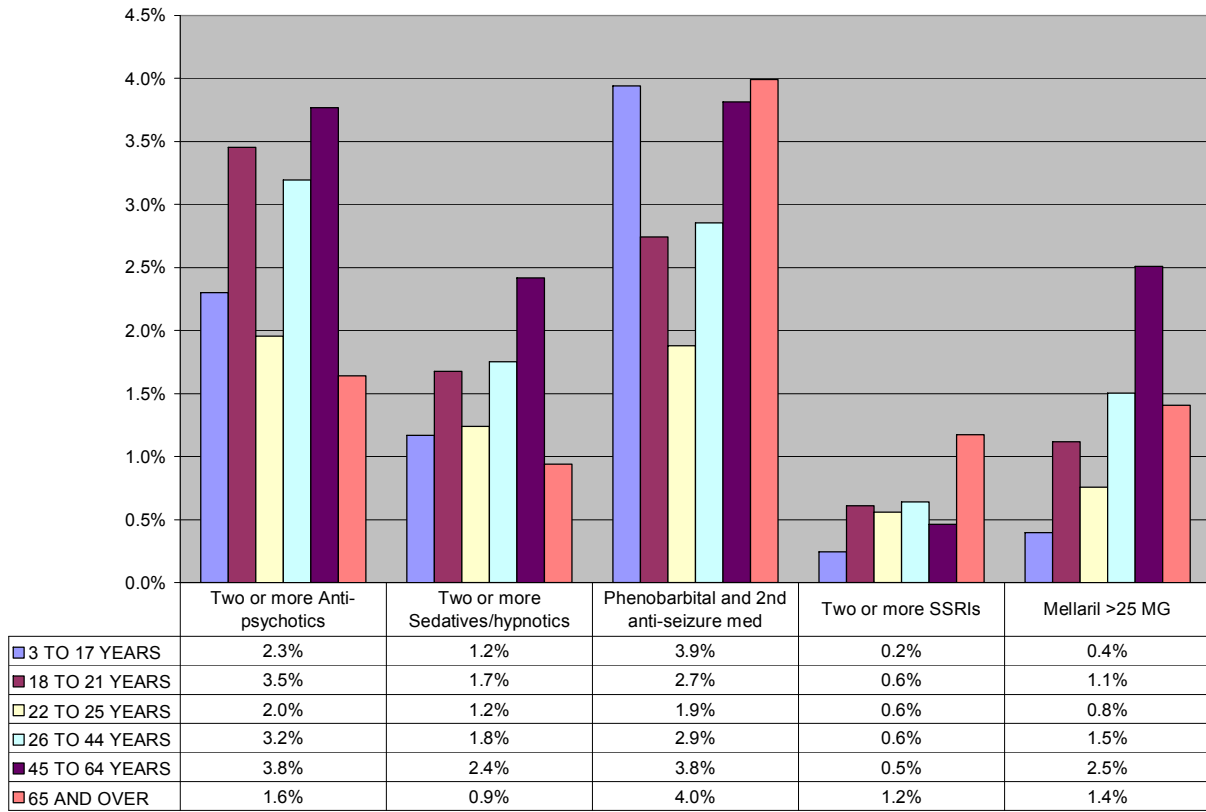
This section of the report analyzes selected medication profiles that are possible indications of individuals who need additional follow-up. Figure 8 displays the proportion of individuals on the DS HCBS Waiver that have one of the medication profiles we selected to study, distributed by age group. Figure 9 shows a more complete picture of the multiple medication profiles by age, living arrangement, and district. As noted previously, the profiles being studied include:

- On two or more sedative/hypnotic medications concurrently
- On two or more antipsychotic medications concurrently
- On Phenobarbital and another anti-seizure medication concurrently. (high potential for side effect, lack of effectiveness).
- On two or more Selective Serotonin Reuptake Inhibitors (SSRI)
- On Mellaril – greater than 25 milligrams

In general, all of the medication profiles selected for study occurred in a very small percentage of consumers, ranging from between one-half of one percent and three percent depending on the profile being studied. It is also important to note that this study can only identify medications that were prescribed and filled within the same time window, but that does not automatically

imply concurrent usage. Within the same month a consumer may have a prescription filled, take the medication for a limited amount of time, and then be switched to another medication in the same class or group. In terms of our analysis, this would count as concurrent usage because the two drugs were prescribed and filled within the same time period and had overlapping dosages. However, this study cannot capture whether or not a consumer completed both drug regimens.

**Figure 8**  
**Multiple Medication Profiles**



**Figure 9**  
**Selected Medication Profiles**

Age Group	Two or more Anti-psychotics	Two or more Sedatives/hypnotics	Phenobarbital and 2nd anti-seizure med	Two or more SSRIs	Mellaril >25 MG
3 TO 17 YEARS	2.3%	1.2%	3.9%	0.2%	0.4%
18 TO 21 YEARS	3.5%	1.7%	2.7%	0.6%	1.1%
22 TO 25 YEARS	2.0%	1.2%	1.9%	0.6%	0.8%
26 TO 44 YEARS	3.2%	1.8%	2.9%	0.6%	1.5%
45 TO 64 YEARS	3.8%	2.4%	3.8%	0.5%	2.5%
65 AND OVER	1.6%	0.9%	4.0%	1.2%	1.4%
<b>District</b>					
1 - Pensacola	1.8%	1.6%	3.1%	0.5%	1.2%
2 - Tallahassee	2.7%	1.4%	2.9%	0.3%	0.7%
3 - Gainesville	1.6%	1.3%	3.4%	0.2%	1.5%
4 - Jacksonville	3.1%	1.4%	3.3%	0.8%	1.5%
7 - Orlando	2.2%	1.4%	4.2%	0.6%	1.0%
8 - Fort Meyers	2.3%	1.0%	2.5%	0.8%	0.6%
9 - West Palm Beach	4.1%	1.7%	3.2%	0.4%	1.0%
10 - Fort Lauderdale	3.7%	0.8%	2.3%	0.6%	1.1%
11 - Miami	4.7%	3.4%	3.5%	0.5%	2.3%
12 - Daytona Beach	2.7%	2.4%	3.8%	0.2%	1.3%
13 - Ocala	2.7%	0.9%	3.0%	1.1%	0.3%
14 - Lakeland	1.5%	1.2%	3.4%	0.1%	3.3%
15 - Stuart/Fort Pierce	3.5%	1.2%	3.6%	0.9%	0.7%
23 - Tampa/St. Petersburg	2.6%	1.7%	2.7%	0.4%	1.4%
0 - Invalid	2.6%	1.3%	2.9%	1.0%	0.6%
<b>Program Component</b>					
Family Home	1.7%	1.3%	3.2%	0.3%	0.8%
Independent/Supported Living	2.2%	1.5%	2.0%	0.9%	0.6%
Small Group Home	6.9%	2.4%	3.4%	0.9%	3.0%
Large Group Home	5.6%	2.4%	4.1%	1.0%	3.7%
Foster Home	4.2%	1.8%	4.0%	0.9%	1.5%
Other/Unkown	6.0%	4.0%	4.1%	0.6%	2.4%
<b>Grand Total</b>	<b>3.0%</b>	<b>1.7%</b>	<b>3.2%</b>	<b>0.5%</b>	<b>1.3%</b>

Two or more concurrent antipsychotics, while sometimes appropriate, may also indicate inappropriate or non-traditional use of medications. The prevalence of this profile appeared to vary most by living situation, with 1.7 percent of consumers in family homes on two or more antipsychotics, but 6.9 percent in small group homes and 5.6 percent in large group homes matching this profile.

The usage of two or more sedative/hypnotics was low at 1.7 percent of consumers, but was more common in the 45 to 64 years (2.4 percent) than in any other age group. There was also

considerable variation by district in this profile, with a low of 0.8 percent in district 10 and a high of 3.4 percent in district 11.

The medication profile of being on phenobarbital and a second anti-seizure medication was found in about 3.2 percent of the total DS HCBS Waiver population. The oldest and youngest consumers had the highest occurrence with 4.0 percent and 3.9 percent, respectively. Further investigation reveals that this most commonly occurs in large group homes and foster homes, both at about 4 percent of the consumers.

Concurrent use of two or more SSRI antidepressants was quite low, only one-half of one percent across all consumers and never higher than one percent in any age group, district, or program component. Likewise, the use of Mellaril at a higher dosage than 25 mg was also quite small, occurring in 1.3 percent of the population.

## Discussion and Recommendations

There are a number of interesting findings from this study, several of which may have direct policy implications for the Florida Developmental Services Home and Community Based Services Waiver Program and the Florida Medicaid Program. Again, it is important to note that these findings arise out of our analysis of Medicaid claims data, and that supplemental data on services received from other payers were not available for this study.

***About half (51.6 percent) of the individuals on the DS HCBS Waiver were on some type of psychotherapeutic medication.*** This number appears to be consistent with other recent research regarding the prevalence of psychotherapeutic use in persons with developmental disabilities. A recent review of the literature by Maria Valdovinos and Stephen Schroeder (2001) shows a similar percentage of psychoactive drug use among adults with developmental disabilities in studies performed in the late 1990s (with study results clustering around the 50 percent mark). It is interesting to note that this level of drug therapy probably represents a significant decline in overall prevalence from the previous two decades. The same literature review charts psychoactive drug usage in this population nearer to 70 percent in the 1970s and 65 percent in the 1980s (Valdovinos, et. al., 2001).

***About 14 percent of consumers were on a benzodiazepine drug,*** a drug class which should often be more closely supervised by the prescribing physician given the increased risk for dependence. A recent review of the literature on benzodiazepines in the population of persons with developmental disabilities notes that while this drug class can be used as an effective anti-anxiety medication, reactions to the drug can include hostile, self injurious, and aggressive behaviors, particularly in individuals who show evidence of these types of behaviors before starting treatment (Antochi, 2003).

***Recommendation:*** Clinical consensus is that these drugs, when used alone, should be prescribed for short periods of time (Antochi, 2003), and further study of the time periods for which consumers are on these drugs would be an appropriate follow-up for this report. Once treatment lengths are established, it may be appropriate to encourage the Department of Children and Families, Developmental Disabilities District Medical Case Management Teams to follow-up on at risk consumers.

***About 16 percent of consumers were on an antidepressant,*** an encouraging figure given that antidepressants have been found efficacious in dealing with depression in persons with developmental disabilities and in treating challenging behaviors like aggression, self-injurious behavior, stereotypies and distraction (Antochi, 2003). This figure is also considerably higher than prevalence rates for antidepressants for this population in the medical literature (Valdovinos, et. al, 2001). It is surprising, however, that such a large percentage of people are on the older, tricyclic, antidepressants (14.1 percent), when the newer medications are clearly the frontline first treatment of choice (Antochi, 2003). There is also research more recently showing that medications that impact serotonergic agents (the SSRIs antidepressants) can be helpful in treating behavioral difficulties, making the low prevalence of the newer SSRI antidepressants worth further investigation.

**Recommendation:** Additional analysis of the population being treated with the tricyclic antidepressants might be appropriate. More detailed study of factors like the length of treatment with a tricyclic drug and whether the tricyclic is used in conjunction with other drugs may shed some light on the high prevalence of these prescriptions. If a consumer has a long history of effective treatment with a particular tricyclic drug, it might be less appropriate to switch to a newer treatment, for example.

***A relatively large number of consumers (6.9 percent) are still on typical antipsychotics*** given that side effects from these drugs are prevalent and serious in comparison with the side effects from atypical antipsychotics. One of the most serious side effects, tardive dyskinesia, is reported in 20 to 30 percent of people with developmental disabilities that are treated with an atypical antipsychotic (Antochi, 2003). Further, the newer atypical antipsychotics have proven effectiveness in those with developmental disabilities and are particularly useful in treating symptoms of self-injurious and aggressive behavior. (Antochi, 2003).

**Recommendation:** Additional analysis of the population being treated with typical antipsychotics might be appropriate. As noted above, study of factors like the length of treatment with a typical psychotic and whether it is used in conjunction with other drugs will increase our understanding of whether or not these treatment protocols are efficacious for those individuals that are still on them. Some follow-up by district case-managers may also be appropriate.

***All of the medication profiles selected for study occurred in a very small percentage of consumers***, ranging from between one-half of one percent and three percent depending on the profile being studied. The highest prevalence among the drug profiles was for consumers who were prescribed phenobarbital and a second anti-seizure medication within the same month, with these consumers representing about 3.2 percent of the total DS HCBS Waiver population.

**Recommendation:** Since this profile of Phenobarbital and a second anti-seizure medication should be very rare among consumers, it is worth further investigation. It is important to note that this study can only identify medications that were prescribed and filled within the same time window, but that does not automatically imply concurrent usage. A more in-depth study of the individuals with this profile might show that both drugs are being prescribed over long periods of time, however, and that would warrant district follow-up.

## References

- AHCA/Florida. Statewide Quality Assurance Program for the Developmental Services Home and Community-Based Waiver. ITN – AHCA 0106, April 3, 2001 AHCA, Division of Medicaid.
- Aman, MG; Singh, NN (1988) The psychopathology instrument for mentally retarded adults: psychometric characteristics, factor structure, and relationship to subject characteristics. *Res Dev Disabil.* 1988; 9(3): 277-90.
- Aman, MG; Teehan, CJ; White, AJ; Turbott, SH; Vaithianathan, C (1989) Haloperidol treatment with chronically medicated residents: dose effects on clinical behavior and reinforcement contingencies. *Am J Ment Retard.* 1989 Jan; 93(4): 452-60.
- \_\_\_\_\_. American Academy of Child and Adolescent Psychiatry. Practice parameters of the assessment and treatment of children, adolescents and adults with mental retardation and comorbid mental disorders. *J Am Acad Child Adolesc Psychiatry.* 1999;38:5S-31S.
- Antochi R, Stavrakaki C, Emery PC. “Psychopharmacological treatments in persons with dual diagnosis of psychiatric disorders and developmental disabilities.” *Postgrad Med J.* 2003 Mar;79(929):139-46.
- Buck, JA and Sprague, RL (1989) Psychotropic medication of mentally retarded residents in community long-term care facilities. *Am J Ment. Retard.* 1989;93(6):\_\_\_\_\_.
- Closing the gap: a national blueprint to improve the health of persons with mental retardation: report of the Surgeon General’s Conference on Health Disparities and Mental Retardation.* Rockville, MD: US Department of Health and Human Services, PHS, Office of the Surgeon General, Washington, DC, 2002. (<http://nichd.nih.gov/publications/>)
- Davidson, PW; Cain, NN; Sloane-Reeves, YE; Van Speybroech, A; Segel, J; Gutkin, J; Quijano, LE; Kramer, BM; Porter, B; Shoham, I; Goldstein, E (1994) Characteristics of community-based clients with mental retardation and aggressive behavioral disorders. *Am. J. Ment. Retard.* 1994; 98; 704-716.
- DCF. Department of Children and Families: Building a Legacy of Quality. Fiscal Year 1998/1999 Annual Report. State of Florida, Tallahassee, 1999
- Lovell, RW and Reiss, AL., “Dual diagnoses. Psychiatric disorders in developmental disabilities.” *Pediatr Clin North Am.* 1993 Jun;40(3):579-92.

Reiss, S and Aman, M Eds. 1998 The International Consensus Handbook: Psychotropic Medications and Developmental Disabilities. Ohio State University Nisonger Center; Columbus, OH

Santosh, PJ and Baird, G (1999) Psychopharmacotherapy in children and adults with intellectual disability. *Lancet* 1999;354:233-42

Singh, NN; Ellis, CR; Wechsler, H (1997) Psychopharmacoepidemiology of mental retardation: 1966 to 1995. *J Child Adolesc Psychopharmacol* 1997; 7(4):\_\_\_\_\_

Valdovinos, Maria and Schroeder, Stephen, "Prevalence and Correlates of Psychotropic Medication Use Among Adults with Developmental Disabilities: 1970 – 1998". Presentation from the Kansas mental Retardation and Developmental Disability Research Center, presented at the Association for Behavioral Analysis Annual Conference, New Orleans, May 25-29, 2001  
<http://www.mrddrc.ku.edu/pubs/mvaldovinosABA2001.ppt>

**Appendix 1 - Guidelines  
Synthesized from the  
“International Consensus Handbook”\*  
and the  
“Practice Parameters American Academy of Child and Adolescent Psychiatry (AACAP)”\*\***

---

**Guideline 1: Definition of a psychotropic medication**

- a) Any medication used to stabilize or improve mood, mental status or behavior.

**Guideline 2: Psychotropic medication shall not be used excessively or inappropriately**

- a) Is the person on the medication an inappropriately long time, dosed very high or is on more than one psychotropic drug within the same class used?

**Guideline 3: Psychotropic medication must be used within the context of a coordinated multidisciplinary care plan designed to improve the individual’s quality of life.**

**Guideline 4. The use of psychotropic medication must be based on a psychiatric diagnosis or a specific behavioral-pharmacological hypothesis resulting from a full diagnostic and functional assessment.**

- a) Is the documented diagnosis appropriate for the medication?
- b) What are the specific target behaviors being treated?
- c) Is there a documented monitoring plan for the medication?

**Guideline 5. Written informed consent must be obtained from the individual, if competent or the individual’s guardian before the use of any psychotropic medication and must be periodically renewed.**

**Guideline 6: Specific index behaviors and quality of life outcomes must be objectively defined, quantified, and tracked using recognized empiric measurement methods in order to monitor psychotropic medication efficacy.**

- a) If the consumer is stable on psychotropic medications, s/he should be seen by psychiatrist every 3 months (AACAP, practice parameter, 12;/99, p 26S.) and more often when medication dosages are changed or new medications started.

**Guideline 7. Individual must be monitored for side effects on a regular and systematic basis using an accepted methodology that includes a standardized assessment instrument.**

**Guideline 8. When antipsychotic medication or other dopamine-blocking drugs are prescribed, the individual must be monitored for tardive dyskinesia on a regular and systematic basis using a standardized assessment instrument.**

- a) Regular is at least once every 6 months using any of the existing TD screening instruments
- b) If TD occurs, there should be follow up of the individual for 6 months after terminating the medication.

**Guideline 9: There must be regular and systematic reviews of all persons on psychotropic medications, which consist of regular clinical reviews by the professional prescribing the medication and regular behavioral reviews by other members of the multi-disciplinary team.**

- a) Every 3 months to 6 months if the person is stable, pharmacist reviews at least every 12 months

**Guideline 10: Practices to avoid (or medication practices to be monitored and reduced):**

- a) Long-term use of PRN orders
- b) Long term use of benzodiazepines and/or anti-anxiety medications—addiction potential
- c) Anticholinergic drug use without documented signs of extra pyramidal side effects.
- d) High doses of any antipsychotic medication

---

\* **The International Consensus Handbook: Psychotropic Medications and Developmental Disabilities.**

\*\* **Practice parameters of the assessment and treatment of children, adolescents and adults with mental retardation and comorbid mental disorders. *J Am Acad Child Adolesc Psychiatry.* 1999;38:5S-31S.**

**Appendix 2**  
**Psychotherapeutic Medications by Therapeutic Class by Brand Name**

ANTI-PSYCHOTICS		
Typical		Atypical
ABILIFY	PERMITIL	CLOZARIL
HALDOL	PROLIXIN	GEODON
LOXITANE	SERENTIL	RISPERDAL
MELLARIL	STELAZINE	SEROQUEL
MOBAN	THORAZINE	ZYPREXA
NAVANE	TRILAFON	
ORAP		

ANTI-DEPRESSANTS		
Tricyclic	SSRI	Other
ANAFRANIL	CELEXA	EFFEXOR
ASENDIN	LEXAPRO	REMERON
AVENTYL	LUVOX	SERZONE
ELAVIL	PAXIL	DESYREL
LIMBITROL	PROZAC	WELLBUTRIN
LUDIOMIL	SARAFEM	ZYBAN
NORPAMIN	ZOLOFT	
SINEQUAN		
TOFRANIL		
TRIAVIL		
VANATRIP		
VIVACTIL		

SEDATIVES/HYPNOTICS		
Benzodiazepines	Non-Benzodiazepines	LITHIUM
ATIVAN	AMBIEN	CIBALTH
<b>DALMANE *</b>	AQUACHLORAL SUPPRETTES	ESKALITH
DIASTAT	ATARAX	LITHOBID
<b>HALCION *</b>	BUSPAR	
LIBRIUM	EQUANIL	
PROSOM	SOMNOTE	
RESTORIL	<b>SONATA *</b>	
SERAX	<b>VISTARIL *</b>	
TRANXENE T-TAB		
VALIUM		
VERSED		
XANAX		

ANTI-SEIZURE		
BUTISOL SODIUM	GABITRIL	PRIMIDONE
CARBATROL	KEPPRA	RIVOTRIL
CELONTIN KAPSEALS	KLONOPIN	<b>SECONAL SODIUM *</b>
CLONAPAM	LAMICTAL	TEGRETOL
DEPAKENE	MEBARAL	TOPAMAX
DEPAKOTE	MYSOLINE	TRILEPTAL
DILANTIN	NEURONTIN	ZARONTIN
EPITOL	PEGANONE	ZONEGRAN
FELBATOL	PHENYTEK	

**Appendix 2**  
**Psychotherapeutic Medications by Therapeutic Class by Brand Name**

<b>ADHD MEDICATIONS (STIMULANTS)</b>		
ADDERALL	DEXEDRINE	METHYLIN
ADDERALL XR	DEXEDRINE SPANSULES	PEMOLINE
CONCERTA	DEXTROSTAT	<b>PROVIGIL *</b>
<b>CYLERT *</b>	FOCALIN	RITALIN
<b>DESOXYN *</b>	METADATE	

<b>ANTICHOLINERGICS</b>		
BENTYL	NULEV	SAL-TROPINE
CYSTOSPAZ	<b>PAMINE *</b>	SCOPACE
LEVBIID	PRO-BATHINE	SPACOL
LEVSIN	ROBINUL	TRANSDERM SCOP
NEOSOL		

\* Not on Florida Medicaid Preferred Drug List.  
 This is the updated list from the February 19, 2003, P&T Committee meeting.