

Use of Selected Psychotherapeutic Drug Profiles in Persons with Developmental Disabilities in Florida's Developmental Disabilities Home and Community Based Services Waiver

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Introduction and Background

This study is the third in a series of annual studies on the use of psychotherapeutic medications in Florida's population of persons with developmental disabilities who receive services from the Developmental Disabilities Home and Community Based Services (DD HCBS) Waiver. These studies have been conducted as part of the Delmarva Foundation's Florida Statewide Quality Assurance Program (FSQAP), a multi-year review of services and outcomes for people who are supported through the DD HCBS waiver. The Delmarva Foundation provides this program through a contract with the Florida Agency for Health Care Administration (AHCA) and in cooperation with the Agency for Persons with Disabilities (APD). Medstat is a partner with the Delmarva Foundation, providing data reporting and analytic support for this project through a subcontractual agreement.

Previous studies quantified the use of psychotherapeutic medications in the entire DD HCBS Waiver population including the use of five medication profiles identified as potentially high risk as they carry increased risk for complications.¹ These studies included analysis of medication use by consumer age, geographic location (district/area) and residential setting. Based in part on the findings from these two studies, and as a part of a contract amendment in the second year (FY 2002-2003), Delmarva agreed to provide quarterly reports to the APD districts on psychotherapeutic drug use. Each report is based upon statewide demographic data available through APD and claims data available through AHCA.

The intent of the quarterly reports was to provide the APD Medical Case Management staff information about psychotherapeutic medication utilization based on actual Medicaid drug claims. Initially, each district was to receive a report on each consumer in the district who had a Medicaid claim for a psychotherapeutic drug during the quarter. It quickly became apparent the large volume of data would not provide value to the Medical Case Management staff in supporting consumer health care. With input from the APD Medical Case Management staff and in consultation with the Delmarva Nurse reviewer, a target population and specific medication profiles were selected for inclusion in the Quarterly District Psychotherapeutic Drug Use Reports.

Individuals in paid group residential settings were identified as the target group within the DD HCBS waiver population to be reviewed. On going medication monitoring for this group is a priority responsibility for the district Medical Case Management staff. These settings include

¹ David Wood, MD, MPH, Linda Tupper, RN, Michael Collins, PhD, Jan Kelm, RHIA, and Eliana Steele-Friedlob, RN, MPH. The Epidemiology of Anti-Seizure and Psychotropic Medication Use in Persons with Developmental Disabilities in Florida on the Developmental Disabilities Home and Community-Based Services Waiver. Revised and Edited March 2003. Jan Kelm, RHIA and Rachel Thompson, MPH. Psychotherapeutic Medication Use in Persons with Developmental disabilities in Florida's Developmental Services Home and Community-Based Services Waiver. July 7, 2003. Both submitted to the Agency for Healthcare Administration, Florida. Please see for a detailed description of the methodology used to define each profile.

foster care (1 to 3 people); small group home (4 to 6 people); large group home (7 + people) and other residential.²

Medicaid drug claims associated with seven medication profiles were also identified for inclusion in the quarterly reports. Six of these were consistent with the profiles identified in the first two studies as high risk for complications:

- Two or more anti-psychotic medications
- Two or more sedative medications
- Phenobarbital and other anti-seizure medications
- Two or more selective serotonin reuptake inhibitors (SSRI)
- Mellaril (greater than 25 mg)
- Lithium

Additionally, Medicaid drug claims for Clozaril (generic name clozapine), an atypical anti-psychotic used for the treatment of schizophrenia, were also identified for inclusion in the quarterly report. Clozaril should be the last choice for treatment of this condition as it carries a high risk of complications and therefore, requires on going medical monitoring.

Other specific data elements were identified for inclusion in the quarterly district psychotherapeutic drug use profiles by the District Medical Case Management staff or policymakers. Each district/area report provides information by consumer including the consumer name, Medicaid ID, consumer age, the type(s) of drug profiles for which claims data were found, the prescribing physician(s) for each drug; the consumer's address; the generic name of drugs prescribed; and the date of the last medication review. Each quarterly report includes both a summary statewide analysis and district/area level information. Districts receive a copy of the data specific to the district, while a report is provided to the state that includes all district data. While the initial district quarterly drug use profiles were generated in draft format beginning in March 2003, it wasn't until October 2003 that district profiles were generated by Medstat using the data specifications described above.

Study Design and Objectives

In this study we analyze data collected and reported in the quarterly District Psychotherapeutic Drug Use reports for five quarters (2Q 2003 through 2Q 2004). The objectives of the study are:

- To examine characteristics and drug utilization of the target population;
- To identify potential trends or patterns of use by specific demographic characteristics;
- To determine the need for additions or modifications to the information provided in the district reports;

² See Appendix B for a list of all settings included in this category. Note, however, that people on the DD Waiver do not live in all of these types of settings.

- And, to recommend areas where more in-depth analysis or medical review may be indicated.

This study is based on pharmacy and medical claims data from the Florida Medical Management Information System (FMMIS) and on consumer demographic data from the Agency for Persons with Disabilities (APD), Allocation, Budget and Contract (ABC) Control System. The pharmacy claims include the date and quantity dispensed, the National Drug Code (NDC) for the medication prescribed, and the prescribing and dispensing providers.³ The medical claims data were used to identify consumers who received a Medication Review (a DD HCBS Waiver service). Demographic data on individuals served through the DD HCBS Waiver were available through the ABC database and the following four characteristics were used in this analysis:

- Age - was analyzed using the categories consistent with those recommended by the Data Work Group of the Interagency Quality Council (IQC) and utilized for other studies and data analysis;
- Gender;
- Location by Agency for Persons with Disabilities Program Districts (pre 2004 reorganization into Areas);
- Paid Residential Setting (Program Component (PC)) including foster home, small group home, large group home and other.⁴

Key study parameters and definitions include the following:

- Study period: Dates of service from April 1, 2003 through June 30, 2004.
- Consumers: The number of consumers is unique within each quarter or profile. If a consumer has more than one profile in a quarter, he/she is counted only once. Likewise, if a consumer is in the same profile for more than one quarter he/she is counted only once for the overall time period.
- District/Area: If a consumer resides in more than one district during the study period, the last district in which he/she resides is used for totals over all quarters.
- Age: Age at the end of the study period (6/30/2004) is used for all age analyses.
- Two or more anti-psychotics: Consumers with prescriptions for the anti-psychotics Mellaril and Clozaril are included in this profile if they have at least one other antipsychotic medication in a given month (e.g., Clozaril and Abilify).
- Residential care setting: If a consumer resides in more than one type of residential care setting during the study period, the last setting in which he/she resides is used for totals over all quarters.

³ First DataBank® therapeutic classes were used to identify FMMIS pharmacy claims within the seven drug profiles. Refer to Appendix A for a complete listing of the medications in each profile.

⁴ The current quarterly District Psychotherapeutic Drug Use Reports use the REC_SETT field from the ABC database to identify a consumer's *recommended residential setting*. A new field, SBPG_C1, has been added to the ABC database that reflects more accurately where the consumer actually resides. The REC_SETT field was used for the five quarterly reports on which this study is based and is used for this report to reflect consistency with the actual district reports. Subsequent district psychotherapeutic reports (beginning with 3Q 2004) will use the SBPG_C1 field to identify *residential setting*.

- Medication Reviews provided within six months from the time the specified drug(s) were dispensed were included in the district reports and in this analysis. A medication review within six months represents best clinical practice for the drug profiles included in this study.

Results

Demographic Characteristics

Table 1, on the following page, presents characteristics of the DD HCBS Waiver target population included in this study, i.e. age group distribution, gender, district and recommended residential setting. Of the approximate 31,000 individuals in Florida receiving services from the DD HCBS Waiver, there were 6,346 consumers who lived in a paid residential care setting during at least one quarter of the study period (2Q 2003 through 2Q 2004).

Of these 6,346 individuals, 21 percent (1,335) have drug claims that met one or more of the seven psychotherapeutic drug profiles in one or more quarters. The majority of this population is between 26 and 64 years old (73.2%), with 15 percent under age 21. The percent of consumers identified with a drug profile within each age group is relatively similar (20 to 22 percent), with the exception of those over age 65, who have a slightly smaller percent of people with a profile (15.6%). Males are overrepresented in the group as a whole, comprising 59 percent of the population. Male and female consumers are equally likely to have been identified with a drug profile.

Almost two-thirds of the consumers (61.1%) in residential care settings live in a small group home. The next most common setting is large group homes (23.1%). Residents in large group homes are somewhat less likely to have been identified with a drug profile than residents in small group homes or foster homes. However, the differences shown here are small and should not be over interpreted. Only 8.5 percent of the consumers in the study resided in settings other than small group, large group or foster homes. However, these consumers had the highest percentage of persons with profiles (25%).

The largest percent of consumers reside in District 23 (19.2%). Districts 1, 8 and 15 have a relatively small percent of consumers in residential settings, each approximately three percent. These percentages are fairly similar to the statewide distribution of the DD Waiver population across districts. Over the five quarters in the study, Districts 4 and 11 had on average the highest percentage of consumers with profiles, 27.2 percent and 26.9 percent respectively. District 8, with only 3.2 percent of the population in residential settings, had the lowest proportion, 15.3 percent of consumers identified with a drug profile.

**Table 1
Population Demographics of Consumers in Residential Care Setting
Services Incurred April 1, 2003 through June 30, 2004**

Population Characteristic	Number Consumers	Percent of Total Population	Number Consumers w Profiles	% of Consumers w Profiles
Age Group				
3 TO 17 YEARS	487	7.7%	102	20.9%
18 TO 21 YEARS	456	7.2%	90	19.7%
22 TO 25 YEARS	488	7.7%	110	22.5%
26 TO 44 YEARS	2,600	41.0%	572	22.0%
45 TO 64 YEARS	2,046	32.2%	419	20.5%
65+ YEARS	269	4.2%	42	15.6%
Gender				
Male	3,746	59.0%	811	21.6%
Female	2,600	41.0%	524	20.2%
District				
1	189	3.0%	37	19.6%
2	277	4.1%	64	23.1%
3	423	6.7%	69	16.3%
4	481	7.6%	131	27.2%
7	619	9.8%	119	19.2%
8	202	3.2%	31	15.3%
9	365	5.8%	85	23.3%
10	529	8.3%	115	21.7%
11	922	14.5%	248	26.9%
12	255	4.0%	52	20.1%
13	323	5.1%	67	20.7%
14	344	5.1%	71	20.6%
15	200	3.2%	44	22.0%
23	1,217	19.2%	238	19.6%
Recommended Residential Setting				
Small Group Home	3,894	61.1%	848	21.8%
Large Group Home	1,483	23.1%	267	18.0%
Foster Home	428	6.7%	86	20.1%
Other	541	8.5%	134	24.8%
TOTALS	6,346	100.0%	1,335	21.0%

Summary by Psychotherapeutic Drug Use Profiles

Table 2 displays a variety of information about the consumers in residential care settings within each profile.⁵ The second column shows the unique number of consumers within each profile, the profile of *Two or More Anti-psychotics* appears by far the most frequently (774). The profiles of *Two or More Sedatives* and *Two or More SSRIs* have the highest difference between the number of unique consumers within these profiles across all quarters and the average number of consumers per quarter, 54.1 percent and 71.9 percent respectively. This informs us the population of consumers identified in these profiles changes more on a quarterly basis, with fewer individuals remaining on these drugs for multiple quarters, as compared to other drug profiles. This would be consistent with some of these individuals being evaluated on new drug regimens over time. In contrast, the number of unique consumers receiving Clozaril over five quarters (43) is very close to the quarterly average (40), which indicates that this is a more stable population with little change from quarter to quarter.

Table 2 Consumers with Profiles Statewide – All Five Quarters						
DRUG PROFILES	Total Unique Consumers w/Profile	Average per Quarter	Difference Total Unique vs. Average	Percent of Consumers w/Profile	District(s) w/Largest Percent of Consumers	District(s) w/Highest Number of Consumers
Clozaril	43	40	7.9%	0.7%	4	4
Lithium	119	100	16.3%	1.9%	13 and 15	23
Mellaril > 25 mg	145	119	17.8%	2.3%	14	11
Phenobarb and other anti-seizure	227	196	13.7%	3.6%	7	7
Two or more anti-psychotics	774	455	41.2%	12.2%	11	11
Two or more sedatives	241	111	54.1%	3.8%	11	11
Two or more SSRI	69	19	71.9%	1.1%	1	23
Total Profiles	1,618	1,039	35.8%			
Total Unique Consumers	1,335	904				
Total Consumers in Recommended Residential Settings	6,346	6,200				
% of Consumer with Profiles	21.0%	14.6%				

Additional overall findings:⁶

- Close to 45 percent of consumers with profiles (599) appeared in all five quarters of the study while 24 percent (321) appeared only in one quarter.
- Over 17 percent of consumers with profiles had more than one profile (233).

⁵ See Appendix C, Exhibit 1 for a more detailed description by quarter.

⁶ See Appendix C, Exhibit 4 for additional information on consumers with profiles in multiple quarters and consumers with multiple profiles.

- The percent of consumers with more than one profile has dropped from 14.7 percent in the second quarter of 2003, to 12.7 percent in the second quarter of 2004.
- The three most common combinations of profiles were *Two or More Anti-psychotics* and *Two or More Sedatives* (60), *Two or More Anti-psychotics* and *Mellaril (>25 mg)* (47), and *Two or More Anti-psychotics* and *Lithium* (45).

The following section summarizes findings across the different profile types. In many instances we examine the data to see if what we expect in a certain sub-category of the sample is reflected in the results. The expected results for this analysis are based on comparisons to the population of interest (6,346 consumers in residential settings). Other factors which might impact variations in comparison of the results have not been considered for this analysis. In other words, all else being equal, we would expect that people of all ages are equally likely to use Clorazil (i.e., age does not effect use rates), so we would expect the age distribution of consumers with this profile to be similar to the age distribution of the population. Differences of five percentage points or more are noted. In addition, when analyzing across categories such as districts or age groups, the number of people in each category can be quite small. Interpretation of results must be made with caution.

Two or More Anti-psychotics⁷

- The highest number of consumers in residential care settings had this profile (774).
- The distribution across residential settings is similar to the average in the sample population for all profiles.
- District 11 had the most consumers with this profile, 160 or 20.7 percent, and is also the only district that varies significantly from what we would expect given the sample population distribution—more that six percentage points higher.
- While 41 percent of the sample population is age 26 to 44, 46 percent of consumers with this profile were age 26 to 44, five percentage points higher than expected.
- Sixty consumers with this profile were also receiving two or more sedatives and 20 were receiving Two or More SSRIs.

Two or More Sedatives

- The distribution across residential settings is similar to the average in the sample population for all profiles, with the exception of consumers in the “other” category. Over 17 percent of consumers in this category were identified with this profile, over seven points higher than expected.
- District 11 had the most consumers with this profile and is also the only district with a considerably higher than expected number of consumers on two or more sedatives.
- The distribution across age groups for this profile is similar to the population distribution.
- This profile occurred in combination with five of the other profiles, and most often with Two or More Antipsychotics (60).

⁷ The following information on each profile is summarized from Exhibits 4 through 8 in Appendix C.

Phenobarbital and Other Anti-seizure Medication

- 55.9 percent of the 227 consumers receiving phenobarbital and at least one other anti-seizure medication reside in small group homes, somewhat less than expected.
- District 7 has a higher than expected percent of consumers with this profile, with 9.8 percent of the study population and 18.5 percent on this profile. Conversely, District 23 has a lower than expected percent with this profile.
- Close to 13 percent of consumers with this profile are under age 18, compared to the average for children of 7.7 percent on any profile. A somewhat lower than expected percent of consumers are in the 26 and 44 age group.
- 20 consumers with this profile were also receiving two or more anti-psychotics and 17 were receiving two or more sedatives.

Two or more SSRIs

- A less than expected proportion of consumers with this profile reside in small group homes (53.6%) but a greater than expected proportion reside in Foster Care (13.0%).
- Only District 1 varies from the proportion of consumers prescribed two or more SSRIs than is expected, with 10.1 percent while representing only three percent of the population. However, this represents only seven people.
- This profile occurs relatively less than expected among 22 to 25 year olds and more than expected among adults age 45 to 64.
- While females comprise only 41.0 percent of the population, 59.4 percent of consumers prescribed two or more SSRIs were female, much higher than expected.

Mellaril(>25 mg)

- 53.1 percent of the 145 consumers receiving greater than 25 mg of Mellaril resided in small group homes, much less than the population on average. However, over 35 percent of consumers on this profile resided in large group homes, greater than the average of 23.1 percent and more than for any other profile.
- Districts 11 and 14, have a higher than expected proportion of consumers on Mellaril, with over a six percentage point difference compared to the population.
- While nearly 15 percent of consumers in the population are under age 21, 7.5 percent with this profile are under age 21, less than expected. The percent on this profile in the 26 to 44 age range is also somewhat less than expected. However, the percent of consumers on this profile age 45 to 64 is considerably greater than expected, 46.2 percent compared to 32.3 percent in the population.
- 47 of the consumers with this profile were also receiving at least one other anti-psychotic medication.

Lithium

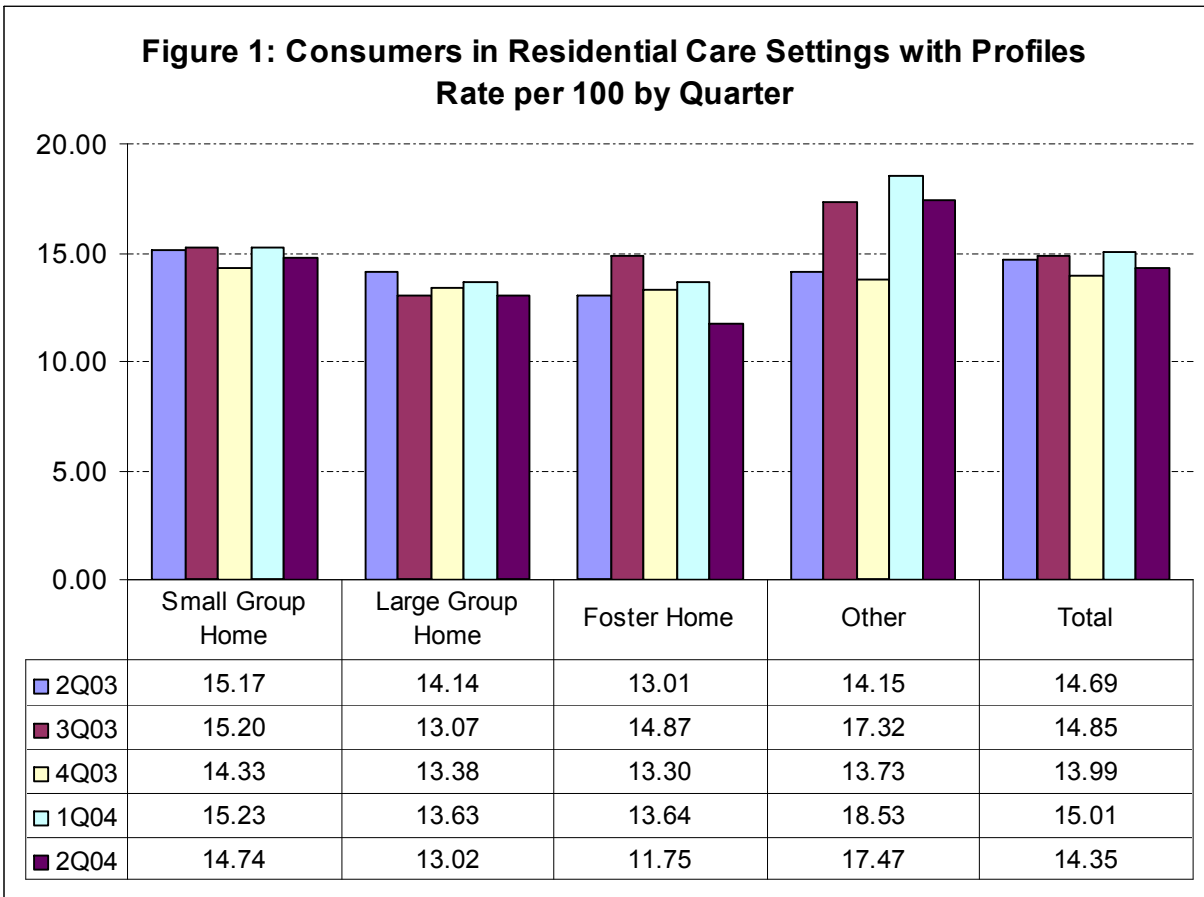
- Close to 73 percent of the 119 consumers with this profile reside in small group homes, considerably higher than expected (61.1% in the population).
- None of the districts vary more than four points from the distribution reflected by the population.
- While 7.7 percent of the population is between the ages of 22 and 25, over 13 percent of consumers with a Lithium profile were in this age group, more than for any other profile.
- 45 consumers with a lithium profile were also receiving two or more anti-psychotic medications.
- Men appear to be more likely to be prescribed lithium than expected, and women less likely.

Clozaril

- 84 percent of the 43 consumers with this profile reside in small group homes. On average, 21.8 percent of consumers in small group homes have at least one profile.
- District 4, which represents less than eight percent of the population in residential care settings, accounts for 44 percent of consumers with the Clozaril profile, much higher than expected. On the other hand, District 11, with 14.5 percent of the population, accounts for only 2.3 percent of consumers with a Clozaril profile.
- 65.1 percent of consumers with this profile are between 26 and 44 years of age, a much higher proportion than for the population as a whole and higher than for any other profile.
- Five of the consumers with this profile were also receiving at least one other anti-psychotic medication.

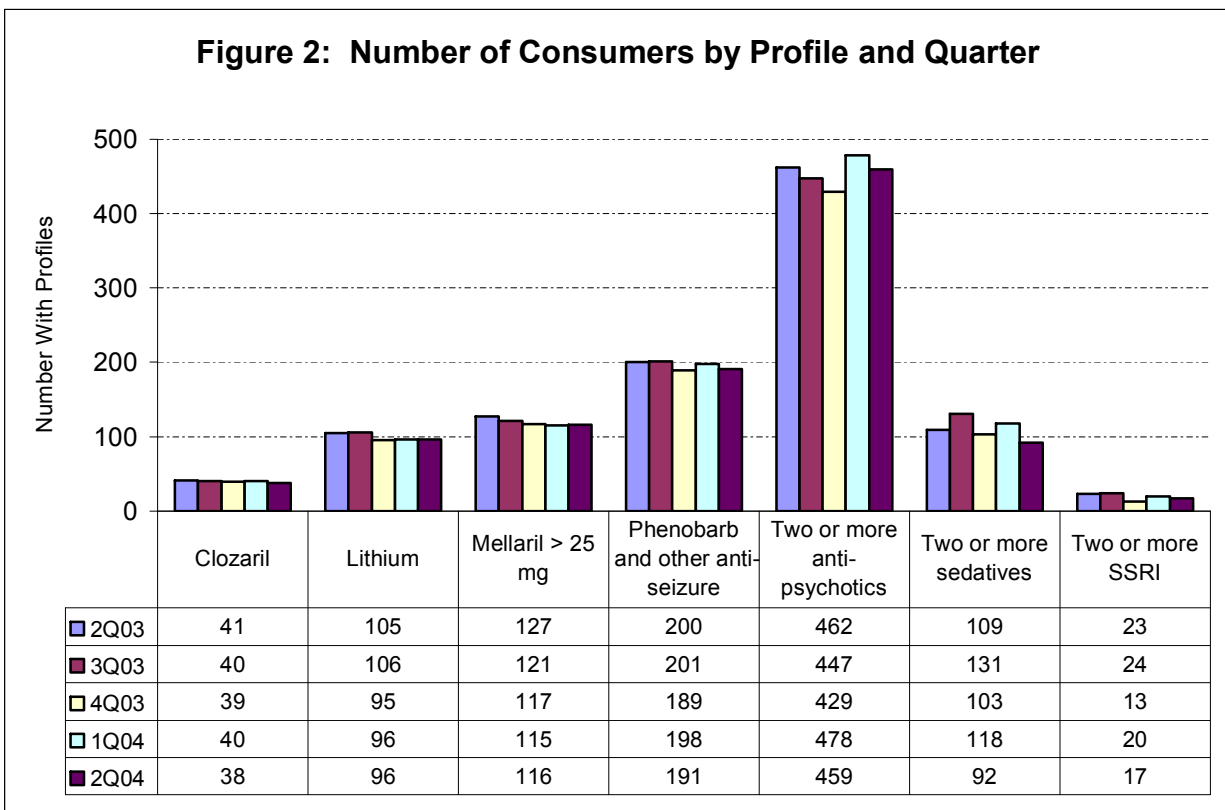
Drug Profile Distribution – by Quarter

Figure 1 demonstrates the overall quarterly profile rate per 100 consumers has remained fairly constant, varying from a low of 13.99 to a high of 15.01.⁸ There is virtually no difference from 14.69 in 2Q03 to 14.35 in 2Q04, the start and end points in the study period. The greatest variation across the study period occurs in Foster Homes and in the Other categories. In the Other setting, the rate ranges from a low of 14.15 in the first quarter of the study (2Q03) to a high of 18.53 in 1Q04. In addition, this is the only setting where the rates increased between the first and last quarter.



⁸ See Appendix C, Exhibit 7 for more details across the quarters.

Figure 2 displays the number of consumers within each profile by quarter. The profile with the highest number of consumers is *Two or More Anti-psychotics* with an average of 455 consumers per quarter. However, there were 774 unique consumers across all quarters for this profile. Sixty-nine consumers had *Two or More SSRIs*, averaging 19 consumers per quarter and making this the least occurring profile. While there is little variation across the quarters in any of the profiles, each profile shows a slight decrease in numbers from the first to the last quarter of the study period.⁹



⁹ Appendix C, Exhibit 1 summarizes the number of consumers with profiles by quarter – statewide.

Drug Profile Distribution – by District

The distribution of consumers across districts for each profile, by quarter, is presented in Exhibit 3 of Appendix C. Because the numbers in most of the sub-categories are quite small, we have only a limited amount of summary information to report at this time. Within each profile, we present the total number of unique consumers over the five-quarter time period and the percent of consumers with the profile for each district. For example, there were a total of three individuals in District 1 who took *Clozaril* during the study time period and that represents 1.6 percent of the total number of 189 consumers in District 1.

On average, there is little variation across the districts within the different profiles. The difference between the highest and lowest percent of consumers identified with a profile is less than five percentage points, with one exception. The greatest amount of variation occurs in the profile of *Two or More Anti-psychotics*, from a low of seven percent in District 3 to a high of 17.4 percent in District 11. Only one district had the highest percentage of consumers for more than one profile. District 11 ranked highest for *Two or More Anti-psychotics* (17%) and *Two or More Sedatives* (6%) profiles.

Table 3 below illustrates that District 11 had the highest percent of consumers with profiles (19.6%) in both the first and last quarters of this study.¹⁰ An important finding is that District 12 had the largest decrease in the percent of consumers with profiles, from 11.8 percent in 2Q 2003 to 7.5 percent in 2Q 2004, a 37 percent decrease, followed by District 7, with an 18 percent decrease. Overall, there was a three-percent decrease between the first and last quarter in the number of consumers with profiles. Eight districts experienced no change or an increase in the percent of consumers on a profile during this time period. Of greater concern is the 26 percent increase seen in District 15, a change from 11.5 percent to 14.5 percent.¹¹

Table 3: Percent of Consumers with Profiles by District
First and Last Quarter of Study Period

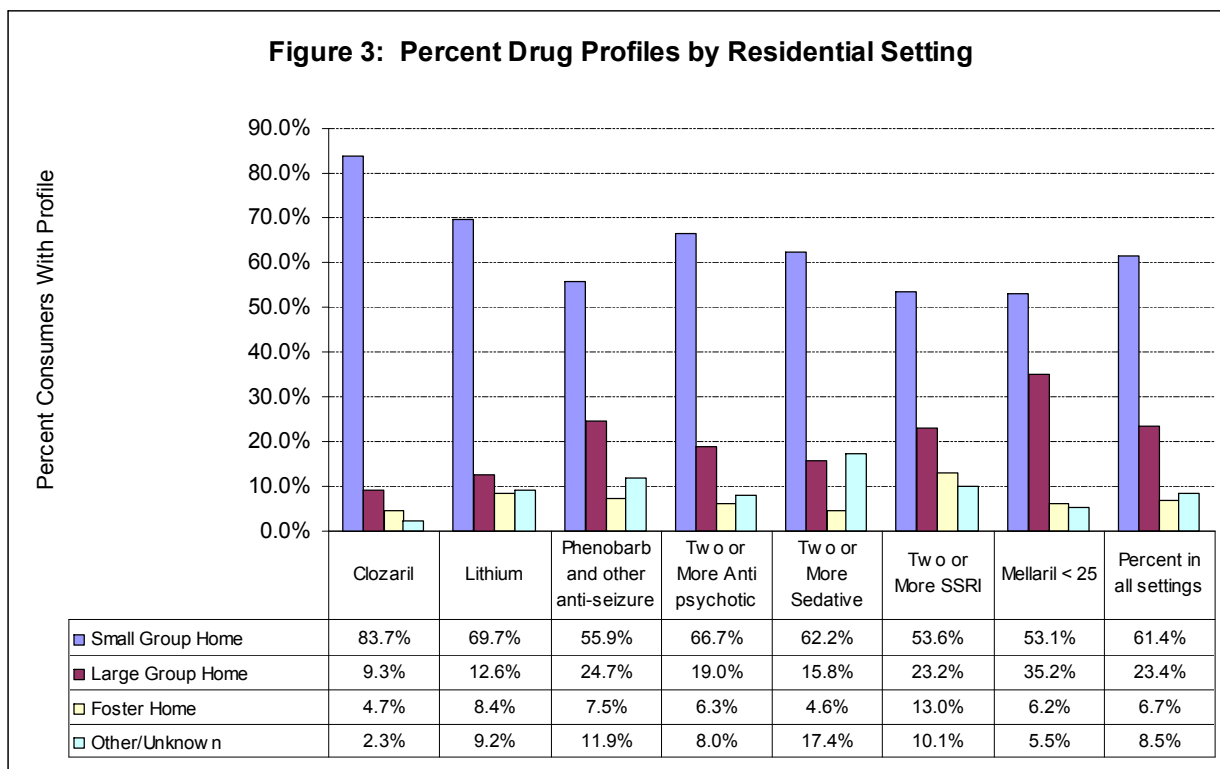
	1	2	3	4	7	8	9	10	11	12	13	14	15	23
2Q03	13.2%	14.8%	10.6%	17.7%	13.6%	8.9%	14.5%	15.9%	19.6%	11.8%	11.5%	12.8%	11.5%	13.4%
2Q04	13.2%	15.5%	10.2%	16.6%	11.1%	9.4%	16.7%	14.2%	19.6%	7.5%	10.8%	13.1%	14.5%	13.5%
% Change	0%	5%	-4%	-6%	-18%	6%	15%	-11%	0%	-37%	-5%	2%	26%	1%

¹⁰ The percents in this table vary somewhat from those presented in Table 1. Table 1 shows the distribution across districts for all quarters and as we have pointed out, some consumers have multiple profiles.

¹¹ See Appendix C, Exhibit 2 for details by quarter, district and statewide.

Drug Profile Distribution – by Setting

Figure 3 represents the percent of consumers with the specified profile who reside in each setting. The last set of columns represents the percent of consumers in the sample living in each different setting. Most of the individuals in the sample reside in a small group home (61.1%), and for each of the seven profiles the highest percent of consumers lived in small group homes. However, 84 percent of the consumers with a *Clozaril* profile and 70 percent of those with *Lithium* profiles resided in a small group home. This number exceeds the portion of the total population in residential care settings that is represented by small group homes.



Consumers who have been prescribed greater than 25 mg of *Mellaril* are more likely to live in a large group home than consumers identified with any other profile. Consumers who were prescribed *Two or More SSRIs* are more likely to live in foster care than people identified with any other profile.

Medication Reviews

According to the requirements in the Developmental Disabilities Waiver Services Coverage and Limitations Handbook, individuals who reside in licensed residential facilities and who are taking any psychiatric or anti-epileptic medication should have a medication review conducted by a Consultant Pharmacist at least annually (Pg. 2-76, July 2002). A Medication Review is a unique service available through the DD HCBS Waiver to enrolled consumers. The individual’s Waiver Support Coordinator requests this review. In addition, any eligible consumer can

receive a medication review if they meet the criteria as established on pages 2-3 of the July 2002 Handbook. Each quarterly district Psychotherapeutic Drug Use Report indicates if the consumer has received a Medication Review (DD HCBS waiver service) within six months after the time the specified drug(s) were dispensed. The following table shows the distribution of consumers by the number of quarters in which they appear with a profile, and the percent of consumers in each grouping with a Medication Review within six months of the date the drug(s) was prescribed. Approximately one fourth (321) of the consumers with a profile were identified in only one quarter, while almost 45 percent appeared in all five quarters of the study (599). A medication review through the DD HCBS Waiver was conducted for only 17.0 percent (231) of the consumers with a profile within six months after the time the specified drug(s) was dispensed. Consumers with profiles in three or four quarters were most likely to have had a medication review, 21.7 percent and 23.9 percent respectively, and consumers in only one or two quarters were least likely to have had a medication review, 14.3 and 12.0 percent respectively.

Table 4: Medication Reviews Within Six Months of Profile Prescription
April 2003 - June 2004

Profiles Present in:	Number of Consumers w/ Profile	Percent Consumers by Number of Quarters	Number of Consumers w/ Medication Review	Percent w/ Medication Review w/in Quarters
1 Quarter	321	24.0%	46	14.3%
2 Quarters	175	13.1%	21	12.0%
3 Quarters	106	7.9%	23	21.7%
4 Quarters	134	10.0%	32	23.9%
5 Quarters	599	44.9%	109	18.2%
Total	1,335	100.0%	231	17.0%

Summary and Recommendations

The findings provided throughout this report and summarized below reflect the use of selected drug profiles in a targeted group of persons receiving services in Florida through the Developmental Disabilities Home and Community Based Services Waiver. The data reflect consumer-specific information for use by district staff in addressing the medical needs of a priority population (persons in paid residential care). Therefore, findings may not generalize (be applicable) to the entire population and the ability to draw conclusions or make recommendations related to statewide practice and policy is limited. The findings, however, are worthy of additional review at the State level in terms of general trends or patterns and at the district level to direct quality improvement health care initiatives.

Overall findings that may benefit from additional clarification include the following:

- While there were a total of 1,335 unique consumers in the target population who were identified with one or more of the high risk drug profiles over the five quarters included in this study, the average number of unique consumers in the target population for any one quarter was 913.
- Close to 45 percent of consumers with profiles (599) appeared in all five quarters of the study while 24 percent (321) appeared only in one quarter.
- Over 17 percent of consumers with high risk profiles had more than one high risk profile (233).
- The number of consumers in each of the seven medication profiles has remained relatively consistent throughout the five quarters reviewed in this analysis. Statewide, the overall rate of the drug profiles decreased by only two percent.
- Across the entire study period, about 21 percent of the target population received one or more of the medication(s) profiles with the largest proportion (12%) receiving *Two or More Psychotropic* drugs. However, the average utilization rate for the entire target population was about 14.57 per 100, with the percent of persons receiving *Two or More Anti-psychotics* remaining fairly consistent at approximate seven percent.
- The profiles of *Two or More Sedatives*, *Two or More SSRIs* and *Two or More Anti-Psychotics* have the highest difference between the number of unique consumers within these profiles across all quarters and the average number of consumers per quarter, 54.1 percent, 71.9 percent and 41.2 percent respectively. This indicates fewer individuals remaining on these drugs for multiple quarters as compared to other drug profiles. This would be consistent with on going evaluation and adjustment of specific drugs and new drug regimens over time.
- Approximately one in five consumers who stayed on a profile for more than two quarters showed evidence of a medication review in the six months following the first appearance of the profile. This is lower than anticipated and inconsistent with program policy and suggests opportunities to further improve monitoring of psychotherapeutic prescribing practices for medications that pose risks for potential complications or reduced quality of life.
- Specific findings by subgroup that are notable include:
 - District 12 showed a sizeable decrease (37%) in the percent of consumers identified with any of the profiles. District 7 showed an 18 percent decrease.

- Districts 15 and 9 demonstrated the greatest increase in the percent of consumers identified with any of the profiles, 15 percent and 26 percent respectively.
- District 4 demonstrated a considerably higher than expected rate of *Clorazil* prescription.
- District 11 showed a higher than expected prescribing rate on three profiles: *Mellaril (>25 mg)*, *Two or More Anti-psychotics*, and *Two or More Sedatives*.
- Analysis by residence indicates that compared to all other profiles a relatively higher percent of prescriptions for *Clozaril* or *Lithium* were for residents in small group homes, a relatively higher percent of consumers prescribed *Mellaril (>25mg)* lived in large group homes and consumers in foster care were more likely to be prescribed *Two or More SSRIs*. These utilization patterns could be reflective of the medical/behavioral needs, the age, or the length of stay of the consumers living in a particular setting

Based on the analysis and findings, recommendations are offered in two general areas:

- Additional analysis of results from current reports or subsequent quarterly reports;
- Suggestions for the district (areas) or state level policy clarification, targeted interventions, or in depth study;

Recommendations for additional analysis of current data

1. Examine results from the first two Psychotherapeutic Drug Studies for comparative data with the target population and subgroups and the utilization of the medication profiles to establish or validate baseline results.
2. Provide additional analysis by age, gender and residential setting for each specific drug profile. Analyses should further examine anomalies presented here, such as the high rate of *Clozaril* use in District 4 and the high usage of *Two or More Anti-psychotics* in District 11. An attempt should be made to identify whether unusually high use rates represent a unique cluster of consumers, or whether there are one or more providers in the districts with distinct prescribing practices. If available, documentation based on literature or expert medical opinions to support or explain variations in expected utilization for subgroups by district, age, or residential setting should be included.
3. An analysis of residents in the “other” category should be analyzed when there are a sufficient number of cases to validly represent this group. Utilization rates among consumers in these settings have been relatively high and have increased over the study period.
4. We recommend a closer look at consumers who continued on the same profile for all five quarters, and consumers on multiple profiles for more than one quarter. It should be identified whether continuing profiles are concentrated among specific demographic groups, in certain types of residences or possibly with specific physicians and if a medication review

through the DD HCBS waiver has been provided. If a medication review has been provided, information from the review should be integrated into the analysis.

5. Some consumers are identified as high risk of complications due to prescribing drug patterns as discussed in this study, but are then subsequently “dropped” from the high risk “list”. An examination of these individuals by age, district, residential setting, drug profile and prescribing physician could help provide insight into ways districts, providers, and/or physicians are using the data to help reduce risk among these consumers.
6. Provide additional analysis of the individuals who have received a medication review, expanding the analysis to all individuals in the target group regardless of residential setting, and expand the time frame for when a Medication Review was completed to 12 months, as required in the Florida Medicaid Developmental Disabilities Waiver Services Coverage and Limitations Handbook. If possible, include analyses by area, age, residential setting, and drug profile. This analysis should include consumers identified “at risk” and also those who have been “dropped” from the at risk category, as well as a comparison of individuals with and without a Medication Review, to help determine if there is any positive impact from the process.
7. Provide an analysis of prescribing physicians to identify possible trends or patterns including known factors that might impact prescribing protocols.
8. Out patient follow up is important for these high-risk individuals. The Delmarva Nurse Reviewer currently provides follow up review of medical claims for individuals who are randomly selected for Personal Outcome Interviews. We recommend the medical claims be examined for all consumers on a high risk drug profile to determine if the primary care physicians are following individuals on an annual basis. In addition, claims should be examined to determine whether these individuals receive care from a psychiatrist or neurologist. The Developmental Services Waiver Services Medicaid Coverage and Limitations Handbook states that individuals residing in licensed residential facilities taking any anti-epileptic or psychiatric medications have a comprehensive review completed annually by either a licensed psychiatrist or neurologist.
9. Given the need for regular clinical monitoring of consumers on *Clozaril*, *Lithium* and *Mellaril*, we recommend a pilot analysis of medical claims history to determine whether the recommended lab tests and EKGs are being routinely performed.

Recommendations related to policy, targeted interventions, or topics for in depth study

1. The intent of the quarterly District Psychotherapeutic Drug Use Report is to provide APD district personnel, specifically those who perform medical case management functions, with information about a group of consumers identified as potentially high risk for drug use complications based on program initiatives and priorities. Current results reflect little change in the percent of utilization of drug profiles in the target population

of consumers. Continuing dialog with the district APD staff, specifically those providing medical case management functions, about the usefulness of the quarterly reports is recommended. Questions to be addressed include:

- How are the data being used? For example, over the study period there has been an overall drop in the percent of individuals on a profile, from 14 percent to 12 percent, with quite large drops in districts 12 and 7. Perhaps these districts have best practices they can share based on these findings.
 - Are the reports being distributed to the right staff in a timely manner?
 - Do staff understand the purpose of the reports?
 - Are there other types of information available through ABC or FMMIS district staff would find helpful?
 - Are there other drug profiles that should be regularly produced or additional data that would be helpful for some specific profile?
 - Are the data reliable (i.e. is a consumer's living arrangement correctly identified)?
 - What are the criteria that should be measured to determine if appropriate medical interventions are being provided, and if the process is facilitating improvement?
2. With the establishment of Area Quality Leaders in each district (area) and an increased focus on Quality Improvement, the Quarterly District Psychotherapeutic Drug Use Reports can be used to support quality enhancement initiatives within the district. It is recommended that these reports be shared with the AQLs and that a face-to-face overview of the reports be provided to this group in cooperation with the other district staff including members of the Medical Case Management Team.
 3. Part of the AQL's role could be to identify areas for improvement and document positive change through the data presented in the quarterly district Psychotherapeutic Drug Use Reports as well as through other district specific data sources available on a regular basis. The AQL's in cooperation with the medical case management staff could also provide a means to report best practices that have been instituted. For example, if positive outcomes for consumers who receive a Medication Review are achieved, information about the frequency with which pharmacists' recommend a change in the course of treatment could be documented and shared as a best practice.

Appendix A

For the Psychotherapeutic Study we identified (profiled) consumers with drug claims for at least one of the following seven medications or groups of medications:

1. Clozaril
2. Lithium (includes CIBALTH, ESKALITH, LITHOBID)
3. Mellaril > 25 mg
4. Phenobarb and other anti-seizure

OTHER ANTI-SEIZURE		
BUTISOL SODIUM	FELBATOL	
CARBATROL	GABITRIL	PRIMIDONE
CELONTIN KAPSEALS	KEPPRA	RIVOTRIL
CLONAPAM	KLONOPIN	SECONAL
CLONAZEPAM	LAMICTAL	TEGRETOL
DEPAKENE	MEBARAL	TOPAMAX
DEPAKOTE	MYSOLINE	TRILEPTAL
DILANTIN	NEURONTIN	ZARONTIN
EPITOL	PEGANONE	ZONEGRAN

5. Two or More Antipsychotic

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

6. Two or More Sedative

SEDATIVES/HYPNOTICS	
Benzodiazepines	Non-Benzodiazepines
ATIVAN	AMBIEN
DALMANE	AQUACHLORAL SUPPRETTES
DIASTAT	ATARAX
HALCION	BUSPAR
LIBRIUM	EQUANIL
PROSOM	SOMNOTE
RESTORIL	SONATA
SERAX	VISTARIL
TRANXENE T-TAB	
VALIUM	
VERSED	
XANAX	

7. Two or More SSRI

SSRI
CELEXA
LEXAPRO
LUVOX
PAXIL
PROZAC
SARAFEM
ZOLOFT

Appendix B

ABC Residential Setting Code List

02	Family home (parent, relative, guardian)	Family Home
21	Foster home devel.services (1-3)	Foster Home
22	Foster home Family Safety & Preservation (1-3)	Foster Home
23	Foster home adult services (1-3)	Foster Home
01	Independent living	Independent/Supported Living
11	Supported living (IFSSB)	Independent/Supported Living
31	Small group home devel. services (4-6)	Small Group Home
32	Small group home Family Safety & Preservation (4-6)	Small Group Home
33	Small group home adult services (4-6)	Small Group Home
41	Large group home devel. services (7-16)	Large Group Home
42	Large group home Family Safety & Preservation (7-16)	Large Group Home
43	Large group home adult services (7-16)	Large Group Home
12	Transitional Living	Other
35	Home for special services (6 or less)	Other
44	Mental health group home	Other
45	Home for Special services (7-16)	Other
51	Residential HAB center devel. Services (17+)	Other
52	Residential HAB center non-DS (17+)	Other
53	Residential school (non-correctional)	Other
55	Home for special services (17+)	Other
61	6-Bed or less ICF/DD	Other
62	Cluster	Other
63	Community ICF/DD (7+)	Other
64	Community ICF/DD CSLA program	Other
71	Adult retarded defendant program	Other
72	Juvenile retarded offender program	Other
81	DSI non-ICF/DD	Other
82	DSI ICF/DD	Other
83	DSI ICF/DD CSLA program	Other
84	DSI non-ICF/DD CSLA program general rev	Other
91	Family Safety & Preservation commitment facility	Other
92	Children & families mental hospital	Other
93	Non-children and families psychiatric facility	Other
94	Nursing home	Other
95	Jail	Other
96	Interstate compact client	Other
97	Hospital	Other
98	Nursing home	Other