Florida Statewide Quality Assurance Program

Quality Improvement Study
Contract Year 6: July 2006 – June 2007

Health-Related Service Needs Assessment: Analysis of Health/Behavioral Questionnaire Results

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

Executive Summary

In this study we examine data collected through the Health and Behavioral Survey, used in conjunction with the Person Centered Review, to determine the health status and potential needs of individuals served through the Developmental Disabilities (DD) and Family and Supported Living (FSL) Home and Community-Based Services waiver programs. Interviews completed between July 2004 and March 2007, with 3,512 individuals, were available for the analysis and were conducted as part of the Waiver Support Coordination Consultation (WiSCC) process Delmarva utilizes to monitor Waiver Support Coordinators (WSC). In addition to the WiSCC process and Health and Behavioral Questionnaire, a Personal Outcome Measures (POM) interview is conducted to measure the outcomes and supports present in the individual's life.

Through descriptive and regression analyses, we examine demographic indicators (age, gender, home type, disability, Agency for Persons with Disabilities (APD) Area Size, APD Area, waiver services, health status indicators, POM Supports and the WSC performance level to determine how each correlates with a need for one or more health-related services. We also examine the correlation between the need for services and POM Outcomes. A need for health-related services is reported by individuals or family members during the interview and these include speech therapy, occupational therapy, physical therapy, nutritional supports, respiratory therapy, massage therapy, oral motor evaluation, adaptive equipment evaluation, environmental modifications, female/male preventive health care, vision and hearing exams, a need for medication information/education and a behavior analysis assessment.

Results indicate the following:

- Close to 73 percent of individuals interviewed felt they needed at least one of the health-related services;
- Younger waiver recipients, women, and individuals in smaller more rural APD Areas were likely to need additional health-related services, as were individuals with Cerebral Palsy;
- Individuals receiving services in Areas 8, 9 or 15 were more likely than in other Areas to need services;
- having fewer POM Supports present was associated with a need for additional health-related services;
- Waiver service recipients who indicated their health was worse at the time of the interview than in the previous year were almost twice as likely to report a need for additional health-related services;
- Individuals indicating they had health problems were about 1.7 times more likely to need at least one of the services.

Waiver Support Coordinator performance was also important, the data suggesting that individuals working with higher performing WSCs (Achieving) were more likely to indicate they did not need any of the health-related services analyzed in this study and they were also likely to have more outcomes present in their lives. A key finding is that needing one or more health-related service as measured in this study was significantly correlated with lower POM Outcomes in the lives of the individuals served on the waivers.

Background

Delmarva Foundation provides quality assurance (QA), through the Florida Statewide Quality Assurance Program (FSQAP), for the Developmental Disabilities (DD) and Family and Supported Living (FSL) Home and Community-Based Services waiver services programs. The Agency for Health Care Administration (AHCA) provides contractual oversight and the Agency for Persons with Disabilities (APD) administers the waiver programs. Individuals receiving services through each of these waivers choose a Waiver Support Coordinator who helps the individuals navigate the waiver system and matches them with service providers who are best able to meet their needs.

As part of the QA program, Delmarva Quality Improvement Consultants (QIC) conduct Waiver Support Coordination Consultations (WiSCC) with Waiver Support Coordinators (WSC) to evaluate their organizational systems and determine how well the WSCs are helping people they serve achieve desired outcomes in their lives. As part of the WiSCC, QICs conduct Person Centered Reviews (PCR) with a random sample of individuals receiving services through one of the waiver programs. The PCR includes a Personal Outcome Measure (POM) interview, as developed by The Council on Quality and Leadership (CQL), to determine if 25 different outcomes are being met for individuals and if supports are in place to help achieve those outcomes. In addition to CQL's interview instrument and protocols, the QICs also examine several health issues using the Health and Behavioral questionnaire developed by Delmarva.[1]

Included in the health/behavioral interview, individuals are asked about health care utilization, service needs and medications taken over the past 12 month period. The purpose of this study is to examine the perceived health-related service needs of individuals who receive DD or FSL Waiver services.

- Are people who believe they need services such as speech therapy, occupation therapy, a nutritional evaluation, vision or hearing exams, preventive health care, an adaptive equipment evaluation or environmental modifications more likely to have health problems?
- Are they less likely to have outcomes met in their lives?
- Are they more or less likely to be admitted to the hospital or to have been treated at an emergency room?
- Does taking medication correlate with needing health-related services?
- Are higher WiSCC performance evaluation levels associated with a reduced need for additional services?

[1] A copy of the 25 Personal Outcome Measures and the Health/Behavioral survey instrument are included as Attachments 1 and 2 to this study.

In this study we examine these research questions and also the correlation of other demographic factors with the individual's need for health-related services.

Data

Data for this study were collected between July 2004 and March 2007 and were taken from three sources: Waiver Support Coordination Consultations (WiSCC), Person Centered Reviews (PCR), and Medicaid claims data stored in FMMIS (Florida Medicaid Management Information System) at AHCA[2] Each eligible WSC is evaluated annually using the WiSCC evaluation tool. Five elements in the WiSCC are used to measure licensure and procedural requirements such as background screening, training documentation and billing authorization and documentation. These Minimum Service Requirement (MSR) elements are scored as Met or Not Met. The QIC also examines the extent to which each WSC organization has systems in place that promote an optimal quality of life for individuals, helping to ensure they achieve outcomes in their lives that are important to them. Six WiSCC Results Elements (WRE) are used to measure this portion of the WSC's performance and are evaluated as Achieving, Implementing, Emerging or Not Emerging.[3]

PCRs are part of the WiSCC process and include a POM interview (to determine overall outcomes and supports present), a health and behavioral needs assessment, a review of the individual's record, and interviews with the WSC and, if appropriate, other relevant people who may know the individual. Information from the PCR is used to help determine the WSC's performance level. A random sample of two individuals is selected from each WSC's caseload, producing a sample statewide each year that is suitable for statistical analyses. It is important to note that in order to maximize on the number of cases available for the study, we use the random samples from Year 4 of the contract (July 2004 – June 2005), Year 5 (July 2005 – June 2006) and the first three quarters of Year 6 (July 2006 – March 2007). Therefore, we are utilizing data from an incomplete sample for the most recent time period. However, because the selection of individuals is random across the state, we have no reason to believe this will bias the results. A total of 3,512 cases were available for the descriptive analyses.[4]

Claims data are used to identify the number and type of waiver services received by each individual for the 12 month period prior to the PCR. Not all individual cases can be successfully merged to the

[2] Demographic data are supplemented with APD's ABC data when needed and when available in the ABC data.
[3] See Attachment 3 for a description of the elements and evaluation levels.
[4] A small percent of the sample (approximately 1.5%) consists of individuals interviewed twice during the time period. However, previous analysis with longitudinal data suggests the interview does not impact POM outcomes for individuals. At this time, it is not known how more than one PCR may impact service needs, but with such a small number any bias should not impact the overall results.

claims data due to problems with identification numbers. Therefore, only 1,994 cases are in analyses that include waiver services, such as Adult Day Training, Residential Habilitation or Transportation.

Methodology

We use descriptive analyses to show the relationship between the various variables in the study and the need for health-related services as defined during the Person Centered Review. For example, we display the difference in service need between men and women in the sample—a bivariate analysis. But these analyses do not explain the various other factors that could simultaneously impact a need for more services. Bivariate analysis may show that children are more likely to have outcomes present in their lives. However, by using more sophisticated analyses we can tease out the fact that it is not because they are young but because they have more supports in place than older people, and supports directly impact outcomes. Regression analysis models are designed to do this; to test the net impact of each independent variable on the variable of interest, the dependent variable.

Regression models were developed to examine the impact of each available independent variable on the probability that an individual with a developmental disability feels the need for additional health-related services, and to examine the impact of needing additional services on the outcomes present in the lives of individuals in the waiver programs. Linear regression analysis is used when the dependent variable is a continuous or interval level variable, meaning there is a logical distance between each category of the variable such as with age and POM outcomes. Binary logistic regression is used when the dependent variable is one with two categories, generally coded as 0/1 denoting the presence or absence of an event.

Two logistic regression models are used in this study when examining the impact of various factors on the need for additional health-related services. The dependent variable in the first model is coded as 0 v one (1) or more services needed and the dependent variable in the second model is coded as zero (0) v three (3) or more services needed. In this way we test the impact of needing at least one additional health-related service and also the impact of having more complex needs, needing at least three or more services, versus not reporting a need for any of the services. Logistic regression results inform us if certain characteristics or events increase or decrease the odds of needing more services. The odds ratio ranges from zero and up. An odds ratio of one (1) indicates the independent variable has no impact on the dependent variable—equal odds for both. An odds ratio greater than one indicates a greater likelihood exists and an odds ratio less than one a smaller likelihood exists.

The probability (p-value) associated with this test informs us how likely the association is due to chance. A standard probability level used to determine statistical significance in the social sciences is

p<=0.05. When we do not have a very large sample size, a p-value of 0.10 or less may also indicate an important relationship exists, that might be detected with a larger sample size. However, you accept a larger margin of error as well. The importance of the p-value is in giving an indication of the probability we may be wrong in our assumptions about the results. If p=.05 there is a five percent chance our point estimate does not accurately represent the population.

The odds ratios tell us something about the strength of the relation whereas the p value indicates the risk of error. For example, we may examine the impact of supports on the likelihood of needing one or more additional health-related services. If we find that individuals with more supports are less likely to need services the p-value would indicate statistical significance (<= .05) and the odds ratio would be less than one (1). An odds ratio of .50 would indicate the odds of needing services when you have a greater number of supports are about half the odds of needing services with fewer supports, a relatively strong relationship. Likewise, if we find that older people are more likely to need services the odds ratio would be greater than one (1). An odds ratio of 2.5 would indicate older people are about two and a half time more likely to need additional services than younger people.

A linear regression model is used to examine the impact of needing additional services on the outcomes present in people's lives. If health-related services are not sufficiently available or accessible, does this impact the quality of life for individuals as measured by the POM outcomes? In a linear regression, we test the impact of the independent variables across all levels of the dependent variable, not just at some cut off point as in the logistic regression. If we find an individual with more supports also has more outcomes, this is true whether outcomes are low or high. For example, older individuals typically have fewer outcomes present in their lives. However, this type of analysis tells us that controlling for other factors in the model, even at lower levels of outcomes, the person with more supports will have more outcomes present.

The R-Square statistic in linear regression tells us how much of the variation in the dependent variable is explained by the independent variables in the model, ranging from 0 to 1. When a model explains only a small proportion of the variance in the dependent variable it supports the assumption that other unmeasured variables, not represented in the equation, impact the dependent variable. The Beta Coefficient informs us how much and the direction the dependent variable changes given a unit change in the independent variable. For example, in an analysis with the number of POM Outcomes present as the dependent variable, a Coefficient of 0.736 for POM Supports indicates the addition of one support increases outcomes by .736, close to a one to one correspondence. A negative Coefficient indicates a one unit increase on the independent variable is associated with a decrease on the dependent variable.

Dependent Variables

We used two dependent variables to examine the impact of various factors on needing additional health related services for individuals on the waiver programs. A health-related service needs assessment indicator was developed using the following questions from the Health and Behavioral survey (Attachment 2): 9a-f, 10a-g, 11a-b, 12a-d, 16, 17c and 18d. These measure the need for additional services or supports or the need for an evaluation for additional services/supports for:

- Speech therapy
- Occupational therapy
- Physical therapy
- Nutritional evaluation
- Respiratory therapy
- Massage therapy
- Oral motor evaluation
- Adaptive equipment evaluation
- Environmental modifications
- Male/Female preventive health care
- Vision or hearing exam
- Medication information/education
- Behavioral review
- Behavioral services or supports

Table 1 displays the number and percent of individuals in the sample who were identified as needing a service or an evaluation for a particular service. The information indicates the need for a vision exam is relatively high and that women are far more likely to report a need for preventive health care than are men, 35 percent compared to 14 percent respectively. The need for an evaluation for speech therapy, adaptive equipment, physical therapy and occupational therapy is also quite prevalent, and close to 18 percent of the individuals interviewed needed additional information or education about medications.

Table 1: Need for Services/Supports or the Evaluation for Services
July 2004 - March 2007

Service	No	Yes	Pct Yes
	Stated Need for Additional Service/Supports		
Speech Therapy	3,238	265	7.6%
Occupational Therapy	3,356	151	4.3%
Physical Therapy	3,308	199	5.7%
Nutritional Evaluation	3,439	65	1.9%
Respiratory Therapy	3,500	6	0.2%
Massage Therapy	3,408	95	2.7%
Service	Appeared to Need or Stated a Need for Evaluation For		
Speech Therapy	2,850	655	18.7%
Occupational Therapy	3,115	395	11.3%
Physical Therapy	3,017	492	14.0%
Nutritional Evaluation	3,224	282	8.0%
Respiratory Therapy	3,474	32	0.9%
Massage Therapy	3,180	325	9.3%
Oral Motor	3,396	112	3.2%
Service	Appeared to Need or Stated a Need For		
Adaptive Equipment Evaluation	2,949	560	16.0%
Environmental Modifications	3,123	382	10.9%
Male Preventive Health Care	1,652	278	14.4%
Female Preventive Health Care	1,010	552	35.3%
Vision Exam	2,818	677	19.4%
Hearing Exam	3,182	312	8.9%
Medication Information/Education	2,885	627	17.9%
Service	Family Indicated a Need For		
Behavioral Review	3,222	215	6.3%
Behavioral Services	3,173	241	7.1%

The following table displays the number and percent of individuals in the sample who received the health-related services offered through the waiver, within a 12 month period prior to the interview. Information for this is only available for the 1,994 cases that were successfully merged to the claims

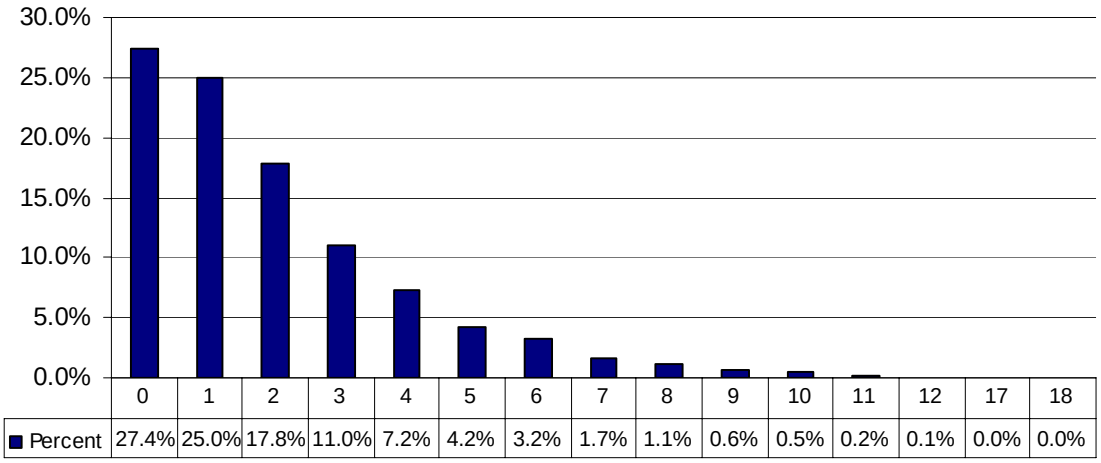
data to identify the services they had received. With the exception of Behavioral Analysis Assessment, received by 22 percent of individuals, these services are seldom utilized.

Table 2: Health-Related Services on the Waiver
July 2004 - March 2007

	Received the Service	
Health-Related Service	Number	Percent
Speech Therapy	118	5.9%
Occupational Therapy	72	3.6%
Physical Therapy	128	6.4%
Respiratory Therapy	2	0.1%
Massage Therapy	78	3.9%
Environment Accessibility Adaptations	62	3.1%
Behavioral Analysis Assessment	443	22.2%

The measure of service need was calculated by simply adding the number of times the responses were recorded as "yes", meaning the service was needed. Individuals can report a need for zero to 21 services. Figure 1 shows the distribution of the percent of individuals across the number of needed services reported. Approximately 27 percent of individuals in the sample (962), or their family member, reported they did not feel the need for any additional health-related service. Just over one fourth of the individuals believed they could benefit from one additional service and 29 reported needing 10 or more. On average, individuals reported a need for 1.98 services, with a median of one (1).

Figure 1: Health-Related Service Needs Indicator
July 2004 - March 2007
N=3,512



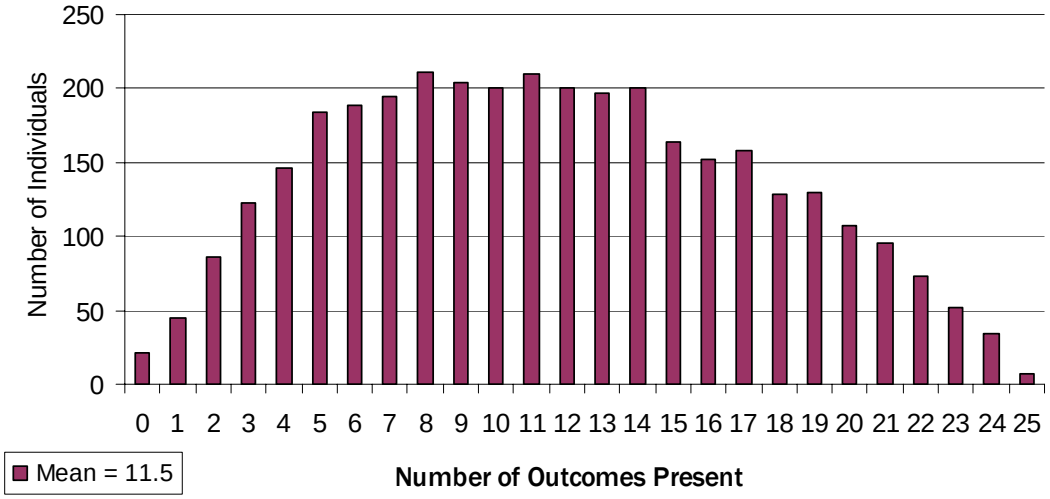
	0	1	2	3	4	5	6	7	8	9	10	11	12	17	18
Percent	27.4%	25.0%	17.8%	11.0%	7.2%	4.2%	3.2%	1.7%	1.1%	0.6%	0.5%	0.2%	0.1%	0.0%	0.0%

Number of Services Needed

Because this does not represent a normal distribution (bell-shaped curve) that is needed when using certain statistical tests, we dichotomize this variable for analysis. One model utilizes a dependent variable that compares individuals who do not need any other health-related service with everyone who needed one or more service. In order to examine somewhat greater need, we also use a dependent variable that compares individuals who reported needing no additional services with individuals needing three or more services.

To examine the impact of needing services on the outcomes in people's lives, we use the total number of outcomes achieved as a dependent variable in a second statistical model. The distribution is normal and is displayed in Figure 2. On average, from July 2004 through March 2007, individuals had 11.5 of the 25 outcomes present (46%) as defined during the POM interview.

Figure 2: Number of Outcomes Present per Individuals
July 2004 - March 2007
N=3,512



Independent Variables

Several demographic indicators are used in the analysis because of their known impact on health, access to health care or on the outcomes and supports present in the lives of individuals with developmental disabilities. These have been used in many previous studies submitted to AHCA and APD and described again briefly here.

- Sex: Female (N=1,568) and Male (N=1,944). Female=0/Male=1.
- 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 ABC (Allocation, Budget and Contract Control) data from APD 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 or FSL 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, and Tallahassee) and Small Areas fewer than 1,000 consumers. The categories contain the following APD Areas:
    - Large—7, 10, 11, 23 (N=1,760)
    - Medium—1, 2, 3, 4, 9, and 13 (N=1,249)
    - Small—8, 12, 14 and 15 (N=503)

- Home Type: There are several types of living arrangements available to people who receive services on the DD Waiver. We have grouped these into the following categories for this analysis:
    - Family Home (N=1,787)
    - Independent Living and Supported Living (N=659)
    - Small Group Homes (N=734)
    - Large Group Home (N=163)
    - Other Home—Assisted Living Facilities (ALF) (N=89), Residential Treatment Facilities (N=27), Foster Home (45) and Unknown (N=8).
- Disability: Individuals with six different disabilities are included in the sample. These are grouped as follows:
    - Intellectual Disability (N=2,134)
    - Cerebral Palsy (N=289)
    - Autism (N=151)
    - Other Disability—Epilepsy (9), Spina Bifida (97), Prader Willi (9), Other (12), Unknown (5)
- POM Supports—total number of the 25 POM supports present that help the individual achieve outcomes. Ranges from 0 to 25 with a normal distribution and a mean of 12.5.[5]
- CORE Services—waiver services reviewed onsite. Individuals may receive multiple services:[6]
    - Adult Day Training (ADT) (N=985)
    - Non-Residential Support Services (NRSS) (N=431)
    - In-Home Support Services (IHSS) (N=256)
    - Supported Employment (N=209)
    - Supported Living Coaching (N=381)
    - Residential Habilitation (N=634)
- Non-CORE services includes all DD and FSL Waiver services not listed above with the exception of Waiver Support Coordination. On average individuals received 2.5 additional non-CORE waiver services, with a median of two (2).
- WSC Results Score (WRE)—the total score received by the Waiver Support Coordinator on the six Results Elements of the WiSCC. Scores range from zero (0) to 18, with a mean of 10.6 and a median of 10, based upon the following evaluation levels:
    - Achieving (3 points)
    - Implementing (2 points)
    - Emerging (1 point)

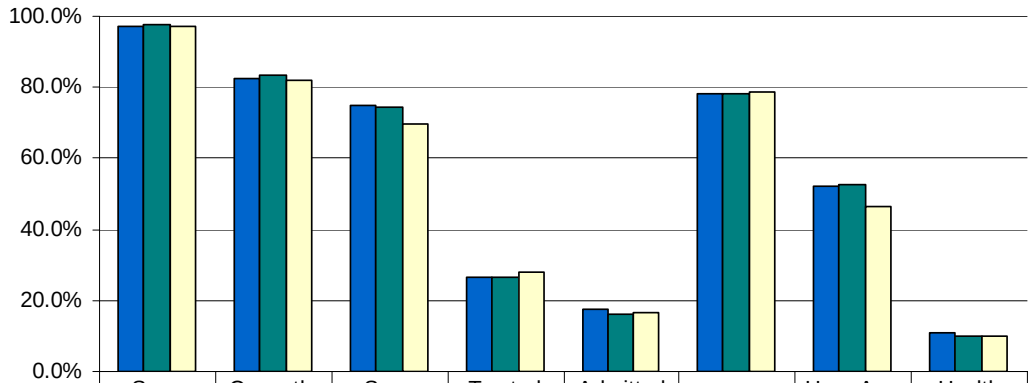
[5] See Attachment 1 for a list of the POM items.
[6] Special Medical Home Care has too few cases to analyze separately and is therefore included with the other "non-CORE" services.

- Not Emerging (0 points)

Several health indicators on the Health and Behavioral questionnaire were analyzed to determine their possible impact on the need for additional health-related services. With the exception of Health Status, these are coded as Yes=1 and No=0:

- Seen Doctor—Have you seen a doctor in the past year?
- Have Dentist—Do you currently have a dentist?
- Seen Dentist—Have you been to the dentist in the past year?
- Treated ER—Have you been treated in the emergency room this past year?
- Admitted Hospital—Have you been admitted to the hospital this past year?
- Take Medicine—Do you take any medicines?
- Health Problems—Do you have any problems with your health?
- Health Status—In the past year is your health (better/worse/the same)? This is coded as Better/Same=0, Worse=1.

Figure 3: Health Indicators by Year
July 2004 - March 2007



	Seen Doctor Past Year	Currently Has Dentist	Seen Dentist Past Year	Treated ER Past Year	Admitted Hospital Past Year	Take Any Medicines	Have Any Health Problems	Health Worse Past Year
Year 4 (1,330)	97.3%	82.4%	74.7%	26.7%	17.4%	78.3%	52.2%	11.0%
Year 5 (1,356)	97.7%	83.3%	74.2%	26.8%	15.9%	78.2%	52.7%	9.8%
Year 6 (850)	97.3%	82.1%	69.6%	27.8%	16.6%	78.6%	46.6%	9.8%

Figure 3 shows the distribution of each of these health indicators by year, for the time period July 2004 through March 2007. Each has remained fairly consistent, remembering that data for Year 6 represent about 65 to 70 percent of the total projected sample for the year. Nearly every individual

had been to see a doctor in the year previous to the PCR. Most, over 82 percent, have a dentist but fewer than that, around 73 percent, had been to the dentist in the 12 months prior to the interview. On average about 78 percent of individuals were taking some kind of medicine, around 51 percent reported having problems with their health, and 10 percent felt their health was worse than in the previous year.

Results

Descriptive Information

The distribution of the percent of individuals needing one or more health-related service across various demographic and health indicators is presented in the next series of tables and graphs. Table 3 displays the number and percent of individuals needing one or more heath related service by gender and by the size of the APD Area in which they live. On average, for the time period between July 2004 and March 2007, 72.6 percent of individuals interviewed reported they needed at least one additional health-related service. Women, more so than men, appear to need additional services, as do individuals in smaller/less populated Areas compared to medium or large sized Areas.

Table 3: Health-Related Services Need by Gender and Area Size
July 2004 - March 2007

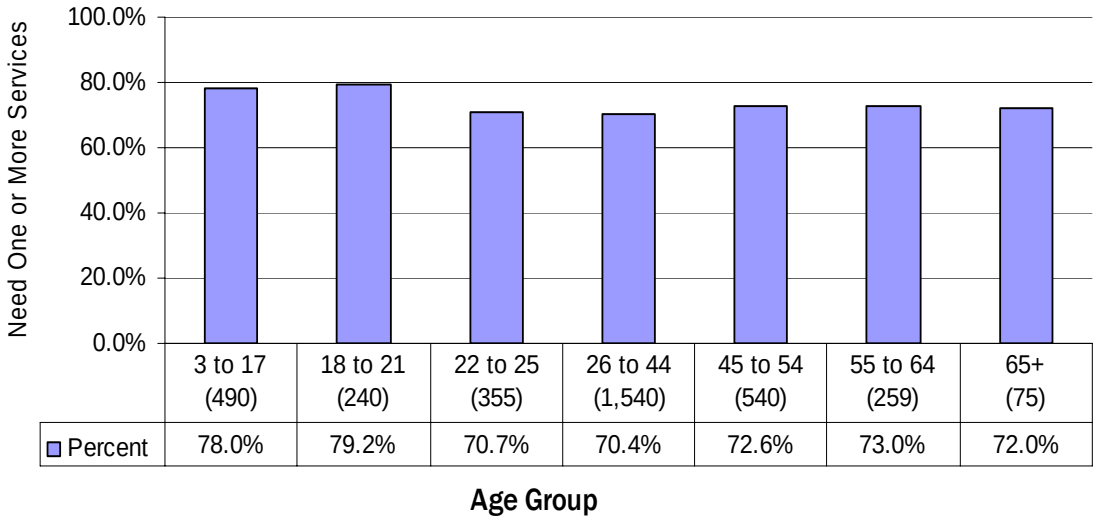
	Need One or More Service	
	Number	Percent
Gender		
Female	1,181	75.3%
Male	1,369	70.4%
Area Size		
Small	392	77.9%
Medium	873	69.9%
Large	1,285	73.0%
Average	2,550	72.6%

Figure 4 displays the distribution of individuals needing at least one or more health-related service across various age groups.[7] Children and young adults up through age 21 are most likely to report

[7] There were 13 individuals for which a birth date could not be found. Therefore, age group totals do not sum to 3,512.

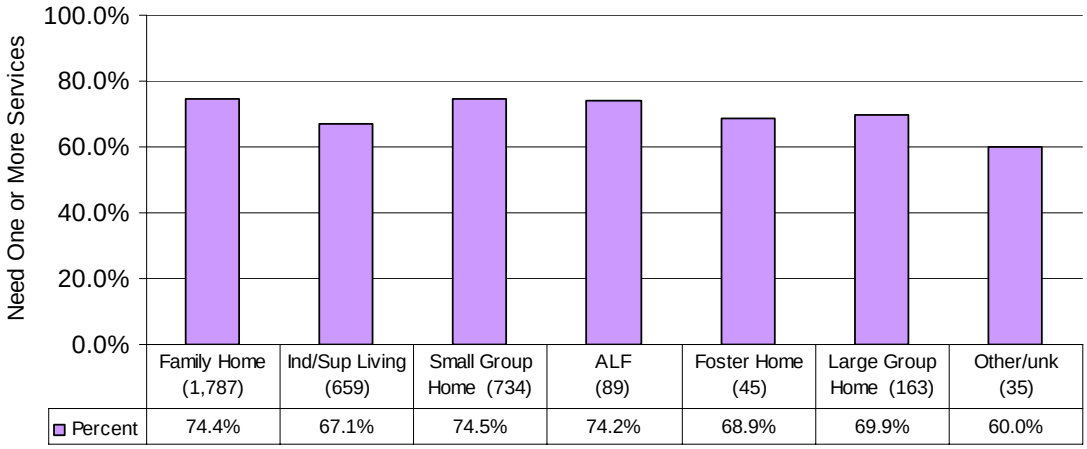
needing additional services, with individuals age 22 to 25 least likely to have a need for these health-related services.

Figure 4: Percent Who Need One or More Services by Age Group
July 2004 - March 2007



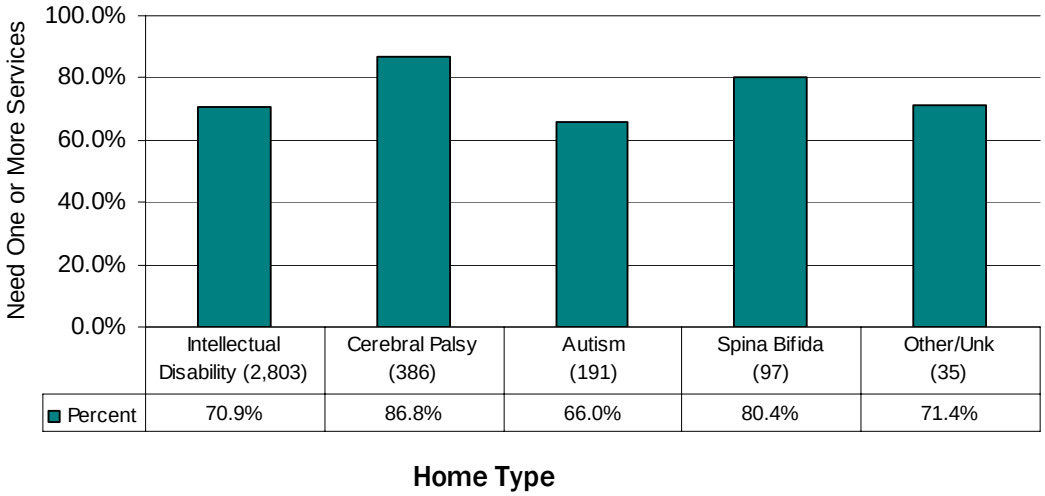
The distribution of individuals needing services is shown by Home Type in Figure 5. Individuals in Family Homes were most likely to need services whereas individuals in the Other/Unknown category, consisting mostly of ALFs (89), Foster Home (45) and Residential Treatment Centers (27), were least likely to report service needs.

Figure 5: Percent Who Need One or More Services by Home Type
July 2004 - March 2007



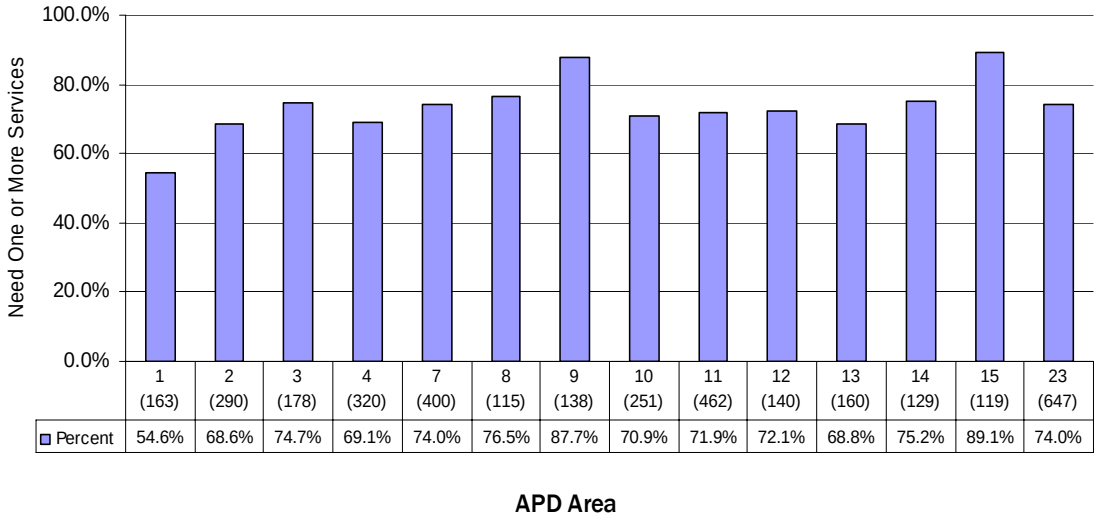
Data in the following figure inform us that individuals with Cerebral Palsy are very likely to need additional health-related services, with 86.8 percent reporting a need for one or more. Individuals with Autism or Intellectual Disabilities were least likely to need additional services.

Figure 6: Percent Who Need One or More Services by Disability
July 2004 - March 2007



Reported need for additional services by individuals in the sample varies across APD Areas, from a low of 54.6 percent in Area 1 to a high of 89.1 percent in Area 15 (Figure 7). The rate is also relatively high in Areas 8 and 9, where close to 76.5 percent and 87.7 percent of individuals respectively, or their family member, felt they needed more health-related services.

Figure 7: Percent Who Need One or More Services by APD Area
July 2004 - March 2007

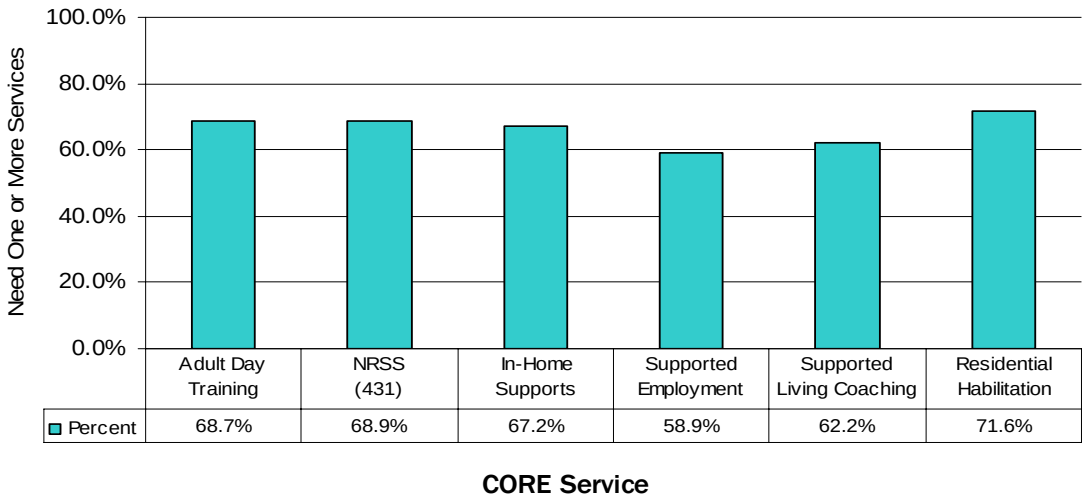


	1 (163)	2 (290)	3 (178)	4 (320)	7 (400)	8 (115)	9 (138)	10 (251)	11 (462)	12 (140)	13 (160)	14 (129)	15 (119)	23 (647)
Percent	54.6%	68.6%	74.7%	69.1%	74.0%	76.5%	87.7%	70.9%	71.9%	72.1%	68.8%	75.2%	89.1%	74.0%

APD Area

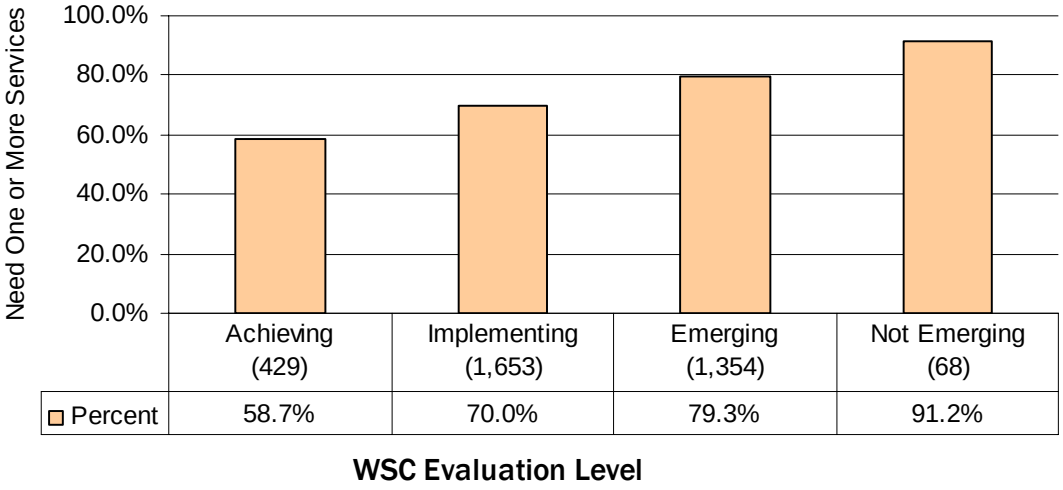
Individuals receiving Supported Employment were least likely to need additional services and individuals receiving Residential Habilitation were most likely to report a need for these services (Figure 8).

Figure 8: Percent Who Need One or More Services by CORE Service
July 2004 - March 2007



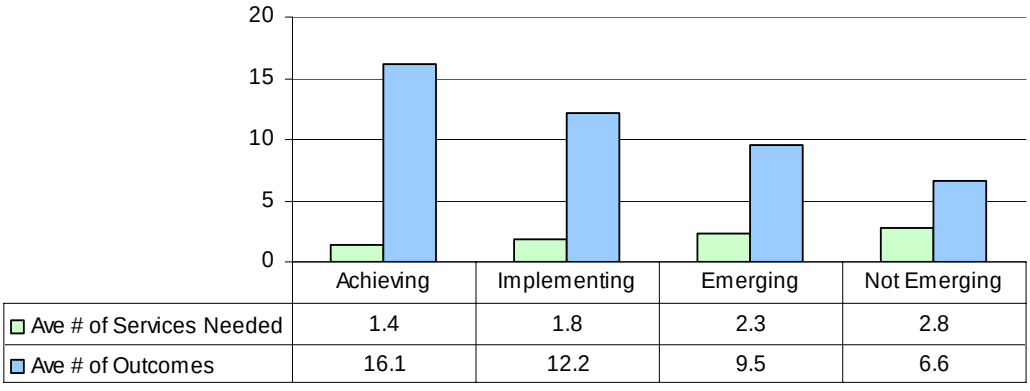
Each individual works with a Waiver Support Coordinator and each WSC receive an evaluation by Delmarva Foundation—Achieving, Implementing, Emerging or Not Emerging. An evaluation of Achieving indicates the WSC has systems in place to address the needs and desires of the people served, and these systems are actually meeting those needs/desires for the individuals who receive services from that WSC. Each subsequent level indicates fewer systems are in place and fewer outcomes are being met for individuals. Calculations for the evaluation levels incorporate three different aspects of the consult: the overall numeric score on the six WiSCC Results Elements (WRE score) ranging from 0 to 18; the score on Element 6 (achieving results for individuals) at certain WRE scores (3, 9, and 15); and in order to score Achieving all of the five MSR elements must be scored as Met with no alerts cited. The following graph (Figure 9) shows the distribution of individuals needing services across the evaluation received by their specific WSC, working as a solo support coordinator or within an agency.

Figure 9: Percent Who Need One or More Services by WSC Level
July 2004 - March 2007



The evidence provides some support that support coordinators performing at a higher level are more likely to serve individuals who do not feel they need additional health-related services as defined in this study. Over 91 percent of the 68 individuals receiving services from a WSC who was evaluated as Not Emerging reported they needed at least one or more additional health-related service compared to approximately 59 percent of individuals working with an Achieving WSC. This appears to reflect the importance of having a WSC who organizes systems and activities around the needs of individuals.

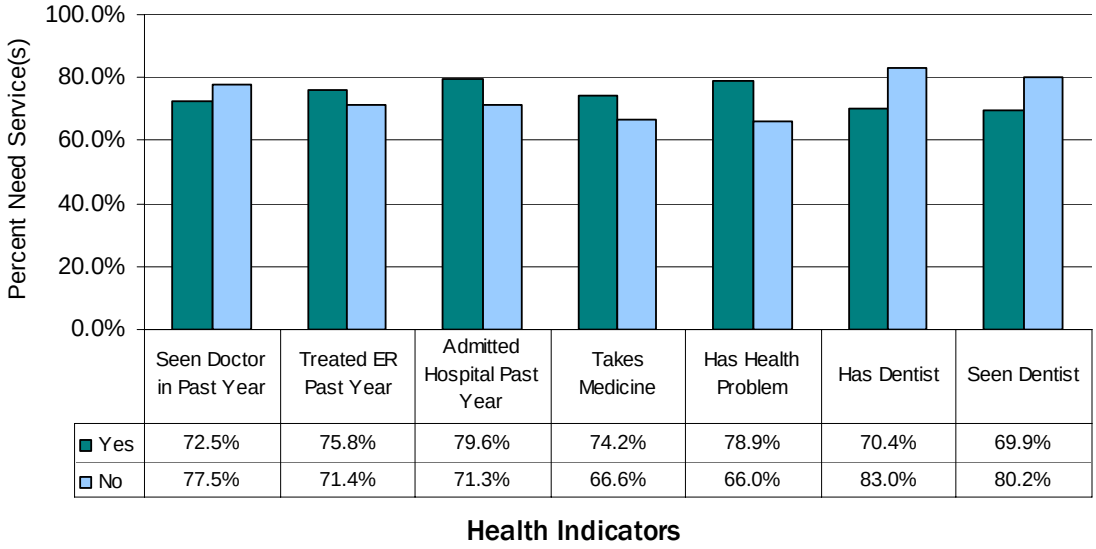
Figure 9a: WSC Performance Level
Average Number of Outcomes and Needed Services
July 2004 - March 2007



In addition, results in Figure 9a show the trend of POM Outcomes and needed health-related services across the WSC performance level. The data clearly show a higher average number of outcomes are present for individuals receiving services from an Achieving WSC, combined with a lower average number of health-related services reported as needed by the individuals. A downward trend is apparent, from Achieving to Not Emerging, in the outcomes present and a small upward trend exists for the number of health-related services needed.

Seven indicators, discussed in the independent variable section, are used in this study to help identify the health status of individuals interviewed. Of the 359 individuals who believed their health was worse at the time of the interview than in the previous year, almost 86 percent felt they needed additional health services, compared to 71 percent of individuals who believed their health to be the same or better. Figure 10 displays the remaining health indicators. Individuals who had seen a doctor in the year previous to the interview were less likely to report a need for services than individuals who had not seen a doctor. Individuals who had been treated at an emergency room, admitted to a hospital or reported they were taking at least one medication were more likely to need additional services, as were individuals who had health problems, who did not have a dentist or had not seen a dentist within the previous 12 month period. The largest discrepancy, over 10 percentage points, exists among individuals with health problems or a lack of dental access/care.

Figure 10: Need One or More Services by Health Indicators
July 2004 - March 2007
n=3,512



Regression Analyses

Logistic regression results, using a Need for One or More Services as the dependent variable, are presented in Table 4. In order to simplify the information in the table we only present variables that were statistically significant. Complete results are presented in Attachments 4 and 5. The data supply evidence to support the following, controlling for all variables in the model:

- Older individuals were less likely to need additional services than were younger people.
- Male participants in the waiver programs were approximately 22 percent ((.783-1)*100) less likely to report needing one or more additional health-related service than were female participants.
- Individuals with Cerebral Palsy were over 167 percent ((2.672-1)*100) more likely to need additional services than were individuals with an Intellectual Disability. Individuals with another disability [Epilepsy (9), Spina Bifida (97), Prader Willi (9), Other (12), or Unknown (5)] were also much more likely to need additional health services support than were individuals with an Intellectual Disability.
- Individuals with an increased number of supports were more likely to report they did not need additional services as defined in this study.
- People receiving Ault Day Training were less likely to report a need for additional health-related services. However, individuals who already received more of the other "non-CORE" waiver services were about 16.5 percent ((1.163-1)*100) more likely to express a need for additional health-related services.
- Individuals who indicated their health was worse at the time of the interview than in the previous year were almost twice as likely to report a need for additional health-related services and individuals indicating they had health problems were about 1.5 times more likely to need the services.
- Having a dentist appears to ameliorate the need for additional health-related services. Individuals who reported they had a dentist were about half as likely to report a need for one or more of the other services.
- Waiver Support Coordinator performance appears to positively impact a need for these additional services. As performance improves, individuals were less likely to indicate a need for health-related services.

Table 4: Logistic Regression Results
Dependent Variable = Service Need (0 v 1 or More)
July 2004 - March 2007

Independent Variables	p-value	Odds Ratio
Age	0.013	0.989
Gender	0.031	0.783
Disability (Intellectual as Reference)		
Cerebral Palsy	0.000	2.672
Other Disability	0.037	2.294
POM Supports	0.000	0.948
Waiver Services		
Adult Day Training	0.013	0.721
All Other Non-CORE Services	0.000	1.163
Health Status Indicators		
Health Worse than in Past Year	0.006	1.991
Currently Have Dentist	0.015	0.574
Have Health Problems	0.000	1.661
Waiver Support Coordinator Score	0.005	0.949

Regression results exploring more complex needs, using a Need for Three or More Services v No Services needed, reflected similar results with a few exceptions (Attachment 6).

- Individuals living in Small APD Areas were about twice as likely to express a need for three or more additional services as were individuals in Large Areas.
- Individuals receiving Supported Employment were about half as likely to need three or more services.
- Having a dentist was not a significant factor when considering more complex service needs.

In order to help determine the impact of the need for additional health-related services on the outcomes present in the lives of individuals receiving waiver services, we developed a regression model similar to the Logistic Model above but using the total number of POM outcomes present as the dependent variable. The Need for One or More Services is entered as an independent variable. The correlations between age, gender, home type, disability, Area size and POM supports with POM outcomes have been examined in previous studies and reported to AHCA and APD. In addition, a quality improvement study examining POM outcomes across waiver services will be submitted to AHCA and APD by June 30, 2007, detailing the net impact of various services on overall outcomes, the presence of 13 or more outcomes and on the Foundational Outcomes.

These factors are essential components to the statistical model but we do not focus on them in our discussion of the results in this study, as presented in Table 5. As before, to simplify the information in the table we only present variables that were statistically significant. Complete results are presented in Attachments 6 and 7. The data supply evidence to support the following, controlling for all variables in the model:

- An increased number of "Other non-CORE" services was associated with fewer outcomes.
- Taking medications appears to be associated with fewer outcomes present.[8]
- The relationship between WSC performance (WRE score) and outcomes is somewhat complex and interesting. Earlier we demonstrated a strong positive correlation exists between the two variables—a higher WRE Score correlates to a higher number of outcomes. This strong positive association holds true when we run the regression model with all the independent variables included except POM Supports. In fact, while that full model is not shown here, WRE Score showed the strongest positive correlation with the number of outcomes present. However, there is also a fairly strong and significant correlation between the WRE Score and the number of POM Supports present. Therefore, when the total number of POM Supports is included in the model the correlation of WSC performance with outcomes present appears to be negative, as indicted in the results in Table 5. This type of statistical result most likely indicates an "intervening relationship" exists, meaning the positive impact of WSC performance on outcomes is working "through" the supports present—WSCs work to build natural and paid supports for individuals, which in turn results in better outcomes/quality of life.
- Individuals needing at least one or more health-related service were likely to have fewer outcomes present in their lives than individuals who did not indicate a need for additional services.

[8] Several studies of psychotropic drug use have been completed and address outcomes and medication. Five are posted on the Delmarva Website under the Quality Improvement Study section (http://www.dfmc-florida.org/index2.htm).

Table 5: Linear Regression Results
Dependent Variable = Outcome Present
July 2004 - March 2007

R-square = 84.0%

Independent Variables	p-value	Coefficient
Gender	0.033	0.235
Disability (Intellectual as Reference)		
Autism	0.001	0.841
Other Disability	0.005	0.835
Home Type (Family as Reference)		
Independent/Supported Living	0.026	0.520
Other Home Type	0.007	-0.787
APD Area Size (Large as Reference)		
Medium Size	0.000	0.840
POM Supports	0.000	0.736
Waiver Services		
Adult Day Training	0.001	-0.431
Supported Employment	0.009	0.502
Residential Habilitation	0.000	-0.820
All Other Non-CORE Services	0.000	-0.453
Health Status Indicators		
Take Medication	0.022	-0.339
Waiver Support Coordinator Score	0.000	-0.107
Need **One or More** Health-Related Services	0.000	-0.595

Regression results exploring more complex needs, using a Need for Three or More Services v No Services needed, reflected similar results with a few exceptions (Attachment 7). When controlling for a Need for Three or More Health-Related Services, living in Independent or Supported Living environments, receiving Supported Employment or In-Home Support Services and taking medication no longer significantly impact outcomes.

Discussion and Recommendations

This study is the first analysis completed with the data obtained through the health and behavioral questionnaire, a portion of the Person Centered Review process. We use responses to construct a

health-related service needs indicator and determine how this correlates with various demographic characteristics of individuals in the sample, waiver services received, support coordinator performance, personal outcomes and several health status indicators. Results indicate that over 72 percent of the individuals interviewed (n=3,512), or their family member, reported a need for one or more health-related service such as speech therapy, occupational therapy, physical therapy, hearing or vision exams, preventive health care or a need for an evaluation for adaptive equipment or another health-related service.

Over half of the people in the sample indicated they had some sort of health problem and 10 percent believed their health was worse at the time of the interview than during the previous year. Generalizing that to the population means there are potentially 3,500 individuals needing additional health services as identified in this study. This supports a need for APD to focus some resources in this area.

Over 75 percent of women interviewed reported a need for additional health-related services, compared to 70 percent of men, significant in the 0 v 1 or more services model at p=.03. While this difference was not shown to be statistically significant in the model testing for more complex needs (three or more), the p-value was .051, just over the "standard" acceptable margin of error. In addition, 35 percent of women felt they needed preventive health care compared to only 14 percent of men. Women, compared to men, were also likely to have fewer outcomes present in their lives, a statistically significant relationship. These findings together suggest this phenomenon is not one in which women simply perceive a need for more services more so than do men, but actually have poorer outcomes and may require additional services not currently available to them.

Recommendation 1: The specific health service needs of women must be addressed. Waiver Support Coordinators and Medical Case Managers should be routinely ensuring women are obtaining proper female preventive health care and receiving services necessary to improve their health and desired outcomes.

Recommendation 2: APD should organize an educational program focused on the preventive health care needs of women. This session should be organized to help educate women, their families, WSCs and other providers to the special needs of women and how to meet those needs.

This study suggests that given the same type and number of waiver services, the same home type, same disability, similar number of supports, and similar WSC performance level, younger waiver service recipients are about twice as likely as older recipients to need additional health-related services. This association is true when examining a need for one or three or more services. On

average, 78 percent of individuals in the sample up to age 21 reported a need for at least one additional health-related service. It is possible many younger recipients are on the Family and Supported Living Waiver which limits the number of services available and does not include most of the health-related services identified in this study.

Recommendation3: Because many younger individuals on the DD and FSL Waivers are in school, APD should research the feasibility of providing services and/or the evaluation for services analyzed in this study through the school system. WSCs should be certain necessary evaluations are part of the student's Individual Education Plan (IEP) and action is taken to ensure the IEP is followed.

Individuals living in Small rural APD Areas were more likely to need additional services than people in larger Areas. While this relationship is not significant when one or more services are indicated, it is significant for more complex health service needs, possibly reflecting problems accessing an adequate number of therapists and other health services in rural areas. Access issues in rural areas have been identified as barriers to services due to travel time and the lack of reimbursement for this as providers are only reimbursed for time spent with the individual.[9]

Recommendation 4: APD should actively recruit providers of the types of services identified in this study for rural areas of the state. Efforts could begin with services most often noted by individuals: female and male preventive health care, vision exams, medication information, speech therapy, adaptive equipment evaluation, physical therapy, occupational therapy and environmental modifications. When possible, APD should work with community leaders in an effort to promote sharing resources across different Areas, in particular into the more rural settings.

Recommendation 5: In conjunction with Recommendation 3, more funding is needed for schools in rural areas to ensure they are able to render these services. Various funding sources should be researched to help move forward with this.

Recommendation 6: Providers should be reimbursed for travel when traveling further than a set amount of miles from their home/office or outside of their Area, and/or transportation should be provided to individuals, when possible, to travel to providers where they are available.

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[9] Barriers to DD HCBS Services from the Perspective of Waiver Support Coordinators, Service Providers, Area Quality Leaders, Families and Individuals with Developmental Disabilities. June 2006. (http://www.dfmc-florida.org/quality_improvement_studies/2005-2006/index.htm).

Although the APD Areas were not included separately in the regression models, descriptive analysis indicated individuals receiving services in Areas 8, 9 and 15 were more likely than in any other Area to need health-related services. Results from the abuse and neglect workgroup (established through a directive of the Interagency Quality Council (IQC)) and subsequent research on the topic suggested that Areas 8, 9 and 15 were also most likely to have reported cases of abuse, neglect or exploitation, as measured during the POM interview.[10] Neglect by family members and/or school systems could result in a lack of necessary health-related services for individuals in the program.

Recommendation 7: As a result of the abuse and neglect study referenced above, APD has begun to research activity in Areas 9 and 15 to determine root causes of the increased levels of possible abuse. We recommend they expand this activity to include Area 8 and to investigate possible problems accessing needed services. Any WSC or service providers with a level of Emerging or lower on the Delmarva evaluation (WiSCC) should be closely monitored as part of this process.

Close to 87 percent of the individuals with Cerebral Palsy who were interviewed stated a need for one or more additional health-related services. This association was significant in both regression models, reflecting a statistically significant greater need for these services by people with this specific disability compared to people with an intellectual disability. Because individuals with Cerebral Palsy are more often able to advocate for themselves, it is possible this need appears greater because they are better able to identify and express their specific needs. It is also possible they have a much greater need for these specific types of services due to the physical limitations brought about by the disability, more so than individuals with an intellectual disability.

Recommendation 8: APD should target the specific service needs of individuals with Cerebral Palsy (CP). This process could be initiated at IQC and include participation from providers or organizations specifically serving individuals with this disability, such as United Cerebral Palsy and CP support groups as identified by IQC.

Recommendation 9: Waiver Support Coordinators need to ensure the support plan includes references to the services and equipment necessary to enhance the lives of individuals with Cerebral Palsy.

Individuals receiving Adult Day Training and Supported Employment were less likely than others in the sample to need additional health-related services. It is probable that people receiving these CORE services have less complex physical and/or behavioral issues and are more able to live

[10] Personal Outcome Measure: "Person is Free from Abuse, Neglect and Exploitation" Demographic Patterns and Predictors. June 2006. Submitted to AHCA and APD and currently under review.

independently and maintain employment. This may allow them increased awareness of other services available to them, through interaction with people and providers in the community.

As the number of non-CORE services increased, the likelihood of needing additional health-related services also increased. The increased number of non-CORE waiver services may be a reflection of a higher degree of complexity and care, therefore an increased need for health-related services would be logical. Or, perhaps individuals with more non-CORE waiver services may be exposed to a wider variety of providers and therefore gain an awareness not only of the other services available to them but of how they could benefit from them, as indicated above for individuals in ADT and Supported Employment.

Recommendation 10: In order to improve awareness of conditions that lead to the need for any of the health related services identified in this study, and the extent to which each service can help individuals, APD, in conjunction with Delmarva, should expand on the education and training that has been offered by the Delmarva Nurse Administrator, Linda Tupper, across the state. Sessions should be held at various locations in each APD Area and should include information on all facets of the health-related services identified in this study and should be targeted to providers and individuals (and family members). In addition, providers, individuals and family members or guardians must be trained on how to recognize conditions that would benefit from any of these services.

According to the data in this study, the performance level of the individual's WSC produces a positive impact on the need for health-related services for individuals receiving HCBS waiver services. In addition, the possible intervening relationship of WSC performance and POM Supports indicates that WSCs improve supports, both natural and paid, for individuals that in turn improves outcomes. Therefore, Support Coordinators with better organizational systems appear to be better able to identify the needs of individuals they serve, such as a need for health-related services, and ultimately connect them to the appropriate resources/supports to have those needs addressed. This study supports the expectation that Support Coordination is a vital link to the welfare of individuals with a developmental disability.

Recommendation 11: This study points to the importance of effective Support Coordinators. APD should ensure each WSC receives the training and support needed to develop their organizational systems, with outcomes for individuals as the focus. Delmarva and APD should continue utilization of the Waiver Support Coordination Consultation as a means to monitor WSCs because of its focus on knowing the individual, connecting the individual to providers and the community, assisting with the

development of the WSC's organizational systems, and ensuring outcomes are met for all people served by the WSC.

A critical finding of this study demonstrated that a need for additional health-related services was significantly associated with a reduced number of outcomes present for individuals on the DD and FSL Waiver programs. Given the same type and number of waiver services, the same home type, same disability, similar age, number of supports, and WSC performance level, outcomes were negatively impacted for individuals who lack services vital to their health and well-being. While this study helps identify specific characteristics or factors related to higher rates of need, the fact remains that approximately 72 percent of individuals in the sample reported a need for additional health-related services. This alone points to the need for APD to examine the overall system in terms of the services identified in this study, particularly in light of the fact that a need for these services, or a need for an evaluation for the services or equipment, is directly associated with lower outcomes.

Recommendation 12: APD should begin to focus on ways to increase access to the services identified in this study, in particular those most often cited as an unmet need: female and male preventive health care, vision exams, medication information, speech therapy, adaptive equipment evaluation, physical therapy, occupational therapy and environmental modifications. A workgroup should be formed during the next IQC meeting to begin to address this issue and seek ways to improve access to these services in an atmosphere of cut backs within the DD and FSL Waiver programs.

The impetus for examining the data from the Health and Behavioral Questionnaire came from a request made by APD to develop a medical management quality improvement monitoring initiative that would include an ongoing review of the following areas (for APD clients living in licensed residential settings):

- Medication Administration
- OTC/PRN Medication Administration
- Physical and Nutritional Management (to include enteral feeding)
- Use of Restraint
- Infection Control
- Client Ergonomics
- Accidents resulting in injury to clients
- Continuity of care

Some of these areas can be indirectly monitored through our current processes and recommendations. For example, an improper use of restraints would result in a call to the abuse

hotline and should be recorded in the local APD office incident reporting log. However, a straight forward approach is not available to track incidents or trends in all of these areas. Medication Administration is a vital aspect in the lives of many waiver service recipients and this study suggests that close to 18 percent require additional information or education about the medications they take.

Recommendation 13: Delmarva should work with APD to develop questions that can be added to the current Health and Behavioral Questionnaire in order to gather data that will help APD address concerns in the areas listed here, and to eventually develop an effective quality improvement monitoring system in licensed residential settings.

Attachment 1
Personal Outcome Measures

Identity
- People choose personal goals.
- People choose where and with whom they live.
- People choose where they work.
- People have intimate relationships.
- People are satisfied with services.
- People are satisfied with their personal life situations.

Autonomy
- People choose their daily routine.
- People have time, space and opportunity for privacy.
- People decide when to share personal information.
- People use their environments.

Affiliation
- People live in integrated environments.
- People participate in the life of the community.
- People interact with other members of the community.
- People perform different social roles.
- People have friends.
- People are respected.

Attainment
- People choose services.
- People realize personal goals.

Safeguards
- People are connected to natural support networks.
- People are safe.

Rights
- People exercise rights.
- People are treated fairly.

Health and Wellness
- People have the best possible health.
- People are free from abuse and neglect.
- People experience continuity and security.

Attachment 2
Health and Behavioral Questionnaire

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

What kind of doctor?

1. neurology
2. psychiatry
3. primary care
4. gastroenterology
5. cardiology
6. endocrinology
7. pediatrician
8. hematology
9. rheumatology
10. allergy
11. podiatry
12. dermatology
13. gynecology
14. urology
15. orthopedics
16. neurosurgery
17. ear/nose/throat
18. oncology
19. optometry/opthalmology

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)
2. Adderall
3. Anafranil (Clomipramine)
4. Ativan (Lorazepam)
5. Baclofen (Liorasal)
6. Buspar (Buspirone)
7. Catapres (Clonidine)
8. Celexa (Citalopram)
9. Cogentin (Benztropine)
10. Concerta (Methylphenidate)
11. Depakote (Divalproex)
12. Desyrel (Trazadone)
13. Detrol (Tolterodine)
14. Dilantin (Phenytoin)
15. Effexor (Venlafaxine)
16. Geodon (Ziprasidone)
17. Haldol (Haloperidol)
18. Inderal (Propanolol)
19. Keppra (Levetiracetam)
26. Lopressor (Metoprolol)
27. Mellaril (Thioridazine)
28. Metformin (Glucophage)
29. Mysoline (Primidone)
30. Neurontin (Gabapentin)
31. Norvasc (Amlodipine)
32. Paxil (Paroxetine)
33. Phenobarbital
34. Pravachol (Pravastatin)
35. Prevacid (Lansoprazole)
36. Prinivil (Lisinopril)
37. Prozac (Fluoxetine)
38. Risperdal (Risperidone)
39. Ritalin (Methylphenidate)
40. Seroquel (Quetiapine)
41. Symmetrel (Amantadine)
42. Synthroid (Levothyroxin)
43. Tegretol (Carbamezapine)
44. Thorazine (Chlorpromazine)

20. Klonopin (Clonazepam)
21. Lamictal (Lamotragine)
22. Lasix (Furosemide)
23. Lexapro (Escitalopram)
24. Lipitor (Atorvastin)
25. Lithium (Eskalith)
45. Topamax (Topiramate)
46. Vasotec (Enalapril)
47. Wellbutrin (Bupropion)
48. Xanax (Alprazolam)
49. Zoloft (Sertraline)
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.

Attachment 3
WiSCC Outcome Element Evaluation Levels

The following offers an overall description of the WiSCC evaluation levels. However, the levels are also defined more specifically, relevant to each of the six outcome elements, in the WiSCC tool. The complete tool can be reviewed at http://www.dfmc-florida.org/docs/AA-WiSCC_Tool7-22-04.pdf.

Achieving

Implementing components are present and results are observable for the individuals 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 who 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.

WiSCC Results and Minimum Service Requirement Elements

Results Elements

1. Waiver Support Coordinators (WSC) have an effective method for learning about the people who are receiving their supports and services.
2. The 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.

3. The support plan is developed with the person and is reflective of the communicated choices and preferences that matter most to the individual.
4. The WSCs have evaluated the effectiveness of all supports for each person they serve and have implemented strategies to address any barriers that have been identified.
5. The WSC have facilitated educational opportunities, practical experiences, and exposure to ideas (EEE) to increase opportunities for choice and promote self-determination.
6. The WSCs have facilitated the accomplishment of positive results that reflect communicated choices and preferences that matter most to the person.

Minimum Service Requirement Elements

7. Level 2 background screenings, and five-year re-screenings, are completed for all direct service employees.
8. The WSC has attended required training.
9. WSC services and all other service providers are authorized by an approved cost plan and service authorization (or purchasing plan for individuals on CDC Plus).
10. The provider bills for the service at the authorized rate.
11. The provider maintains documentation required for billing.

Attachment 4
Logistic Regression Analysis Results
Dependent Variable - Service Need (0 v 1 or more)
July 2004 - March 2007

Independent Variables	p-value	Odds Ratio
Age	0.013	0.989
Gender	0.031	0.783
Disability (Intellectual as Reference)		
Cerebral Palsy	0.000	2.672
Autism	0.066	0.643
Other Disability	0.037	2.294
Home Type (Family as Reference)		
Independent/Supported Living	0.754	1.076
Small Group Home	0.468	1.188
Large Group Home	0.879	1.050
Other Home Type	0.864	0.952
APD Area Size (Large as Reference)		
Medium Size	0.150	0.838
Small Size	0.279	1.219
POM Supports	0.000	0.948
Waiver Services		
Adult Day Training	0.013	0.721
Non-Residential Support Services	0.244	0.857
Supported Employment	0.244	0.809
Supported Living Coaching	0.052	0.647
Residential Habilitation	0.266	0.785
In-Home Support Services	0.994	1.001
All other	0.000	1.163
Health Status Indicators		
Health Worse than in Past Year	0.006	1.991
Seen Doctor Past Year	0.220	0.598
Currently Have Dentist	0.015	0.574
Seen Dentist Past Year	0.358	0.850
Treated in ER Past Year	0.562	1.089
Admitted to Hospital Past Year	0.191	1.281
Take Medication	0.645	1.070
Have Health Problems	0.000	1.661
Waiver Support Coordinator Score	0.005	0.949

Attachment 5
Logistic Regression Analysis Results
Dependent Variable - Service Need (0 v 3 or more)
July 2004 - March 2007

Independent Variables	p-value	Odds Ratio
Age	0.012	0.984
Gender	0.051	0.738
Disability (Intellectual as Reference)		
Cerebral Palsy	0.000	2.672
Autism	0.072	0.559
Other Disability	0.021	2.805
Home Type (Family as Reference)		
Independent/Supported Living	0.264	0.671
Small Group Home	0.843	0.932
Large Group Home	0.395	0.668
Other Home Type	0.426	0.711
APD Area Size (Large as Reference)		
Medium Size	0.406	0.867
Small Size	0.005	1.903
POM Supports	0.000	0.914
Waiver Services		
Adult Day Training	0.000	0.374
Non-Residential Support Services	0.109	0.734
Supported Employment	0.017	0.514
Supported Living Coaching	0.162	0.615
Residential Habilitation	0.446	0.778
In-Home Support Services	0.836	1.060
All other	0.000	1.308
Health Status Indicators		
Health Worse than in Past Year	0.000	3.045
Seen Doctor Past Year	0.263	0.545
Currently Have Dentist	0.108	0.629
Seen Dentist Past Year	0.059	0.642
Treated in ER Past Year	0.873	0.968
Admitted to Hospital Past Year	0.317	1.284
Take Medication	0.330	1.222
Have Health Problems	0.000	2.032
Waiver Support Coordinator Score	0.004	0.928

Attachment 6
Linear Regression Analysis Results
Dependent Variable - Number of Outcomes Present
July 2004 - March 2007

R-square = 84.0%

Independent Variables	p-value	Coefficient
Age	0.293	0.005
Gender	0.033	0.235
Disability (Intellectual as Reference)		
Cerebral Palsy	0.145	0.250
Autism	0.001	0.841
Other Disability	0.005	0.835
Home Type (Family as Reference)		
Independent/Supported Living	0.026	0.520
Small Group Home	0.104	-0.384
Large Group Home	0.222	-0.394
Other Home Type	0.007	-0.787
APD Area Size (Large as Reference)		
Medium Size	0.000	0.840
Small Size	0.282	0.177
POM Supports	0.000	0.736
Waiver Services		
Adult Day Training	0.001	-0.431
Non-Residential Support Services	0.914	-0.014
Supported Employment	0.009	0.502
Supported Living Coaching	0.627	0.110
Residential Habilitation	0.000	-0.820
In-Home Support Services	0.062	-0.352
All other	0.000	-0.153
Health Status Indicators		
Health Worse than in Past Year	0.395	-0.165
Seen Doctor Past Year	0.460	0.286
Currently Have Dentist	0.209	0.247
Seen Dentist Past Year	0.070	0.300
Treated in ER Past Year	0.095	-0.233
Admitted to Hospital Past Year	0.310	-0.173
Take Medication	0.022	-0.339
Have Health Problems	0.862	-0.021
Waiver Support Coordinator Score	0.000	-0.107
Need **One or More** Health-Related Services	0.000	-0.595

Attachment 7
Linear Regression Analysis Results
Dependent Variable - Number of Outcomes Present
July 2004 - March 2007

R-square=85.2%

Independent Variables	p-value	Coefficient
Age	0.415	0.005
Gender	0.061	0.273
Disability (Intellectual as Reference)		
Cerebral Palsy	0.231	0.263
Autism	0.000	1.178
Other Disability	0.048	0.767
Home Type (Family as Reference)		
Independent/Supported Living	0.243	0.384
Small Group Home	0.342	-0.316
Large Group Home	0.349	-0.427
Other Home Type	0.000	-1.429
APD Area Size (Large as Reference)		
Medium Size	0.000	0.724
Small Size	0.109	0.339
POM Supports	0.000	0.729
Waiver Services		
Adult Day Training	0.001	-0.550
Non-Residential Support Services	0.911	0.020
Supported Employment	0.209	0.322
Supported Living Coaching	0.408	0.265
Residential Habilitation	0.001	-0.982
In-Home Support Services	0.120	-0.399
All other	0.000	-0.167
Health Status Indicators		
Health Worse than in Past Year	0.984	-0.005
Seen Doctor Past Year	0.672	0.218
Currently Have Dentist	0.112	0.416
Seen Dentist Past Year	0.382	0.191
Treated in ER Past Year	0.176	-0.256
Admitted to Hospital Past Year	0.801	-0.058
Take Medication	0.083	-0.337
Have Health Problems	0.863	0.028
Waiver Support Coordinator Score	0.000	-0.112
Need **Three or More** Health-Related Services	0.000	-0.998