

**Florida Statewide Quality Assurance Program**

**Psychotherapeutic Drug Study  
Contract Year 6: July 2006 – June 2007**

**Year 6 Evaluation of Impact of Selected Psychotherapeutic Drug  
Profiles and Medications on Waiver Service Usage and Personal  
Health in Florida's Developmental Disabilities  
Home and Community-Based Services Waiver  
July 1, 2002 – June 30, 2006**

**Florida DD and FSL HCBS Waivers**

**Prepared by Delmarva Foundation**

**Submitted to the Agency for Health Care Administration  
and  
The Agency for Persons with Disabilities**

## Executive Summary

In this study, we examine the impact of medication on the health of people with developmental disabilities by analyzing the impact of several high-risk drug profiles and general psychotherapeutic medication use on indicators of health for individuals receiving services through the Medicaid Developmental Disabilities Home and Community-Based Services Waiver (DD HCBS). We also examine the impact of medication on the receipt of five employment-related waiver services for these individuals. In particular, this study responds to questions raised in the fifth annual psychotherapeutic drug use study submitted to the Agency for Health Care Administration and the Agency for Persons with Disabilities in June 2006.

Analyses are based on a random sample of 2,596 individuals receiving services through the DD HCBS waiver who completed a POM interview between July 1, 2004 and June 30, 2006, and who could be matched to pharmacy claims data between July 1, 2002 and June 30, 2004. Regression analyses examine the impact of fitting a high-risk drug profile on the likelihood of having the *best possible health* (as measured during the Personal Outcome Measure interview), the likelihood of emergency room treatment in the past year, the likelihood of hospital admission in the past year, and the likelihood of having a health problem. We also examine the impact of using psychotherapeutic medication and the Waiver Support Coordinators' evaluation of the awareness of individuals' health, safety and well-being (WiSCC Element 2) on the likelihood of having the *best possible health*. Finally, we examine the impact of fitting a drug profile or using medication on the likelihood of receiving five waiver services: Transportation, Non-Residential Support Services, Behavior Services, Supported Employment, and Adult Day Training.

Results are summarized as follows:

- Using psychotherapeutic medication reduces the likelihood that an individual has the *best possible health*.
- Individuals with Waiver Support Coordinators who have high evaluations for awareness of health, safety and well-being (Element 2) are more likely to have the *best possible health*.
- Even when controlling for the support coordinators' performance on WiSCC Element 2, individuals who use medication are less likely to have the best possible health.
- Individuals who fit a drug profile are more likely to have a health problem, to have sought treatment in an emergency room in the past year, and to have been admitted to a hospital in the past year.

- Individuals are also less likely to receive Supported Employment services when they fit a drug profile or when they use any of the psychotherapeutic medications identified in this study.

Research-related recommendations suggest that future research should examine whether health problems lead to medication use or vice versa for individuals on psychotherapeutic medication identified with less than optimal health. Additional research should also examine claims data for hospital admittance and emergency room treatment to determine whether the diagnosis and treatment were related to medication use or an underlying preexisting health condition. Policy-related recommendations suggest developing focus group sessions with individuals who use psychotherapeutic medication and have less than optimal health; implementing procedures to educate and train support coordinators with inadequate awareness of the health and well-being of individuals they serve; developing and implementing policies to ensure best practice protocols for medication reviews are followed; interviews with individuals who have been treated in an emergency room or admitted to a hospital; policies to encourage individuals who use psychotherapeutic medication to participate in Supported Employment services; and implementing a special Supported Employment outreach program for individuals taking any of these medications.

## Introduction and Background

This is the sixth in a series of annual studies that analyze the use of psychotherapeutic medications and incidence of several high-risk drug profiles among Florida's population of persons with developmental disabilities who receive services from the Developmental Disabilities Home and Community-Based Services (DD HCBS) Medicaid Waiver. The studies utilize pharmacy claims data from the Florida Medicaid Management Information System (FMMIS) and consumer demographic data from the Agency for Persons with Disabilities (APD), Allocation, Budget and Contract (ABC) Control System.<sup>1</sup> These studies are conducted as part of the Florida Statewide Quality Assurance Program (FSQAP), a multi-year review of services and outcomes for consumers receiving services under the waiver program. The Delmarva Foundation administers this project through a contract with the Florida Agency for Health Care Administration (AHCA).

In the studies in Years 1 through 4 we focused primarily on monitoring the incidence and duration of seven drug profiles among waiver recipients by age, gender, residential setting, disability, level of need, and APD Area. We also examined the rate of medication review for recipients with drug profiles and the prescribing patterns of anti-psychotic drugs for individuals fitting the Two or More Anti-psychotic drug profile. The fifth year study analyzes the impact of the drug profiles on the well-being of waiver recipients as measured by the 25 Personal Outcome Measures (POM) as developed by the Council on Quality and Leadership (CQL). CQL representatives train Delmarva consultants in the interview techniques specific to their POMs. The purpose of the interviews is to help determine the degree to which participants in the program have supports in place to improve their quality of life and to measure how well they are achieving outcomes in their lives that are important to them. Staff from CQL regularly monitor the consultants and also provide reliability oversight.

The fifth year study results showed no effect of fitting a drug profile on the POM outcome of *having the best possible health*. However questions remain about whether effects would be found when using objective measures of health such as blood pressure or incidence of disease, and whether the impact of drug use on health is limited to individuals who fit a drug profile. To get at more objective measures of health, in this study we examine the impact of fitting a drug profile on three measures: whether the individual has been treated in the emergency room in the past year, whether the

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<sup>1</sup> The pharmacy claims include the date and quantity dispensed, the National Drug Code (NDC) for the medication prescribed, and the prescribing and dispensing providers. Demographic data about individuals served through the DD HCBS Waiver were available through the ABC database, including primary disability, APD Area and residential setting. Consumers with medication reviews were identified using medical claims data in FMMIS. First DataBank® therapeutic classes were used to identify FMMIS pharmacy claims with the drug profiles studied (refer to Appendix A for a complete listing of the medications in each profile).

individual has been admitted to the hospital in the past year, and whether the individual has any health problems. To determine whether the effect of medication may be broader than that defined by drug profiles, we also analyze the impact of the use of various psychotherapeutic medications on a recipient's health.

The fifth year drug study also raised questions about the impact of psychotherapeutic drug use on waiver service usage. In the fifth year study we found that fitting a drug profile reduces the likelihood that individuals *choose where they will work*, and recommend examining whether individuals who fit a profile are less likely to utilize waiver services that support finding and maintaining employment. This study will examine whether waiver service usage for Transportation, Non-Residential Support Services (NRSS), Behavior Services (Analysis and Assistant), Supported Employment, and Adult Day Training Services (ADT), the waiver services most likely to impact employment, differs for recipients who fit a drug profile as compared to recipients who do not fit a drug profile. We will also analyze whether recipients who use psychotherapeutic medication differ in waiver service usage for these services as compared to recipients who do not use medication.

In the current study, we present rates of fitting a drug profile, psychotherapeutic medication use, and waiver service use for five employment-related services for individuals who receive services through the DD HCBS waiver. We examine the impact of drug profiles and medication use on rates of achieving the outcome *has the best possible health* and on rates of waiver service usage for Transportation, Non-Residential Support Services, Behavior Services, Supported Employment, and Adult Day Training. We analyze the effect of fitting a drug profile on whether an individual has been treated in the emergency room in the past year, been admitted to the hospital in the past year, or has any health problems. We also consider the impact of the support coordinator's evaluation level for the Waiver Support Coordination Consultation (WiSCC) element *aware of the health, safety, and well-being* (Element 2) of consumers on recipients' outcome *has the best possible health*.

## Profile Background

In 1998 a group of international experts developed guidelines for anti-seizure and psychotropic medication usage in persons with developmental disabilities and mental health/behavioral problems. This publication, entitled The International Consensus Handbook: Psychotropic Medications and Developmental Disabilities, identifies multiple medication profiles that could put individuals with developmental disabilities at increased risk for complications and/or decreased quality of life. An individual who takes two or more sedatives, two or more anti-psychotics, two or more selective serotonin reuptake inhibitors (SSRIs), Phenobarbital and another anti-seizure medication, clozaril, lithium, mellaril, or two or more central nervous system stimulants (CNSSs), is defined as fitting a profile. The medication profiles are described in detail in Appendix A.

## Data and Methods

### Sample

Data for this study are taken from the random sample of 2,596 individuals receiving services through the DD HCBS waiver who completed a POM interview between July 1, 2004, and June 30, 2006. Drug profile and medication data were taken from pharmacy claims data between July 1, 2002, and June 30, 2004.<sup>2</sup> Pharmacy claims data are selected for the two years prior to the POM interviews to assess the impact of selected psychotherapeutic medication and drug profiles on service usage and the personal health outcome. To assess whether medication or drug profiles affect services or personal health, we need to ensure that services and personal health are measured after individuals have been exposed to the medication.

Drug profile, medication, and waiver service rates for the waiver population are reported for the 21,478 individuals with a pharmacy claim between July 1, 2002 and June 30, 2004, or receiving a waiver service from July 1, 2004 to June 30, 2006.

### Methods

Descriptive analyses show rates of medication use, drug profiles, and waiver service receipt, as well as the distribution for demographic measures. Regression analyses are used to test the net impact of drug profiles, medication, and independent variables on waiver service usage and several indicators of health. The analyses of waiver services assess the impact of variables on receipt of five waiver services important to obtaining employment. Each of five logistic regression models analyzes the impact of drug profiles of psychotherapeutic medication, and independent variables, on an indicator of whether the service was received. Because the dependent variables are categorical variables (Met vs. Not Met, Yes vs. No, Received vs. Not Received), regression analyses rely on logistic regression techniques. A significant impact of an independent variable on an indicator tells us the variable increases (or decreases) the odds that the health outcome is met, or a waiver service is received.

Regression results report coefficients, odds ratios, and p-values. A coefficient indicates the strength and direction of the relationship between the independent and dependent variable. A positive coefficient indicates that increasing values of the independent variable result in increasing values of the dependent variable. A negative coefficient indicates that increasing values of the independent variable result in decreasing values of the dependent variable. The coefficient tells us the size of the change in the dependent variable for a unit change in the independent variable. Logistic regression coefficients tell us the change in the log odds of the dependent variable for a unit change in the

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<sup>2</sup> Individuals selected for the longitudinal study are excluded from the analyses.

independent variable. However, the interpretation of the coefficient is not intuitively appealing (what does it mean for a log odds to decrease by .01?). Therefore the coefficient is converted to an odds ratio, which tells us the strength of the association—the percent change in the odds for a unit change in the independent variable.

The p-value associated with a variable informs us how likely it is the association between the independent and dependent variable is due to chance. A standard probability level used to determine “statistical significance” is a p-value less than or equal to .05. This means there is only a five percent probability, or less, the results from the sample are due to sampling fluctuation or chance.

### Dependent Variables

The dependent variables include an indicator of whether the POM outcome *has the best possible health* was met, and three objective measures of health: whether an individual has been treated in an emergency room, admitted to a hospital, or has any health problems. These measures are constructed using questions 3, 4, and 6 from the Health and Behavioral survey (Appendix B). We also use five indicators measuring whether a waiver service was received. Table 1 shows each of the four health indicators for the 2,596 individuals interviewed between July 1, 2004, and June 30, 2006.

**Table 1: Dependent Variables  
 Health Indicators  
 July 1, 2004 - June 30, 2006**

Health Indicator	Number Met	Percent Met
Has Best Possible Health	1,117	43.0%
Treated in Emergency Room in Past Year	698	27.0%
Admitted to Hospital in Past Year	429	16.6%
Has Problems with Health	1,363	52.7%
Total Number of Interviews	2,596	

Of the 2,596 individuals in the sample, 1,117 (43%) had the Best Possible Health, 698 were Treated in an Emergency Room in the Past Year, 429 were Admitted to a Hospital in the Past Year, and 1,363 Had Problems with their Health. Close to 53 percent of all individuals in the sample reported some problem with their health and 43 percent met the outcome *has the best possible health*, meaning 57 percent did not have the best health as determined during the POM interview. A little over 16 percent were hospitalized in the past year and over a quarter of the individuals were treated at an emergency room

Analyses of waiver service use utilize measures indicating whether individuals receive a service as dependent variables. The following table shows the number and percent of individuals who receive

the following five services: Transportation, Non-Residential Support Services (NRSS), Behavior Services (Analysis and Assistant), Supported Employment, and Adult Day Training. The sample of individuals with a POM interview from July 2004 to June 2006 show similar rates of waiver service use as the population of individuals receiving DD HCBS services. Individuals were most likely to receive Adult Day Training and Transportation Services and least likely to utilize Supported Employment. Of the 20,095 individuals in the population who received a service, 10,148 (47%) received Adult Day Training, and 9,557 (44%) received Transportation services. Of the 2,375 individuals in the sample who received a service, 1,226 (47%) received Adult Day Training and 1,141 (44%) received Transportation services.

**Table 2: Dependent Variables  
 Waiver Services  
 July 1, 2004 - June 30, 2006**

Waiver Service	Number and Percent Receiving Service			
	Population		Sample	
	Number	Percent	Number	Percent
Transportation Services	9,557	44.5%	1,141	44.0%
NRSS	4,884	22.7%	616	23.7%
Behavior Services	5,151	24.0%	601	23.2%
Supported Employment	2,319	10.8%	318	12.2%
Adult Day Training	10,148	47.3%	1,226	47.2%
Total w/One or More Service	20,095	93.6%	2,375	91.5%

### Independent Variables

Multiple situations and factors influence the extent to which individuals are able to achieve good health and utilize waiver services. We are limited to the factors available in the Delmarva data collected during the interview process: gender, age, type of disability, home type, and Area size. In this study we are able to determine the impact each of these independent variables has on the personal health outcomes and the use of selected waiver services. We then hold constant these factors when determining the net effect of drug profiles and medication on health and waiver service use in regression analyses. The independent variables used in the analysis are measured as follows:

- Gender: Male and Female (Female is coded one and Male is coded zero).
- Age: We show descriptive results for various age groups but analyze age as a continuous variable (without breaking it down by age groups) in the regression models.
- Area Size: The Medicaid Claims data from AHCA were used to identify the number of consumers living in each area during the study period. Areas with over 2,000 consumers on the DD HCBS waiver were categorized as Large. These include the Broward, Orlando,



- Miami-Dade and Suncoast Areas. Medium size areas had from 1,000 to 1,999 consumers (e.g., Jacksonville, Pensacola, Tallahassee) and Small areas fewer than 1,000 consumers. The categories contain the following areas:
- Large—7, 10, 11, 23
  - Medium—1, 2, 3, 4, 9, and 13
  - Small—8, 12, 14 and 15
- Home Type: There are several types of living arrangements available to people who receive services on the DD HCBS waiver. We have grouped these into three categories for this analysis. These are:
    - Family—family home and foster care
    - Independent—Independent Living and Supported Living
    - Group Homes—Large and Small Group Homes, Assisted Living Facilities (ALF), and Residential Treatment Facilities
  - Disability: Consumers with six different disabilities are included in the sample. These are grouped as follows:
    - Mental Retardation
    - Cerebral Palsy
    - Autism
    - Other/Unknown—includes Epilepsy, Spina Bifida, Prader Willi, and Other
  - Drug Profiles: Pharmacy claims from July 2002 to June 2003 were used to identify individuals who fit one of the following high-risk drug profiles:
    - Clozaril (generic name clozapine)
    - Lithium
    - Mellaril (greater than 25 mg)
    - Phenobarbital while taking another anti-seizure medication
    - Two or more anti-psychotic medications concurrently
    - Two or more sedative/hypnotic medications concurrently
    - Two or more selective serotonin reuptake inhibitors (SSRI)
    - Two or more central nervous system stimulants (CNSS)
  - Medication Use: Pharmacy claims from July 2002 to June 2003 were used to identify individuals who use any of the following psychotherapeutic medication:
    - Clozaril (generic name clozapine)
    - Lithium
    - Mellaril
    - Anti-seizure medication
    - Anti-psychotic medication
    - Sedative/hypnotic medication
    - Selective serotonin reuptake inhibitor (SSRI) medication

- Central nervous system stimulant (CNSS) medication
- Element 2 from the Waiver Support Coordinator Consultation (WiSCC) was used as a measure of the Waiver Support Coordinator’s (WSC) evaluation on awareness of consumers’ health, safety, and well-being—“WSCs are aware of the health, safety and well-being of the people they serve and advocate and coordinate in concert with them to support and address identified needs or issues.”
  - A set of categorical measures in which Not Emerging is the omitted reference category and measures for Emerging, Implementing, and Achieving are added to the model. Appendix C presents a description of WiSCC outcome element evaluation levels.

**Table 3: Independent Variables  
 Demographic Characteristics  
 July 1, 2004 - June 30, 2006**

Demographic	Number	Percent
<b>Gender</b>		
Female	1,196	46.1%
Male	1,400	53.9%
<b>Age Group</b>		
17 and under	364	14.0%
18 to 21	171	6.6%
22 to 25	247	9.5%
26 to 44	1,162	44.5%
45 to 54	407	15.7%
55 to 64	188	7.2%
65 and over	57	2.2%
<b>Home Type</b>		
Family/Foster	1,349	51.7%
Independent/Supported	498	19.4%
Group Home	748	28.6%
<b>Disability</b>		
Mental Retardation	2,097	80.8%
Cerebral Palsy	278	10.7%
Autism	111	4.3%
Other	110	3.9%
<b>Area Size</b>		
Large	1,296	49.9%
Medium	912	35.1%
Small	388	15.0%
Total Number of Interviews	2,596	

Table 3 above shows the distribution of the number and percent of POM interviews by each demographic characteristic. Almost 54 percent of the sample is male and 46 percent is female. Children aged 17 years or younger are a sizable portion of the sample at 14 percent. The majority of individuals in the sample fall between 26 and 54 years of age, a majority live in family homes and the largest percent have an intellectual disability as their primary disability. Proportionately more individuals in the sample lived in Areas defined as Large, Areas with over 2,000 consumers as residents, than in either Medium or Small Areas. Almost half of all individuals live in Large-size Areas, while 35 percent live in Medium size Areas, and a little less than 15 percent live in Small size Areas.

**Table 4: Independent Variables  
 Drug Profiles and Medication Use**  
*POM Interviews July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Type of Drug Profile	Population		Sample	
	Number	Percent	Number	Percent
Clozaril	77	0.4%	13	0.5%
Lithium	301	1.4%	34	1.3%
Mellaril > 25 MG	344	1.6%	28	1.1%
Two or more Anti-Seizure	886	4.1%	71	2.7%
Two or more Anti-Psychotic	914	4.3%	78	3.0%
Two or more Sedatives	344	1.6%	22	0.9%
Two or more SSRI	48	0.2%	3	0.1%
Two or more CNSS	13	0.1%	3	0.1%
One or More Drug Profile	2,609	12.2%	225	8.7%
<b>Type of Medication</b>				
Clozaril	77	0.4%	13	0.5%
Lithium	301	1.4%	34	1.3%
Mellaril	572	2.7%	46	1.8%
Anti-Seizure	10,673	49.7%	954	36.8%
Anti-Psychotic	7,216	33.6%	648	25.0%
Sedatives	6,128	28.5%	546	21.0%
SSRI	4,594	21.4%	416	16.0%
CNSS	924	4.3%	62	2.4%
One or More Medication	14,332	66.7%	1,285	49.5%

The distribution of the population and sample by Drug Profile and Medication use is provided in Table 4. Close to nine percent (225) of the individuals were identified as fitting one or more of the drug profiles. This compares closely to the population, with approximately 12 percent fitting one or more of the profiles. However, only a small number of individuals fit any one profile with the

greatest percent on Two or More Anti-Psychotic drugs. Almost half of the individuals in the sample were taking at least one of the medications. This is considerably less than in the population, with over 66 percent identified as having taken at least one of the medications. The largest percent of individuals were taking some type of Anti-Seizure medication, followed by an anti-psychotic. Individual drug profiles do not sum to equal the number of individuals fitting one or more profile since some individuals fit multiple profiles. The same is true for individual medications and the number of individuals who take one or more medications.

Table 5 displays the distribution of individuals by the degree to which their Waiver Support Coordinator (WSC) is not only aware of their health, safety and well-being but advocates and coordinates supports to address their needs in these areas. A majority of the individuals were served by a WSC at the Emerging level, meaning the WSC has some systems in place to address health and safety concerns but little action has been taken to ensure all individuals served are appropriately impacted through these systems. WSCs operating at the Not Emerging level served four percent (105) of this sample and close to 12 percent (304) were Achieving.

**Table 5: Waiver Support Coordinator Performance**  
**WISCC Element 2: Awareness of Health**  
*July 2004 - June 2006*

Evaluation Level	Number	Percent
Achieving	304	11.7%
Implementing	843	32.5%
Emerging	1,344	51.8%
Not Emerging	105	4.0%
Total	2,596	100.0%

## Results

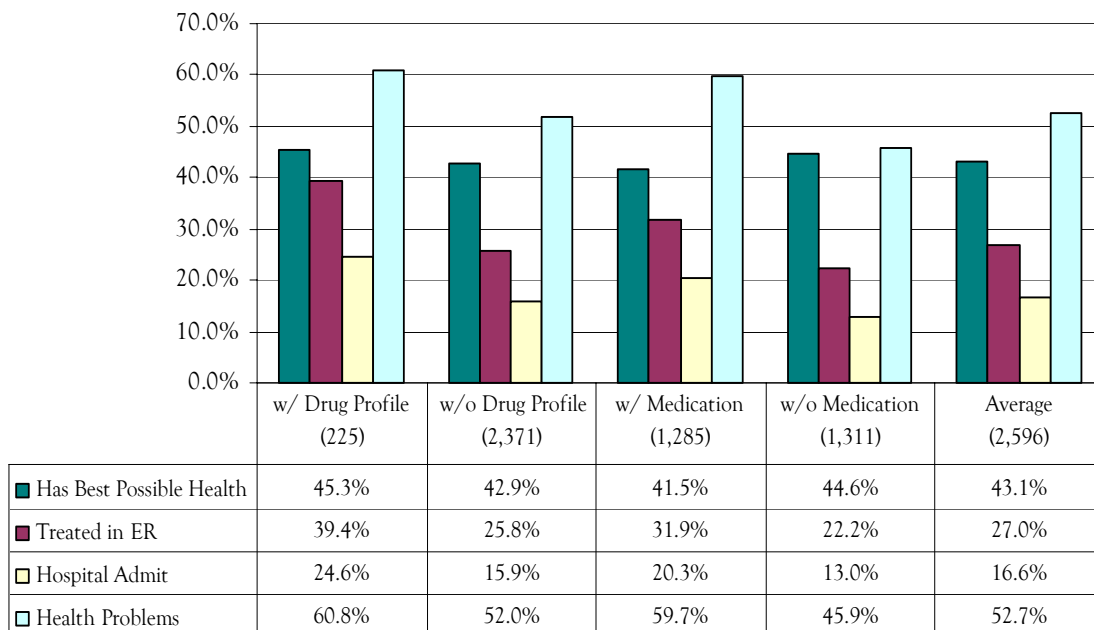
### Descriptive Analyses

Descriptive analyses present the number and percent of individuals who fit a drug profile or use psychotherapeutic medication across each of the dependent variables in the study. The percent of individuals with the best possible health, who were treated at an emergency room, were admitted to a hospital, or had health problems is presented separately for individuals who fit a drug profile, do not fit a drug profile, use medication, and do not use medication. The distribution across each of the waiver services is also presented.

Health Indicators by Drug Profile and Medication Use

Given that a much higher percent of individuals use medication (49.5%) than fit a drug profile (8.7%), it is possible that psychotherapeutic medication, rather than the more narrowly defined drug profiles, impact health. Comparing rates of the various health indicators for individuals with a drug profile as compared to individuals using these medications will indicate whether the health differs for those with a drug profile and those taking medication. Figure 1 shows the percent of individuals with and without a drug profile and with and without medication for each of the health indicators.<sup>3</sup>

**Figure 1: Health Indicators by Drug Profile and Medication Use**  
**POM Interviews July 2004 - June 2006**  
**Rx Claims July 2002 - June 2004**



**Health Indicators**

- A somewhat lower percent of individuals who use the psychotherapeutic medication identified in this study had the *best possible health* as compared to individuals who fit a drug profile. However, there was no difference between individuals who fit a profile and those who did not take any of these medications.

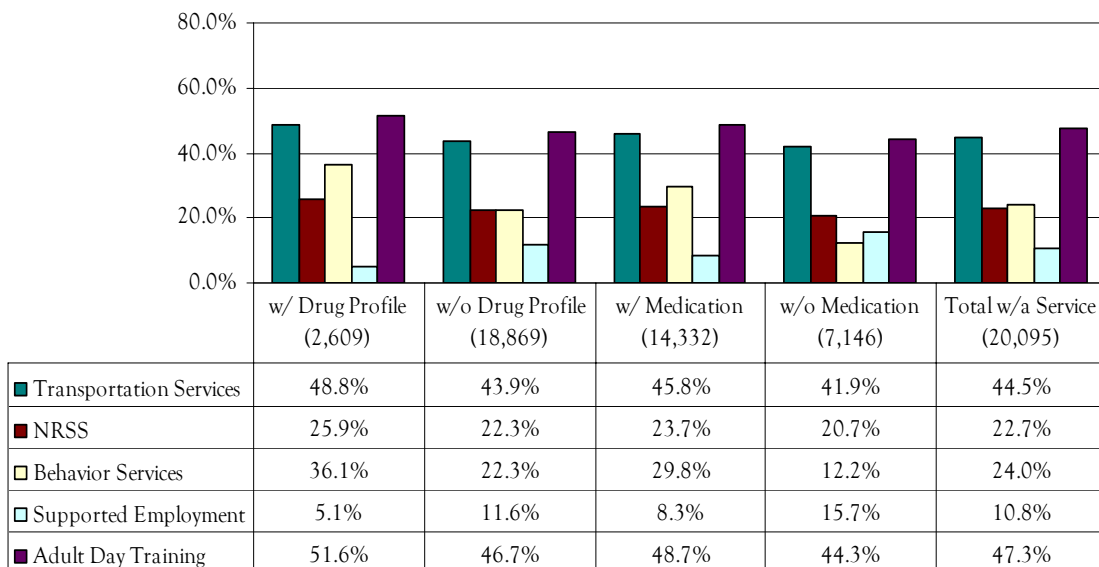
<sup>3</sup> Denominators for each calculation differ due to some missing data items: 10 cases were missing data for treatment in the ER and 11 were missing data on admission to the hospital and if health problems exist.

- The data also provide evidence that people who use at least one of the psychotherapeutic medications were least likely to have the *best possible health*, less than people who fit a drug profile or people who do not use the medication.
- Individuals who fit a drug profile were more likely to have been treated at an emergency room and more likely to have been admitted to a hospital than were individuals in any of the other categories.
- Taking these medications or fitting a profile both appear to be correlated with having health problems. Individuals not taking the specified psychotherapeutic medications were least likely to report the presence of any health problems

Waiver Service Usage by Drug Profile and Medication Use in Waiver Population

The following table compares individuals with and without a drug profile to individuals with and without a medication for rates of waiver service usage for Transportation, Non-Residential Support (NRSS), Behavior Services, Supported Employment, and Adult Day Training Services (ADT). Rates are presented for all individuals in the Medicaid Claims data who used one of the services and had a pharmacy claim in the specified time frames.

**Figure 2: Waiver Services by Drug Profiles and Medication Use**  
**POM Interviews July 2004 - June 2006**  
**Rx Claims July 2002 - June 2004**



Service Category

- Individuals are most likely to receive Adult Day Training or Transportation services and least likely to receive Supported Employment.
- A lower percent of individuals who fit a drug profile than use medication receive Supported Employment services.
- In addition, people who do not use any of the psychotherapeutic medications were more likely to receive Supported Employment than were individuals on average, 15.7 percent and 10.9 percent respectively. They were also less likely to go to an ADT.
- A higher percent of individuals who fit a drug profile than use any of the psychotherapeutic medications receive Transportation, NRSS, Behavior services, and ADT.
- Individuals who fit a profile are more likely than those in any other category to receive all services except Supported Employment.
- Individuals who use any of the psychotherapeutic medications are more likely than those who do not use them to receive all services except Supported Employment.

## Regression Results

Regression results present the coefficients, odds ratio, and p-values for each variable in the regression model. Logistic regression coefficients tell us the change in the log odds of the dependent variable for a unit change in the independent variable. For example, the log odds of achieving the outcome for *best possible health* decreases by .01 for each additional year of age, net of other effects. The odds ratio tells us the percent change in the odds of achieving the *best possible health* for a unit change in the independent variable. For each additional year in age, the odds of having the best possible health decreases by 1 percent (odds ratio (99) – 1 \* 100 = percent change). The odds of having the *best possible health* are 28 percent (1.28-1\*100) greater for individuals living in group homes than for individuals living in family homes. The p-value listed for each variable reflects the statistical significance of the relationship between each variable and the dependent variable. A p-value of .05 or smaller indicates there is a real impact of the variable on the dependent variable.

Gender, Area size, residential setting, disability, drug profile status, and medication use are examined in the form of discrete variables. This means they are grouped into several categories, and the results are interpreted in terms of the reference group. For example, the results for consumers living in independent/supported living settings or group homes are relative to the reference group, people living in family homes. The reference group for gender is male, for Area size is Small-Size Areas, for disabilities is Intellectual Disability, for drug profile status is Fits No Drug Profile, and for medication use is Uses No Medication.

Best Possible Health and Drug Profiles

Results from the regression model using the outcome *has the best possible health* as the dependent variable and an indicator of whether individuals fit one or more drug profile as an independent variable are presented in Table 6. A summary of findings includes the following:

- Individuals who fit a drug profile are no more or less likely to have the *best possible health* than are those who do not fit a drug profile.
- Women are less likely than men to have the *best possible health*.
- As individuals age, they are less likely to have the *best possible health*.
- Individuals who live in group homes are more likely to have the *best possible health* than individuals who live in a family or foster home. This is a somewhat surprising result. It is possible that state policies and standards result in better access to health care services and/or more regular visits to physicians for individuals living in group homes as compared to those living in a family home.
- Individuals who live in medium-size or large-size Areas are more likely than those in small-size Areas to have the *best possible health*. This may reflect a lack of access to health care services or providers for recipients in small-size Areas.

**Table 6: Regression Results 'Has the Best Possible Health' Met**  
*POM Interviews July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	-0.28	0.76	0.001
Age	-0.01	0.99	0.001
Independent/Sup Living	-0.08	0.92	0.462
Group Home	0.25	1.28	0.014
Cerebral Palsy	0.11	1.12	0.393
Autism	0.33	1.39	0.115
Other Disability	-0.19	0.83	0.385
Medium-Size Area	0.57	1.76	0.001
Large-Size Area	0.92	2.50	0.001
One or More Drug Profile	0.06	1.06	0.696
Number of Interviews	2,596		

Because descriptive analyses indicated that medication use is associated with lower levels of having the *best possible health*, we need to assess the impact of the use of one or more of the psychotherapeutic medications on an individual's health.



Best Possible Health and Medication Use

Results from the regression model using the outcome *has the best possible health* as the dependent variable and an indicator of whether individuals use any psychotherapeutic medication as an independent variable are presented in the following table. A summary of findings includes the following:

- Individuals who use one of the specified psychotherapeutic medications are less likely than individuals who do not use the medications to have the *best possible health*.
- The odds of having the best possible health are 17 percent (.83 – 1 \* 100) lower for individuals using at least one of these medications than for individuals who do not use them.

**Table 7: Regression Results 'Has the Best Possible Health' Met**  
**POM Interviews July 1, 2004 - June 30, 2006**  
**Pharmacy Claims July 1, 2002 - June 30, 2004**

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	-0.28	0.76	0.001
Age	-0.01	0.99	0.001
Independent/Sup Living	-0.08	0.93	0.509
Group Home	0.29	1.34	0.004
Cerebral Palsy	0.11	1.12	0.409
Autism	0.35	1.41	0.098
Other Disability	-0.19	0.82	0.369
Medium-Size Area	0.57	1.78	0.001
Large-Size Area	0.92	2.52	0.001
One or More Medication	-0.19	0.83	0.025
Number	2,596		

Best Possible Health and Support Coordinators' Evaluation on Element 2

We are also interested in whether medication continues to impact health even when individuals have Waiver Support Coordinators (WSC) who are aware of their health. The following table presents results from a model including the WSC's evaluation on WiSCC Element 2 that indicates the degree to which the WSC has systems in place to identify health, safety and well-being issues, and to advocate on behalf of individuals in these areas. WSCs are evaluated as Achieving, Implementing, Emerging, or Not Emerging and results from Table 8 are summarized as follows:

- Relative to individuals with support coordinators who score Not Emerging, individuals who have support coordinators who score Emerging, Implementing, or Achieving on WiSCC Element 2 are more likely to have the *best possible health*.

- The effect is strongest for individuals with WSCs who score Achieving, second strongest for individuals with support coordinators who score implementing, and least strong for individuals with support coordinators who score emerging.
- Individuals with support coordinators who score achieving are 433 (5.33-1\*100) percent more likely, individuals with support coordinators who score implementing are 262 (3.62-1\*100) percent more likely, and individuals with support coordinators who score emerging are 95 (1.95-1\*100) percent more likely than individuals with support coordinators who score not emerging to have the *best possible health*.
- Individuals who use a psychotherapeutic medication remain less likely than those who do not take these medications to have the *best possible health*, even controlling for support coordinators' evaluation level.

**Table 8: Regression Results 'Has the Best Possible Health'**  
**POM Interviews July 1, 2004 - June 30, 2006**  
**Pharmacy Claims July 1, 2002 - June 30, 2004**

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	-0.26	0.77	0.001
Age	-0.01	0.99	0.001
Independent/Sup Living	-0.10	0.91	0.400
Group Home	0.31	1.37	0.003
Cerebral Palsy	0.07	1.07	0.608
Autism	0.36	1.44	0.088
Other Disability	-0.22	0.79	0.311
Medium-Size Area	0.63	1.88	0.001
Large-Size Area	0.91	2.47	0.001
One or More Medication	-0.18	0.84	0.038
WSC Evaluation (Element 2)			
Emerging	0.67	1.95	0.007
Implementing	1.29	3.62	0.001
Achieving	1.67	5.33	0.001
Number	2,596		

Emergency Room Treatment and Drug Profiles

We are also interested in whether fitting a drug profile impacts health when using more objective measures of health. The following table presents results from a model analyzing the impact of fitting a drug profile on the odds that an individual has been treated in an emergency room in the past year.

- Fitting a drug profile increases the odds that a person has been treated in an emergency room in the past year.

- Individuals who fit a drug profile are 88 percent (1.883 – 1 \*100) more likely than those who do not fit a drug profile to have been treated in an emergency room in the past year.

**Table 9: Regression Results Treated in Emergency Room in Past Year**  
*POM Interviews July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	-0.04	0.96	0.674
Age	-0.01	0.99	0.006
Independent/Sup Living	0.59	1.81	0.000
Group Home	0.41	1.50	0.000
Cerebral Palsy	0.24	1.28	0.087
Autism	-0.07	0.93	0.766
Other Disability	0.71	2.04	0.001
Medium-Size Area	-0.15	0.86	0.279
Large-Size Area	-0.14	0.87	0.272
One or More Drug Profile	0.63	1.88	0.000
Number	2,586		

Hospital Admission and Drug Profiles

The following table shows results from a model examining the impact of fitting a drug profile on the odds that an individual has been admitted to a hospital in the past year.

**Table 10: Regression Results Admitted to Hospital in Past Year**  
*POM Interview July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	0.04	1.04	0.709
Age	-0.00	0.99	0.880
Independent/Supported Living	0.28	1.32	0.052
Group Home	0.08	1.08	0.546
Cerebral Palsy	0.24	1.27	0.152
Autism	-0.07	0.93	0.806
Other Disability	1.04	2.82	0.000
Medium-Size Area	0.03	1.03	0.881
Large-Size Area	-0.02	0.98	0.888
One or More Drug Profile	0.60	1.82	0.000
Number	2,585		

- The results from Table 10 show that fitting a drug profile increases the odds that a person has been admitted to a hospital in the prior year. Alternatively, admission to the hospital could result in the use of additional medications.
- Persons who fit a drug profile are 82 percent  $(1.815 - 1 * 100)$  more likely than those who do not fit a profile to have been admitted to a hospital in the past year.

Health Problems and Drug Profiles

Table 11 displays results from a model assessing the impact of fitting a drug profile on the odds of having any health problems, as reported or identified during the person centered review. Results indicate the following:

- We see that fitting a drug profile increases the odds that a person has any health problems.
- Individuals who fit a profile are 54 percent  $(1.542 - 1 * 100)$  more likely than those who do not fit a profile to have a health problem.
- Results from the emergency room, hospital, and health problem models show that more objective measures of health do indicate an impact of fitting a drug profile on health.

**Table 11: Regression Results Have Problems with Health**  
*Interview July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Independent Variables	Coefficient	Odds Ratio	P-Value
Female	-0.08	0.93	0.354
Age	0.02	1.02	0.000
Independent/Supported Living	0.09	1.10	0.425
Group Home	0.02	1.03	0.810
Cerebral Palsy	0.38	1.46	0.005
Autism	-0.17	0.85	0.424
Other Disability	0.93	2.54	0.000
Medium-Size Area	-0.48	0.62	0.000
Large-Size Area	-1.15	0.32	0.000
One or More Drug Profile	0.43	1.54	0.004
Number	2,585		

Waiver Service Usage, Drug Profiles, and Medication Usage

Ten regression models examine the impact of drug profiles and the use of one or more of the psychotherapeutic medications on receipt of waiver services most relevant to employment. For each waiver service, one model examines the impact of fitting a drug profile and control variables on receipt of the service, and a separate model examines the impact of using medication and control

variables on receipt of the service. Given that our interest is in the impact of drug profiles and medication on waiver services, we present the odds ratios only for fitting a drug profile and using a medication from the ten regression models. Table 12 shows odds ratios when variables are significant with a p-value of .05 or smaller. Blank cells indicate the variable did not significantly impact receipt of that service.

**Table 12: Odds Ratios for Drug Profile and Medication Use**  
*Waiver Service Use July 1, 2004 - June 30, 2006*  
*Pharmacy Claims July 1, 2002 - June 30, 2004*

Waiver Service Receipt	One or More Drug Profile	Uses One or More Medication
Transportation Services		
Non-Residential Support Services	1.114	1.117
Behavior Services	1.649	2.501
Supported Employment	0.439	0.522
Adult Day Training		1.076

We are primarily concerned with medication interfering with the use of waiver services i.e., in the models where the odds ratio for a drug profile or drug use is negative, indicating medication use reduces the likelihood of receiving the service. The only models with negative coefficients are those for Supported Employment. Both fitting a profile and using a psychotherapeutic medication reduce the odds of receiving Supported Employment services.

- Individuals who fit a drug profile are 56 percent ( $.44 - 1 * 100$ ) less likely than those who do not fit a profile to receive Supported Employment, and individuals who use a medication are 48 percent ( $.52 - 1 * 100$ ) less likely than those who do not use medication to receive Supported Employment.
- Fitting a drug profile or using a psychotherapeutic medication increases the odds of receiving NRSS and Behavior services, and using a psychotherapeutic medication increases the odds of receiving Adult Day Training services.
- To the extent that medication interferes with waiver services that aid employment, the interference operates primarily through Supported Employment services.

## Discussion and Recommendations

The purpose of this study is to assess the impact of several high-risk drug profiles and the use of psychotherapeutic medication in general on the health of individuals and on the use of waiver

services that aid employment. The impact of fitting one or more drug profile and using one or more psychotherapeutic medication on having the *best possible health* is examined using regression analysis. Analyses also examine the impact of fitting a drug profile on being treated in an emergency room, being admitted to a hospital, and having any health problem. To assess whether medication affects employment by interfering with the use of waiver services, analyses examine the impact of fitting a drug profile and using medication on receipt of five waiver services that support employment.

Individuals who fit one or more drug profile are no different from those who did not fit a drug profile in their likelihood of having the *best possible health*. However, individuals who use a psychotherapeutic medication are less likely than those who do not to *have the best possible health*. It may be that using medication has a harmful impact on a person's health. It is also possible that health problems lead individuals to use psychotherapeutic medication.

*Recommendation 1: Future drug studies should examine whether health problems lead to medication use or medication use leads to health problems for individuals using psychotherapeutic medication who indicate they have less than the best possible health. This would require additional interviews with individuals who use medication and have less than the best possible health.*

*Recommendation 2: APD should consider focus group sessions with individuals who use medication and do not have the best possible health to determine whether their less than optimal health results from or prompted medication use.*

Individuals with support coordinators who have high ratings on awareness of consumers' health and well-being (WiSCC Element 2) are more likely than those with support coordinators with lower ratings to have the *best possible health*. This difference increases with each level of improvement among support coordinators, from Emerging to Achieving, compared to individuals with support coordinators who are evaluated as Not Emerging on this element. Therefore, effective support coordinators make a difference in the health status among the people they serve. However, we also find that even with effective support coordination individuals who use medication continue to be less likely to have the *best possible health*.

*Recommendation 3: APD should consider implementing procedures to educate and train support coordinators with low ratings on awareness of consumers' health and well-being. Given the strong impact of effective support coordination on individuals' chances of having the best possible health, it is essential that support coordinators who lack an awareness of consumer health and well-being alter their strategies and techniques.*

*Recommendation 4: Education programs should target individuals and family members. Educational sessions should be developed to help them improve their awareness of the symptoms that would point to a need for various medications, their potential side effects, and the importance of regular physician oversight.*

*Recommendation 5: It continues to be imperative that waiver service recipients who take medication have regular medication reviews, and that consulting pharmacists send the medication review report to recipients' physicians. Prior drug profile studies have shown the majority of waiver recipients who take medication do not receive regular medication reviews. APD should ensure that best practice protocols for medication reviews, developed by the medication review initiative, are distributed to and followed by support coordinators. Local APD offices should follow up on this at least quarterly.*

There is a strong association between fitting a profile and experiencing health problems that result in higher rates of emergency room treatment and hospital admission. This may indicate that medications defining the drug profiles result in health problems for individuals. However, it is also possible that health problems were preexisting and resulted in both the use of psychotherapeutic medications and/or fitting a profile and higher rates of emergency room treatment and hospital admission.

*Recommendation 6: Future drug studies should analyze claims data for hospital admissions and emergency care for individuals who fit a drug profile and who indicate they have been treated in an emergency room or admitted to a hospital. Claims data can then be analyzed to determine the health problem that precipitated the visit and the treatment the individual received.*

*Recommendation 7: APD should consider interviews with individuals who have been treated in an emergency room or admitted to a hospital to determine the reasons that drive recipients to seek emergency care. Are individuals seeking emergency care as a result of health problems that also drive them to use medication, or as a result of complications from medication use?*

*Recommendation 8: Delmarva should work with APD to include questions on the Health and Behavioral Questionnaire that could help determine if medication use leads to health problems or vice versa. As part of this process, Delmarva should revise the data input application so that information about emergency room use and hospital admissions, now captured in a memo, can be more easily analyzed.*

Individuals who fit a profile or use the medication specified in this study are less likely to receive Supported Employment than are those who do not fit a profile and those who do not use the medication. Therefore, it appears that using psychotherapeutic medication and/or fitting a drug profile may interfere with the use of Supported Employment services. Taking medication may result in side effects that interfere with an individual's ability to be employed or with an individual's ability to engage in physical tasks more generally. Alternatively, conditions that require the use of such medications may somehow impact the individual's ability to gain employment.

*Recommendation 9: APD should consider implementing policies that encourage individuals who use psychotherapeutic medication to participate in Supported Employment services. The policies should identify effective strategies for overcoming obstacles faced by individuals who use psychotherapeutic medications.*

*Recommendation 10: APD should consider adding a special outreach program to Supported Employment services and potential employers that focuses on developing relations with employers who have work tasks that could be performed by individuals who may be struggling with obstacles created by medication side effects. This program should include input from the Office of Vocational Rehabilitation.*



## Appendix A Psychotherapeutic Medication Profiles

**Two or more sedative/hypnotic medications concurrently.** Sedatives refer to any medication that acts on the central nervous system to reduce responses to stimuli (Segen 2006). Adverse effects may include:

- 1) Ataxia, a condition characterized by a loss of ability to coordinate muscular movement that can result in unsteady movements and a staggering gait;
- 2) Loss of inhibitions;
- 3) Cardiac and respiratory depression;
- 4) Psychological and physical dependence.

**Two or more anti-psychotic medications concurrently.** Anti-psychotic medications include any drug that attenuates psychotic episodes (Segen 2006). Adverse effects can include:

- 5) Dystonia, a condition characterized by abnormal muscle tone;
- 6) Akathisia, a condition characterized by motor restlessness, muscular quivering, and an inability to sit still;
- 7) Parkinsonism, a disease characterized by tremors, muscle rigidity, slow speech, and a shuffling gait;
- 8) Tardive dyskinesia, a disorder characterized by involuntary twitching of the face, tongue, and limbs;
- 9) Sedation, the slowing of mental and physiological functions;
- 10) Autonomic side effects including blurred vision, dry mouth, nasal congestion, and constipation.

**Two or more selective serotonin reuptake inhibitors (SSRI).** SSRI medication refers to a class of antidepressants that slow the re-absorption of serotonin by neurons, allowing it to stay in the synapse longer (Segen 2006). Side effects may include:

- 11) Insomnia, a condition characterized by chronic difficulty in falling or staying asleep for a sufficient length of time;
- 12) Agitation;
- 13) Headache;
- 14) Nausea;
- 15) Diarrhea.

**Phenobarbital while taking another anti-seizure medication.** Anti-seizure medication inhibits neuromuscular transmission. This combination presents high potential for side effects and may decrease phenobarbital metabolism and the effectiveness of the other medications. Adverse effects can include:

- 16) Ataxia, a condition characterized by a loss of ability to coordinate muscular movement that can result in unsteady movements and a staggering gait;
- 17) Slurred speech;
- 18) Mental confusion;
- 19) Blurred vision;
- 20) Nausea;
- 21) Hematologic disorders;
- 22) Hepatitis, a condition characterized by inflammation of the liver.

Several profiles were added to these four. Clozaril was added as a new profile after the first year. Lithium and Mellaril were included in the first study even though they were not part of the Consensus recommendations. This study is the first of the drug profile studies to look at central nervous system stimulants.

**Clozaril** (generic name clozapine). Clozaril is an atypical anti-psychotic and sedative used for the treatment of treatment-resistant schizophrenia (Segen, 2006). This drug should be the last choice for treatment of this condition because it can:

- 1) lower the seizure threshold;
- 2) cause Neuroleptic Malignant Syndrome (fever, respiratory distress, tachycardia, convulsions, diaphoresis, hypertension, hypotension, pallor, tiredness; and
- 3) cause agranulocytosis, a potentially lethal disorder of the white blood cells.

Because of the risk of agranulocytosis, anyone who takes Clozaril is required to have a complete blood count (CBC) once a week for the first six months at the initiation, biweekly thereafter and weekly for the four weeks following discontinuation.

**Lithium.** Lithium is most often used for the treatment of manic/depressive (bipolar) and depressive disorders. Lithium levels should be monitored every three months and a periodic EKG obtained for consumers over age 40 or with cardiac involvement. Potential side effects include (Segen, 2006):

- 1) Hyperirritability;
- 2) Extremely high fever;
- 3) Stupor;
- 4) Coma;
- 5) Inflammation of the stomach and intestines;
- 6) Cardiovascular disease;
- 7) Osteoporosis.

**Mellaril** (greater than 25 mg). Mellaril (generic name thioridazine) is a typical anti-psychotic. According to a warning posted on the U.S. Food and Drug Administration (FDA) website, it should be reserved for use in the treatment of schizophrenic patients who fail to show an

acceptable response to adequate courses of treatment with other anti-psychotic drugs because it:

- 1) prolongs the QTc<sup>4</sup> interval, in a dose related manner, and has been associated with life-threatening arrhythmias and sudden death;
- 2) is contraindicated with fluvoxamine (Luvox), propranolol (Inderal) and fluoxetine (Prozac); and
- 3) can cause Neuroleptic Malignant Syndrome (see *Clozaril* above).

Consumers with this profile should have an annual EKG and monitoring of serum potassium and magnesium.

**Two or more central nervous system stimulants (CNSS).** CNSS medications refer to any drugs that increase the activity of the nervous system. These drugs typically result in euphoria and increased alertness (Kemienski and Keogh, 2006). Side effects can include:

- 1) Sleeplessness;
- 2) Restlessness;
- 3) Tremors;
- 4) Irritability;
- 5) Cardiovascular problems such as increased heart rate, palpitations, dysrhythmia, and hypertension.

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<sup>4</sup> The QTc is a measure of the time between the beginning of the Q wave and the end of the T wave in the heart's electrical cycle, correcting for heart rate.

## Appendix B Health and Behavioral Survey

Have you seen a doctor in the past year? Y/N

What kind of doctor?

- |                     |                                    |
|---------------------|------------------------------------|
| 1. neurology        | 11. podiatry                       |
| 2. psychiatry       | 12. dermatology                    |
| 3. primary care     | 13. gynecology                     |
| 4. gastroenterology | 14. urology                        |
| 5. cardiology       | 15. orthopedics                    |
| 6. endocrinology    | 16. neurosurgery                   |
| 7. pediatrician     | 17. ear/nose/throat                |
| 8. hematology       | 18. oncology                       |
| 9. rheumatology     | 19. optometry/ophthalmology        |
| 10. allergy         | Add all others to the health notes |

2a. Do you currently have a dentist? Y/N

2b. Have you been to the dentist in the past year? Y/N

3. Have you been treated in the emergency room this past year? Y/N  
If yes, add when and why to the health note

4. Have you been admitted to the hospital this past year? Y/N

If yes, add when and why to the health notes

5. Do you take any medicines? Y/N

If yes, what ones?

- |                                |                               |
|--------------------------------|-------------------------------|
| 1. Abilify (Aripiprazole)      | 26. Lopressor (Metoprolol)    |
| 2. Adderall                    | 27. Mellaril (Thioridazine)   |
| 3. Anafranil (Clomipramine)    | 28. Metformin (Glucophage)    |
| 4. Ativan (Lorazepam)          | 29. Mysoline (Primidone)      |
| 5. Baclofen (Liorasal)         | 30. Neurontin (Gabapentin)    |
| 6. Buspar (Buspirone)          | 31. Norvasc (Amlodipine)      |
| 7. Catapres (Clonidine)        | 32. Paxil (Paroxetine)        |
| 8. Celexa (Citalopram)         | 33. Phenobarbital             |
| 9. Cogentin (Benztropine)      | 34. Pravachol (Pravastatin)   |
| 10. Concerta (Methylphenidate) | 35. Prevacid (Lansoprazole)   |
| 11. Depakote (Divalproex)      | 36. Prinivil (Lisinopril)     |
| 12. Desyrel (Trazadone)        | 37. Prozac (Fluoxetine)       |
| 13. Detrol (Tolterodine)       | 38. Risperdal (Risperidone)   |
| 14. Dilantin (Phenytoin)       | 39. Ritalin (Methylphenidate) |
| 15. Effexor (Venlafaxine)      | 40. Seroquel (Quetiapine)     |

- |                            |                                |
|----------------------------|--------------------------------|
| 16. Geodon (Ziprasidone)   | 41. Symmetrel (Amantadine)     |
| 17. Haldol (Haloperidol)   | 42. Synthroid (Levothyroxin)   |
| 18. Inderal (Propranolol)  | 43. Tegretol (Carbamezapine)   |
| 19. Keppra (Levetiracetam) | 44. Thorazine (Chlorpromazine) |
| 20. Klonopin (Clonazepam)  | 45. Topamax (Topiramate)       |
| 21. Lamictal (Lamotragine) | 46. Vasotec (Enalapril)        |
| 22. Lasix (Furosemide)     | 47. Wellbutrin (Bupropion)     |
| 23. Lexapro (Escitalopram) | 48. Xanax (Alprazolam)         |
| 24. Lipitor (Atorvastin)   | 49. Zoloft (Sertraline)        |
| 25. Lithium (Eskalith)     | 50. Zyprexa (Olanzapine)       |

Add all others to the health notes

6. Do you have any problems with your health? Y/N  
If yes, add what to the health notes
7. In the past year is your health (better / worse / the same)?
8. Do you currently receive the following?
- |                          |     |
|--------------------------|-----|
| a. Speech therapy?       | Y/N |
| b. Occupational therapy? | Y/N |
| c. Physical therapy?     | Y/N |
| d. Nutritional supports? | Y/N |
| e. Respiratory therapy?  | Y/N |
| f. Massage therapy?      | Y/N |
9. Does the individual state a need for additional services/supports from?
- |                            |     |
|----------------------------|-----|
| a. Speech therapy?         | Y/N |
| b. Occupational therapy?   | Y/N |
| c. Physical therapy?       | Y/N |
| d. Nutritional evaluation? | Y/N |
| e. Respiratory therapy?    | Y/N |
| f. Massage therapy?        | Y/N |
10. Does the individual appear to need or state the need for:
- |                                     |     |
|-------------------------------------|-----|
| a. Speech therapy evaluation?       | Y/N |
| b. Occupational therapy evaluation? | Y/N |
| c. Physical therapy evaluation?     | Y/N |
| d. Nutritional evaluation?          | Y/N |
| e. Respiratory therapy evaluation?  | Y/N |
| f. Massage therapy evaluation?      | Y/N |
| g. Oral motor evaluation?           | Y/N |
11. Does the individual appear to need or state the need for:
- |                                   |     |
|-----------------------------------|-----|
| a. Adaptive equipment evaluation? | Y/N |
| b. Environmental modifications?   | Y/N |

12. Does the individual appear to need or state the need for:
- a. Male preventative health care? Y/N
  - b. Female preventative health care? Y/N
  - c. Vision exam? Y/N
  - d. Hearing exam? Y/N
- 13a. Does the individual take seizure medication?
- 13b. Is this medication prescribed by the primary care physician?
- 14a. Does the individual take behavior/psychiatric medication?
- 14b. Is this medication prescribed by the primary care physician?
15. Does the individual take medication for chronic conditions such as: diabetes, hypertension, thyroid, heart, gastrointestinal disorders, blood disorders, or respiratory disorders?
16. Does the individual appear to require or state the need for additional information/education about medications?
- 17a. Do behaviors exist that have not been addressed with a behavior review?
- 17b. Does the individual reside in a behavioral home without a current behavior review on file?
- 17c. Does the family/etc. indicate that a behavior review is needed?
- 18a. Has a behavior review recommended behavioral services that are not in place?
- 18b. Do behaviors currently exist that are not addressed in a behavior plan?
- 18c. Does a behavior plan exist without appropriate professional oversight?
- 18d. Does the family/etc. indicate that behavioral services or supports are needed?
19. Does any implemented behavior plan require a level of approval that it has not yet been received?
- 20a. Does the individual have unresolved issues from abuse, grief, interpersonal relationships?
- 20b. Does the individual/supports indicate the need for mental health counseling/support?
- 21a. Does the individual have Medicare?
- 21b. Does the individual have private insurance?
- 21c. Does the individual private pay?

**NOTE: For any additional health concerns or questions please call Linda in the Tampa office 1-866-254-2075 or on her cell 813-495-0147.**

## Appendix C

### WiSCC Outcome Element Evaluation Levels

The following offers an overall description of the WiSCC evaluation levels. The complete tool can be reviewed at [http://www.dfmc-florida.org/docs/AA-WiSCC\\_Tool7-22-04.pdf](http://www.dfmc-florida.org/docs/AA-WiSCC_Tool7-22-04.pdf).

#### **Achieving**

Implementing components are present and results are observable for the individual being served.

#### **Implementing**

Clear strategies to effect change are in place but the results have not yet been achieved; Education, Exposure and Experience (EEE) are taking place and are being integrated into service delivery; WSCs demonstrate advocacy, empowerment, action, responsiveness, and flexibility in their efforts to support individuals to achieve results.

#### **Emerging**

WSCs know the people they serve, have methodologies in place to continue to learn more about them and can define existing barriers. However, little to no appropriate or effective action is being taken on their behalf. Any implementation that may exist is either inconsistent, without rationale, or without direction. No EEE are taking place.

#### **Not Present**

WSCs do not know the preferences, likes or dislikes of the individuals they serve, nor whom the supports or important people are in their lives. The WSCs may have no method in place to learn about the individuals or gather pertinent information regarding their life.