Risk, Rates, and Resolution of Events for Individuals with Complex Needs

2019

GEORGIA DEPARTMENT *of*

BEHAVIORAL HEALTH *and* DEVELOPMENTAL DISABILITIES

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INTRODUCTION

An analysis of health and behavior risks, adverse events, and resolution activity is a component of health and safety oversight and is part of DBHDD's quality management and improvement system. It is important to understand the level of risk for certain key conditions in the population of individuals with intellectual or developmental disabilities (IDD), to consider how frequently a negative health or negative behavioral outcome occurs for those at risk of such events, and how, when they do occur, the system responds to resolve them.

The purpose of this report is to examine what DBHDD has learned about health and behavioral risks and adverse events that rose to the level of statewide clinical oversight (SCO), and when adverse events did occur, to understand both how the system responded to those events and how they were resolved.

This is the third study of elevated health risk, adverse events that rose to the level of SCO, and the resolution thereof for DBHDD IDD individuals. It is important to note that only approximately one calendar year of individuals who received SCO were included in this analysis, and a limited number of outcomes were examined. As additional years of SCO data are collected in the Developmental Disabilities Clinical Oversight (DDCO) database, the impact of SCO and other IDD services can be integrated better with additional outcomes and process data. Moreover, SCO can be examined not only as a standalone support service but also in combination with other DBHDD services and the context of the IDD service and supports system as a whole.

DBHDD SAMPLING PROCEDURE

DBHDD carefully considers information and data to answer analytical questions. High quality, valid information and data are the basis of useful, practical, and valid research findings and conclusions. Ideally, analysis occurs from data on an entire population, and DBHDD strives to accomplish this when feasible; this produces maximum validity. However, when data on the entire population are not available or feasible, then DBHDD carefully considers how the analytic data sample is built, as the sampling procedure has great impact on the quality, validity, and generalizability of research findings.

DBHDD's sampling procedure proceeds in the following manner:

- First, when available, DBHDD uses data on the full population under study (e.g., all individuals who received services within a given period such as calendar or fiscal year).
- Second, if some individuals within the full population have missing data for variables being used for analysis, DBHDD considers widely-accepted procedures to address missing data. For example, individuals with missing data typically are excluded from analysis using listwise deletion,[1] resulting in a subset of the full population. DBHDD may consider other theoretically-sound methods and procedures to understand or address missing data.[2]
- Third, in some cases, DBHDD utilizes some form of random sampling[3] (e.g., a random subset of providers or events that occurred). For this approach to be valid, one must be able to define the entire population from which it is being drawn, and each unit (e.g., individual, situation, etc.) must have an equal chance of being included in the sample. This method is unbiased, and the resulting sample is representative of the full population under study.
- Fourth, DBHDD also occasionally makes use of purposive sampling, a non-probability sampling method. This method is typically reserved for specific instances (e.g., identifying when a situation occurred, selecting specific cases, identifying specific errors, etc.). Purposive sampling is a selective, non-probabilistic method, and purposive sampling is not representative of the full population under study; therefore, findings or results based on purposive sampling are not generalizable to the full population, rather only to the cases from which data were sampled.

[1] Listwise deletion is a method for handling missing data, whereby an entire record is excluded from analysis if any single value is missing.

[2] Sensitivity analyses are conducted to evaluate the pattern of missing data, wherein missing data are determined to be either missing completely at random (MCAR) or missing at random (MAR). Data are determined to be MCAR when the probability of missing data on a variable is unrelated to any other measured variable and is unrelated to the variable with missing values itself. Data are determined to be MAR when the missingness can be explained by variables that do not contain missing values.

[3] The leading component of simple random sampling is that every case (e.g., individuals or providers) has the same probability of being selected for inclusion in analysis.

- Fifth, a goal of inferential statistics is to make inferences about the population based on a sample smaller than the population. DBHDD considers sample sizes carefully and analytically to create empirical samples large enough to have sufficient statistical power to detect associations or differences and allow valid inferences to be drawn from and generalized about the population being studied.

INTERPRETING STATISTICAL TESTS

Some of the following sections report statistical analyses. Statistical analyses are useful to identify associations and trends among variables. Statistics commonly refers to "statistical significance." Sometimes associations or patterns occur due to random chance. A statistically significant difference for a result or relationship has a likelihood that it is caused by something other than mere random chance. It is a natural tendency to assume when there is a statistically significant difference or association that it must result from something other than a random chance and that the difference must have a specific cause.

It is important to exercise caution when interpreting statistical significance in this manner, as sufficient facts may not necessarily be present to conclude a specific idea of what that something is. It is important that statistical significance should be studied further by gathering additional information and by completing a more extensive analysis through additional steps. It also should be noted that statistical significance does not equate to importance or meaningful significance. Meaning and importance of findings can only be determined by more careful examination of additional information.

This report does not make conclusions about any differences or statistically significant findings. As such, the statistical findings will be presented to DBHDD to be considered along with other information for further exploration to understand the causes and implications of the statistical findings. Where there are specific information, findings, observations, cases, and issues that warrant additional investigation, analysis, and consideration, work is underway to examine possible strategies to address these concerns within DBHDD.

ELEVATED RISK AND ADVERSE EVENTS IN THE DBHDD IDD POPULATION

This report examined health and behavior events that occurred between January 1, 2019 and December 31, 2019. The date parameters used in the previous report (January 1, 2018 through December 31, 2018) are considered as the baseline for elevated risk and incidence prevalence. Comparisons are made between 2018 and 2019.

ELEVATED RISK: HRST

These analyses examine elevated risk of health and behavior events. The most recent health risk data were extracted from the Health Risk Screening Tool (HRST) as of December 31, 2019 and were used as a measure of elevated risk. The HRST is designed specifically to identify and quantify health and behavior risks, and the HRST items (scored risk dimensions) and other detailed information can be found at the end of this report (Appendices A and B). Each HRST item may receive a score from zero to four, except item Q, which is scored either zero or four. Health Risk Screening, Inc. (the company that owns the HRST) stated that an item risk score of three or higher on any item within a risk area indicates elevated risk. DBHDD operationally defined elevated risk accordingly. Additional information about the operational definition of each risk area can be found in Tables 1 and 2.

ELEVATED RISK: STATEWIDE CLINICAL OVERSIGHT

DBHDD, via the Office of Health and Wellness (OHW), utilizes the Statewide Clinical Oversight (SCO) program for individuals with intellectual and developmental disabilities (IDD) to minimize risks due to the complexity of their medical or behavioral needs. This includes multidisciplinary assessment, monitoring, training, technical assistance, and mobile response to contracted providers, individuals, and support coordinators who provide care and treatment to individuals with IDD in the community. The SCO program enhances the department's activities to identify, support, and monitor individuals with heightened risks, which include, for example, the following:

- Health-related: an increase in the Health Risk Screening Tool (HRST) score; known emergency department visit or hospitalization; recurring serious illness without resolution; diagnosis with an episode of aspiration, seizures, bowel obstruction, dehydration, gastro-esophageal reflux disease (GERD); or unmet need for medical equipment or healthcare consultation;
- Behavioral: material changes in behavior; known emergency department visit or hospitalization; a behavioral incident with intervention by law enforcement, or functional or cognitive decline;
- Environmental: threat of or actual discharge from a residential provider, change in residence, staff training or suitability concern, or accessibility issues that relate to the

health or safety of the individual (including loss of involved family member or natural supports or discharge from a day provider);

- Other: confirmed identification of any factor above by a provider, support coordinator, family member, or advocate.

The OHW identifies individuals in need of SCO through surveillance of many processes and mechanisms, including critical incident (Reporting of Critical Incidents (ROCI) and Image database) reports and referrals from Intensive Clinical Support Team (ICST), emails, transitions reviews (e.g., Service Review and Technical Assistance monitoring), and other methods such as a hotline. SCO surveillance data are captured and maintained in the Developmental Disabilities Clinical Oversight (DDCO) database.

MEASUREMENT OF HEALTH AND BEHAVIORAL EVENTS

DBHDD used event information captured in the DDCO database for this population to establish incidence percentage rates (i.e., per 100 individuals) for each risk subgroup that rose to the level of statewide clinical oversight. Fortunately, there is tremendous overlap between the risk areas of the HRST and the health and behavioral events captured in the DDCO; only those areas measured by both datasets are included in this analysis. DBHDD is exploring additional ways to identify both health risks as well as identify health and behavioral outcomes for future analyses.

Health and behavior events were identified using data between January 1, 2019 and December 31, 2019 from the DDCO database. Count data extracted from the DDCO yielded counts of incidents (event qualifiers) that resulted in individuals being included in SCO.

RESULTS

Results are presented in Tables 1 and 2 and are organized by descending order of proportion rate of adverse event that rose to the level of SCO. Table 1 focuses on those individuals at elevated HRST risk for common, IDD-specific risk events, as well as the count and percent or rate of adverse outcomes that rose to the level of SCO. The occurrence of these IDD-specific events is considered an adverse outcome that rose to the level of SCO. Table 2 focuses on those individuals who had elevated HRST risk for repeated hospital or emergency department utilization, as well as the count and percent or rate of hospital readmission or emergency department repeated visits.

Table 1: Elevated Risk and Adverse Outcomes Among IDD Individuals, CY2019 (n = 13,240)

Risk Area	HRST Item	Count of Individuals at Elevated Risk	Percent at Elevated Risk	Count of Adverse Events	Count of Individuals with Adverse Events	Percent of Subgroup with Adverse Events	Count of Potentially Averted Adverse Events
Behavior Events	F, G, H, I, or J	7,449	56.3%	1,049	306	4.11%	7,143
Seizures	L or M	1,988	15.0%	302	70	3.52%	1,918
Bowel Obstruction	O	2,228	16.8%	227	45	2.02%	2,183
Aspiration	A	2,985	22.5%	267	41	1.37%	2,944
Dehydration	P	5,579	42.1%*	166	31	0.56%	5,548
GERD	K	3,448	26.0%	13	4	0.12%	3,444

Notes: Elevated risk was measured using HRST items >=3 and indicates the risk of experiencing a health or behavior event. Adverse events / incidents that rose to the level of SCO were determined using DDCO data. Asterisk indicates statistically significant differences in trends from 2018 to 2019 in population proportions by risk area.

Major findings from examining the levels of elevated HRST risk in the IDD population and incidence rates for each risk group are presented below.

BEHAVIOR EVENTS

- Over half (56%) of the population was at elevated HRST risk for a negative behavior event, the largest risk group.
- A little over four percent experienced a negative behavioral event that rose to the level of SCO.
- Though a small percent of the population had a negative behavior event that rose to the level of SCO, the count of events compared with the number of individuals with events indicates that most behavior events occur within a small group of individuals.
- These findings suggest that DBHDD services and supports potentially averted adverse behavioral events that would have risen to the level of SCO for 7,143 individuals.
- The proportion of individuals at elevated risk for behavior events and the proportion of individuals in the behavior events subgroup (or risk area) with adverse events was statistically similar between 2018 and 2019.

SEIZURES, ASPIRATION, BOWEL OBSTRUCTION, DEHYDRATION, AND GERD

- These conditions are prominent risk areas for individuals with IDD, and some of these conditions are also some of the top 10 leading causes of death for individuals with IDD.
- At least 15 percent (and up to about 42%) of the entire DBHDD IDD population is at elevated HRST risk for at least one of these events.
- Despite the percentage of the DBHDD IDD population at elevated HRST risk for negative event for these conditions, these conditions have the lowest incident rates that rise to the level of SCO.

- Less than four percent experienced a negative outcome event within these risk areas that rose to the level of SCO.
- Though a small percent of the population had one of these events that rose to the level of SCO, the count of events compared with the number of individuals with events indicates that most of these types of events occur within an even smaller group of individuals.
- The proportion of IDD individuals at elevated risk for dehydration in 2019 (42.14%) increased from 2018 (40%), and this change was statistically significant ($|z| = 2.762$; $p = 0.006$).
- The proportion of IDD individuals at elevated risk for seizures, bowel obstruction, aspiration, and GERD was statistically similar between 2018 and 2019.
- The proportion of IDD individuals within each subgroup (or risk area) with adverse events was statistically similar between 2018 and 2019.

These findings suggest that DBHDD services and supports potentially averted 16,037 adverse events that would have risen to the level of SCO as indicated below:

- Seizures: 1,918 potentially averted events;
- Bowel Obstruction: 2,183 potentially averted events;
- Aspiration: 2,944 potentially averted events;
- Dehydration: 5,548 potentially averted events;
- GERD: 3,444 potentially averted events.

ELEVATED RISK AND OCCURRENCE OF HOSPITAL AND EMERGENCY DEPARTMENT VISITS IN THE SCO POPULATION

Unlike the IDD-specific conditions identified in Table 1 that can be defined as adverse events, hospital and emergency department (ED) visits are not necessarily adverse events. For instance, a hospital visit for a chronic condition may be appropriate and avert more serious risks or events. DBHDD is investigating additional data and methods that will allow differentiation of negative or adverse events in future analyses. However, DBHDD considers it important to understand prevalence of elevated HRST risk for inpatient and ED utilization, as well as the occurrence in those at elevated risk for repeated hospitalizations and ED utilization.

Table 2: Elevated Risk and Incidence Percent of Hospital and ED Utilization Among IDD Individuals, CY2019 (n = 13,240)

Risk Area	HRST Item	Count of Individuals at Elevated Risk	Percent at Elevated Risk	Count of Events	Count of Individuals with Multiple Events	Percent of Subgroup with Multiple Events	Count of Potentially Averted Events
Repeated Hospitalization	V	925	6.9%	751	265	28.6%	660
Repeated ED Visits	U	2,448	18.5%	884	312	12.7%	2,136

Notes: Elevated risk was measured using HRST items >=3 and indicates the risk of experiencing a health or behavior event. Adverse events / incidents that rose to the level of SCO were determined using DDCO data. Repeated indicates at least 2 hospitalizations or visits.

HOSPITAL RISK AND INCIDENT RATE

- About seven percent of the population was at elevated HRST risk of repeated hospitalization, which is the lowest risk area.
- However, the incidence rate of repeated hospitalization is the highest.
- These findings suggest that DBHDD services and supports potentially averted repeated hospitalizations for 660 individuals or about 71 percent of the time.
- Though a small percent of the population had one of these events (i.e., hospitalization) that rose to the level of SCO, the count of hospitalization events compared with the number of individuals with multiple hospitalization events indicates that most recurrent hospitalizations occur within an even smaller group of individuals.
- The proportion of individuals at elevated risk for repeated hospitalization and the proportion of individuals within the repeated hospitalization subgroup with events were statistically similar between 2018 and 2019.

ED UTILIZATION

- About nineteen percent of the population was at elevated HRST risk for repeated ED visits.
- The incidence rate of repeated ED visits among those at elevated HRST risk was the second highest.
- These findings suggest that DBHDD services and supports potentially averted repeated ED visits for 2,136 individuals or 87 percent of the time.
- Though a small percent of the population had one of these events (i.e., ED visit) that rose to the level of SCO, the count of ED events compared with the number of individuals with multiple ED events indicates that most recurrent ED events occur within an even smaller group of individuals.
- The proportion of individuals at elevated risk for repeated ED visits and the proportion of individuals within the repeated ED visits subgroup with events were statistically similar between 2018 and 2019.

RESOLUTION OF EVENTS FOR INDIVIDUALS WITH COMPLEX NEEDS

The previous section looked at adverse events (as well as hospital and emergency department utilization, which may not indicate adverse events). When adverse events occur, DBHDD works towards resolution. Resolution is defined individually and may include, for example, a return to baseline level of function, establishment of a new baseline, or confirmation of a disease process that will result in a continued decline.

DBHDD manages the IDD service system to deliver services that prevent, avert, intervene, mitigate, and resolve health issues before they become adverse events. When evaluating the performance of a system, it is important to consider how the system of services and supports respond to events, not just the adverse events, as the analyses clearly demonstrate that exponentially more events that could rise to the level of statewide clinical oversight are avoided than occur. The following sections will look at event resolution through statewide clinical oversight, support coordination services (coaching and referrals), and the Individualized Quality Outcomes Measures Review (IQOMR).

DATA COLLECTION PROCESS

Individuals were identified from the list of 2,375 individuals from the DDCO database, and the data were extracted in March 2020. Data from 1,002 individuals were included in the hospital and ED admission analysis.

Hospital and ED admissions were identified from the ROCI and Image databases, DBHDD's critical incident management systems (ROCI/Image). Critical incident data for hospital and ED utilization can be captured across different critical incident categories in ROCI/Image. Therefore, hospital and ED admissions for this study were determined through utilizing and consolidating data from multiple critical incident categories.

DATA ANALYSIS PROCESS

The first analysis compared the number of times individuals were admitted into hospitals and EDs six months prior to their first CY19 qualifying event and the six-month period afterwards. The second analysis compared the baseline HCL as of September CY2019 and as of December CY2019. Paired t-tests were used to complete both analyses. Statistical analyses proceeded with determining statistical significance at $p < 0.01$ ($\alpha = 0.01$).

HOSPITAL AND EMERGENCY DEPARTMENT UTILIZATION

- The mean number of hospital admissions during the six-month period before the CY19 qualifying event and the six-month period after the qualifying event was not statistically different.
- There was a statistically significant increase in the mean number of ED admissions at baseline and the mean number of ED admissions during the follow-up period.
- There was a statistically significant increase in the mean HCL score at baseline and the mean HCL score during the follow-up period.

Table 3: Hospital and ED Admissions compared to HCL Scores at Baseline and Follow-Up

Outcome	Baseline		Follow-Up		Statistical Significance
	Mean	SD	Mean	SD	
Hospital Admissions	0.25	0.69	0.29	0.73	NS
ED Admissions	0.32	0.76	0.63	1.24	$p < 0.001$
HCL Score	4.31	1.51	4.36	1.47	$p < 0.001$

Previous research indicates that IDD individuals who have higher levels of health risk and comorbidity face a significantly higher likelihood of being admitted to hospitals,[4,5] ED,[6] and have increased complications of care.[7] The findings presented above indicate that individuals receiving SCO services have a similar number of hospital admissions during the follow-up period. This is meaningful given that HCL scores, which are a measure of health risk and comorbid conditions, increased in the latter half of 2019, while inpatient admissions remained steady. These are especially positive indicators of not only SCO effectiveness but also overall IDD services.

Prior to conducting the analyses presented above, DBHDD was aware that extant research indicates that additional clinical oversight and involvement with IDD individuals may actually result in increases in hospital admissions,[8] which did not occur in CY19 for those with complex

[4] Balogh, R.S., Ouellette-Kuntz, H., Brownwell, M., & Colantonio, A. (2013). Factors associated with hospitalizations for ambulatory care-sensitive conditions among persons with an intellectual disability—a publicly insured population perspective. Journal of Intellectual Disability Research, 57(3), 226-239.

[5] Kelly, C. L., Thomson, K., Wagner, A. P., Waters, J. P., Thompson, A., Jones, S., Holland, A. J., & Redley, M. (2015). Investigating the widely held belief that men and women with learning disabilities receive poor quality healthcare when admitted to hospital: a single-site study of 30-day readmission rates. Journal of Intellectual Disability Research, 59(9), 835-844.

[6] Hosking, F. J., Carey, I. M., DeWilde, S., Harris, T, Beighton, C., & Cook, D. G. (2017). Preventable emergency hospital admissions among adults with intellectual disability in England. Annals of Family Medicine, 15(5), 462-470.

[7] Ailey, S. H., Johnson, T. J., Fogg, L., & Friese, T. R. (2015). Intellectual and Developmental Disabilities, 53(2), 114-119.

[8] Roos, L. L., Walld, R., Uhanova, J., & Bond, R. (2005). Physician visits, hospitalizations, and socioeconomic status: ambulatory care sensitive conditions in a Canadian setting. Health Services Research, 40, 1167-1185.

needs. Research has also concluded that having increased physician or clinical involvement (such as increased SCO and increased intensive support coordination) is an indicator of chronic illness or increasing comorbidity.[9] Therefore, it is not a negative finding that ED admissions increased. That hospital admissions remained the same, while ED admissions increased, are findings that led DBHDD to consider other markers for quality of outcomes for individuals receiving SCO to understand the impact of hospital and ED services, in addition to the entire IDD supports system on outcomes. Additional analysis, detailed later, did find that the inpatient and ED utilization was associated with and contributed to overall positive outcomes. This is a particularly meaningful finding: inpatient and ED admissions are often interpreted as being negative event or outcome indicators, yet DBHDD's analyses support that hospital and ED services, along with the IDD system as a whole, work together to contribute to positive outcomes.

[9] van Walraven, C., Seth, R., Austin, P. C., & Laupacis, A. (2002). Effect of discharge summary availability during post-discharge visits on hospital admission. Journal of General Internal Medicine, 17, 186-192.

RESOLUTION OF EVENTS FOR INDIVIDUALS WITH COMPLEX NEEDS THROUGH SCO

DBHDD provides SCO to individuals with intellectual and developmental disabilities receiving services in the community. That an individual is identified for SCO indicates the individual may have complex needs, thus a need for clinical oversight. Clinical oversight is designed to engage as needed, episodically, and through coordination of community resources to the extent possible for those individuals with complex needs who reside in the community. *Therefore, SCO provides the oversight for resolving the issues—not the actual resolution activities*.

DBHDD uses a system of services, providers, state and field office staff, clinical processes, administrative processes, analysis, performance monitoring, and quality improvement to deliver an effective system of supports to assist individuals. The data capturing the resolution processes and outcomes of issue resolution is captured in other areas than the DDCO, such as individual medical records, case management systems, coaching, referrals, and IQOMR activities of support coordination, which is also responsible for the resolution of events for individuals with complex needs. Therefore, event resolution analysis in this report pulls from coaching, referrals, and IQOMR activities of support coordination.

Additional data about the oversight of issue resolution activities is captured in the DDCO database. DBHDD is continually enhancing the sophistication of systematic and analytic reporting to illustrate and provide information about the oversight of resolution activities of SCO. Analytical reports, such as this one, rely mainly on information about the actual resolution activities and outcomes of the resolution activities. That said, Table 4 presents the resolution status of events tracked within the DDCO database for CY2019. Most notable, is the significant decrease in “continue to monitor” with concomitant significant increase from last year in the count and proportion of events that rose to the level of SCO that were in “resolved” status at the time of this report.

Table 4: SCO Event Resolution Status Summary, CY19 (n = 4,411)

SCO Resolution Status		Count of Events	Percentage
Inquiry Initiated	An action step which involves accessing pertinent data sources to gather additional information about the status of the individual or issue	376	9%
Resolved	The qualifier resulting in entry into SCO was resolved or the person is deceased and no longer requires oversight of the issue	2,601	59%*
Continue to Monitor	Follow-up has occurred, and the issue has not been resolved. Monitoring and outreach will continue to occur until it is resolved. This option may also be elected for those individuals who are stable but required continued monitoring or for those individuals who are diagnosed with chronic or end of life conditions.	1,208	27%**
Stabilized with Continued Surveillance	Frequently related to more complex individuals, experiencing long term/ongoing complications, or with chronic conditions that will not resolve (e.g., diabetes, cancer in remission, seizure disorder)	226	5%

*Note: *: Statistically significant increase from 2018 to 2019; **: Statistically significant decrease from 2018 to 2019*

RESOLUTION OF EVENTS FOR INDIVIDUALS WITH COMPLEX NEEDS THROUGH SUPPORT COORDINATION SERVICES: COACHING AND REFERRALS AND IQOMR POSITIVE OUTCOMES

DBHDD transitioned from its original case management information system, CIS, to its new case management system, IDD Connects, on September 1, 2019. At the time the data for this section of the report were extracted, the decision was made to use data from prior to the implementation of IDD Connects while DBHDD continues to increase sophistication with utilizing data from IDD Connects. Therefore, the analysis within this section is limited to January through June of 2019. Consequently, comparison or analysis of support coordination data collected after July 1, 2019 could not be completed.

Support coordination services are a set of interrelated activities for identifying, coordinating, and overseeing the delivery of services to enhance the health, safety, and general wellbeing of waiver participants within the context of the person's goals toward maximum independence.

The IQOMR is the services and support evaluation tool used for support coordination services. The IQOMR is divided into seven focus areas: Environment, Appearance and Health, Supports and Services, Behavioral and Emotional, Home and Community Opportunities, Financial, and Satisfaction. Each focus area contains one or more questions that guide the support coordinator to do the following:

- Observe and interact with the participant as it relates to the elements of the item reviewed;
- Observe the setting for evidence pertaining to the item reviewed;
- Review any pertinent documentation relating to the item reviewed;
- Engage in discussion with staff members or natural supports who may have information on the item reviewed; and
- Observe staffs' or natural supports' interaction with the individual as it relates to the item reviewed.

According to DBHDD policy, support coordinators can report and record concerns within the IQOMR using coaching and referrals. Support coordinators also capture information regarding critical incident follow-ups. That information can lead to using coaching and referrals as well. Analyzing coaching and referrals provides a better understanding of activities support coordinators deliver to individuals to effect positive outcomes for individuals.

Table 5 highlights the amount of effort and productivity of support coordinators in working with providers to assist 1,217 individuals with complex needs. When taken together, support coordination agencies provided 1,749 coaching sessions aimed at addressing issues to provide improved outcomes for individuals from January through June 2019. Support coordinators also provided 1,431 referrals in response to individuals' needs in order to facilitate positive outcomes. To understand more fully the tremendous efforts beyond achieving face-to-face requirements, consider that combined, support coordinators initiated and followed up on 3,180 coachings and referrals to improve the services, supports, and outcomes of individuals receiving SCO—within a six-month period. Of course, this is in addition to the supports, services, and follow-up provided by other providers, community supports, services, and DBHDD staff.

Table 5: Coaching and Referrals Activity for SCO Population January through June CY19

Coaching and Referrals Activity	Number of Coachings	Number of Referrals	Number of Referrals Open beyond Intended Close Date	Percent of Referrals Open beyond Intended Close Date
Appearance/Health	1,002	476	240	50%
Supports and Services	315	118	53	45%
Environment	124	31	14	45%
Home and Community Opportunities	115	25	4	16%
Behavioral and Emotional	90	75	28	37%
Financial	75	12	7	58%
Satisfaction	12	2	0	0%
Critical Incident Follow-Up	16	692	261	38%
Total	1,749	1,431	607	42%

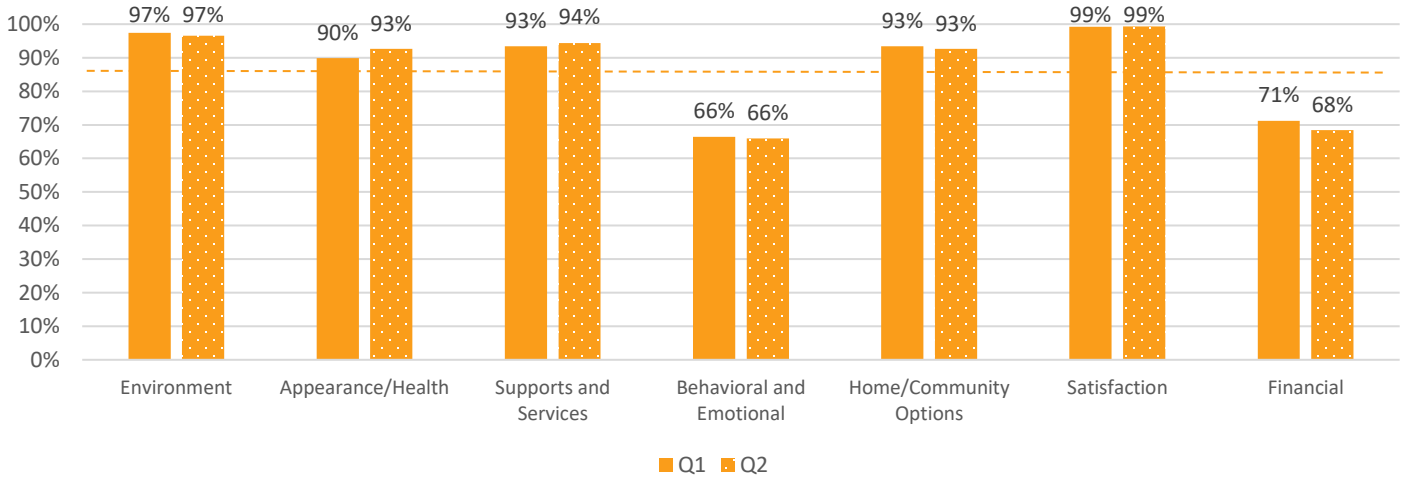
T-test analyses indicated that the number of coachings between the first and second quarters of CY19 were not significantly different. The number of referrals opened remained consistent throughout the reporting period. Additionally, the number of referrals open beyond their intended close date showed no significant change between the first and second halves of the year.

IQOMR POSITIVE OUTCOMES

In this section, DBHDD analyzed IQOMR response data and activity related to coaching and referrals. Figures 1 and 2 compare support coordination IQOMR positive answer rates for the first quarter (January through March) and second quarter (April through June) of CY19. The dotted line indicates the 86 percent performance benchmark set by DBHDD.

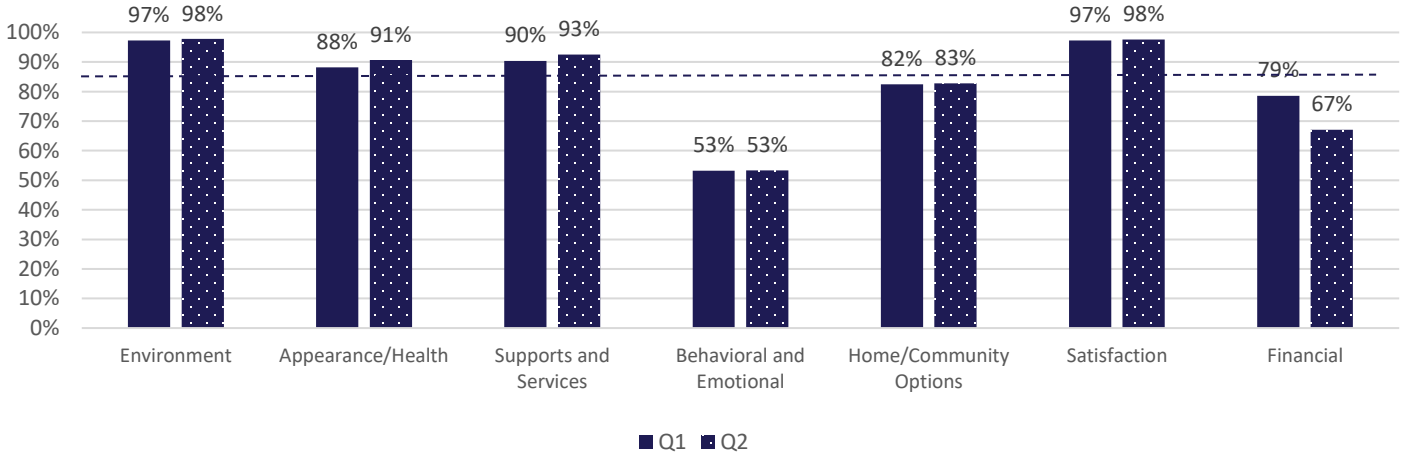
Support coordination services recipients sustained at least 86 percent positive outcomes in five of seven of the IQOMR focus areas. The behavioral and emotional focus area and the financial focus area were the only areas that fell below the threshold of 86 percent for both the first and second quarters of CY19. Outcomes for the critical incident follow-up focus area are not collected or scored as positive outcomes for the determination of positive performance related to the IQOMR.

Figure 1: SC IQOMR Positive Answers, CY19 *Performance threshold is 86%.



Analysis indicates intensive support coordination services sustained positive outcomes in four of seven areas for CY19. Positive outcomes for home and community opportunities fell slightly below the 86 percent performance threshold. As with support coordination services, intensive support coordination services fell below the threshold in the focus areas of behavioral and emotional and financial.

Figure 1: ISC IQOMR Positive Answers, CY19 *Performance Threshold is 86%.



IQOMR data for support coordination services remained above 86 percent for five of seven focus areas, and intensive support coordination services remained above 86 percent in four of the seven focus areas. There were no significant changes in the numbers of coachings, referrals, or referrals open beyond the expected close date between January and June CY2019, indicating that support coordination services remain stable in the provision of positive outcomes for individuals, their families, and providers.

MAJOR FINDINGS

This third study of elevated HRST risk and adverse outcomes for DBHDD IDD individuals has several limitations; DBHDD will continue to strengthen the data, methods, and analyses for future studies. Though limitations exist, several major findings should be noted.

The majority of the DBHDD IDD population are at elevated HRST risk for a negative outcome or adverse event in the areas listed above in Table 1. That said, for all individuals with an elevated HRST risk for an adverse event that rose to the level of SCO in the aforementioned risk areas, DBHDD services and supports potentially averted 23,180 negative outcomes or adverse events. Many individuals (i.e., at least 28%) are at elevated HRST risk of repeated inpatient or ED utilization, though inpatient and ED utilization are not necessarily adverse outcomes. That said, DBHDD services and supports potentially averted 2,796 inpatient and ED visits.

Additionally, new and meaningful insights about the resolution of adverse events came to light within these analyses this year. In every area of elevated risk (e.g., behavior, seizures, bowel obstruction, inpatient/ED, etc.), the comparison of the actual number of events that rose to the level of SCO compared to the number of individuals who had those events indicates that the adverse events are driven by a much smaller set of at-risk individuals. This finding was consistent across all risk areas and has two major implications. First, this smaller set of individuals are the key drivers of adverse events that rise to the level of SCO. Second, for the larger set of individuals who do not have repeated adverse events, then suggests even further evidence of DBHDD's IDD supports system resolving adverse outcomes once they occur, which is evidence in addition to similar positive resolution findings in other areas of this report and several other reports.

This study also found that having received at least six months of SCO did not significantly increase or reduce the number of hospital admissions among individuals receiving SCO. Therefore, that hospital admissions for those receiving SCO remained constant is an especially positive indicator of SCO effectiveness. Further evidence of positive outcomes of SCO for at least six months was evidenced by SCO individuals having comparable IQOMR scores to the larger IDD waiver population, which is a positive indicator that the IDD service supports system, in conjunction with community services such as inpatient and ED services, produce lasting, stable, positive outcomes.

Another persistent positive finding in this report is that IQOMR data indicate that support coordinator processes and procedures are producing positive outcomes in most areas; however, improvement can be made, especially in the behavioral and emotional, and financial focus area. Coaching and referral data indicate that support coordinators could use additional supports in resolving some referrals that remain open pasts the expected close date. Also, of import is the significant increase from last year in the count and proportion of events that rose to the level of SCO that were in "resolved" status at the time of this report.

In summary: Most individuals in the IDD population have an elevated risk for an adverse event. Yet, very few of those individuals had adverse events; conversely, DBHDD's service system (in conjunction with other community services) potentially averted over 23,000 negative outcomes or adverse events. Support coordination delivered during the first half of CY19, over 3,000 coaching, referral, and resolution activities to individuals with complex needs, yielding positive outcomes in all major areas measured, with the exception of behavioral and emotional and financial outcomes. DBHDD continues to work towards resolution on events that are within and beyond expected timeframes of event resolution.

APPENDIX A: HRST ITEMS AND RISK DIMENSIONS

Risk Dimension	Item Letter (A-V)	Item Topic
Functional status	A	Eating
	B	Ambulation
	C	Transfer
	D	Toileting
	E	Clinical issues affecting daily life
Behaviors	F	Self-abuse
	G	Aggression towards others and property
	H	Use of physical restraints
	I	Use of emergency drugs
	J	Use of psychotropic medications
Physiological	K	Gastrointestinal conditions
	L	Seizures
	M	Anticonvulsant medication
	N	Skin breakdown
	O	Bowel function
	P	Nutrition
	Q	Requirements for licensed interventions
Safety	R	Injuries
	S	Falls
Frequency of services	T	Professional health services
	U	Emergency department visits
	V	Hospital admissions

APPENDIX B: HRST EXPANDED SCORE DESCRIPTORS

Functional Status - Eating (Item A)	
Score	**Expanded Explanation**
0	**Eats independently:** May require simple adaptive equipment (hand splint, special eating equipment) but is able to eat without assistance/supervision. Individuals needing help only to cut food into regular, bite-sized pieces still rate a 0. Those who require altered food/fluid textures require a higher score.
1	**Requires INTERMITTENT physical assistance and/or verbal prompts to eat:** May need occasional physical help due to physical limitation or occasional verbal prompts due to issues with attentiveness or behavior.
2	**Requires CONSTANT verbal and/or physical assistance to complete a meal:** Has difficulty attending to task or may have motor limitations which require constant physical and/or verbal assistance. No issues with safety or swallowing.
3	**Requires constant assistance or other mealtime intervention to eat SAFELY OR has a feeding tube but maintains some level of oral intake:** May have difficulty coordinating breathing/swallowing while eating, dangerous behaviors or other conditions which impair their ability to eat safely. Unable to obtain adequate calories and fluids without assistance. Interventions are required (specific positioning support, eating devices, presentation techniques and/or modifications in food/fluid consistency). May have enteral (feeding) tube but maintains some level of oral eating.
4	**Receives ALL nutrition/hydration via other than oral routes (gastrostomy, jejunostomy or nasogastric tube, or total parenteral nutrition-TPN):** Unable to swallow safely OR has other issues requiring other than oral feeding procedures. Individuals who receive food by mouth against physician orders still qualify for a score of 4.

Functional Status - Ambulation (Item B)	
Score	**Expanded Explanation**
0	**Ambulates independently in ALL settings:** May use a walker or other means of support but does so independently in all settings without problems of safety.
1	**Walks with minimal supervision:** Requires the support of another person in close proximity in one or more settings. The primary issue is safety during ambulation.
2	**Predictably dependent on wheelchair for at least some mobility needs:** May or may not have the ability to walk in some settings. Non-ambulatory individuals are able to use their upper body strength for repositioning AND have the ability to independently maintain trunk alignment. Able to recognize the need to change positions on a consistent basis.
3	**Requires mechanical assistance to maintain upright, seated position in wheelchair. Needs assistance to change position or shift weight:** Unable to walk. Able to be placed in an upright sitting position but cannot maintain a seated posture without outside mechanical support (specialized positioning equipment, adaptive wheelchair, etc.) or assistance. Needs assistance to reposition OR may not recognize need to reposition on a consistent basis. May need assistance to propel wheelchair.
4	**Disability prevents sitting in an upright position:** UNABLE to flex the hips to at least 45o OR unable to approach reasonable alignment of the head, shoulders and pelvis. Due to degree of musculoskeletal deficits or deformity has limited positioning options.

Functional Status - Transfer (Item C)	
Score	**Expanded Explanation**
0	**Transfers independently in ALL settings:** May require verbal prompts, but no physical assistance.
1	**Needs someone to supervise the transfer for safety:** May need minor hands-on assistance, but able to bear their own weight and transfer safely in all settings.
2	**Needs physical assistance of 1 person to transfer or change position:** Individual is able to participate in transfers with the assistance of one other person managing a portion of their weight OR is completely dependent for lifting assistance but weighs less than 50 pounds.
3	**Needs physical assistance of 2 people to transfer or change position:** Individual is able to participate in transfers with the assistance of two other persons managing a portion of their weight OR is completely dependent for lifting assistance and weighs between 50 and 75 pounds.
4	**Needs lifting equipment or specialized procedures to safely transfer OR has a history of a fracture caused by a transfer procedure:** Requires specialized lifting equipment due to inability to participate in transfers. Includes individuals who weigh more than 75 pounds and are completely dependent for transfers, whether or not they actually use lifting equipment. May need range of specially designed positions due to severe spasticity, history of bone fragility, potential for injury due to size, or due to degree of physical deformity OR has had a history of a fracture caused by a transfer procedure at some time in their life. *Note: The influence of this item on the HCL extends beyond 12 months, because it relates to "history of"*.

Functional Status - Toileting (Item D)	
Score	**Expanded Explanation**
0	**Independently accomplishes ALL toileting tasks:** No assistance required or appreciated.
1	**Minimal supervision or adaptation required:** May require reminders or some verbal and physical assistance to maintain hygiene or manage clothing adjustments. May require adaptations to restroom facilities (grab bars or built up commode seat) Beyond this, minimal assistance is necessary.
2	**Continent of bladder and bowel, but constant attention is needed:** Requires physical assistance to complete hygiene tasks (wiping, hand washing) and clothing repositioning. May have occasional accidents but NOT routine, predictable incontinence.
3	**Incontinent of bowel or bladder:** Individual is predictably incontinent of bowel or bladder in one or more settings (nighttime, work or school settings or engages in willful incontinence.) May require scheduled toileting or use incontinence briefs. Includes infants, for whom incontinence is age appropriate.
4	**ANY use of catheterization procedures or colostomy for elimination within the past 12 months:** Urinary catheterization for ANY reason or elimination via colostomy, urostomy or ileostomy within the past year.

Functional Status - Clinical Issues (Item E)	
Score	**Expanded Explanation**
0	**None, or person does not participate due to personal preference or guardian objections. No clinical restrictions:** No ADLs changed or missed within the past year due to illness, behaviors or necessary medical appointments (Full or partial day).
1	**Less than 2 days (full or partial) in a month on average due to clinical issues:** Able to participate in usual activities of daily living, but participation may occasionally be interrupted by illness, behavioral or mental health issues, or may have physician appointments to monitor a diagnosed condition or receive treatment.
2	**2 to 4 days (full or partial) in a month on average due to clinical issues:** Able to participate in usual activities of daily living, but participation may be interrupted by illness, behavioral or mental health issues, or may have physician appointments to monitor a diagnosed condition or receive treatment.
3	**5 to 10 days (full or partial) in a month on average due to clinical issues:** Able to participate in usual activities of daily living, but due to chronic unstable or progressively worsening health or behavioral issues, there is a significant impact on usual activities. May be due to physician appointments to monitor a diagnosed condition or receive treatment.
4	**More than 10 days (full or partial) in a month on average or normal daily activities are completely disrupted due to intensity of clinical issues:** Due to chronic, unstable or progressively worsening health or behavioral issues participation in usual activities is severely impaired. May be ill or have physician appointments to monitor condition or receive treatment OR may be completely unable to participate in usual activities due to intensity of clinical issues.

Behavior - Self Abuse (Item F)	
Score	**Expanded Explanation**
0	**No self-abuse within the past year.**
1	**Minimal self-abuse, no additional consequences:** Behaviors that are considered self-abusive have been identified but have not required first aid or other intervention within the past year.
2	**Self-abuse needing additional observation LESS than 2 times a month:** Demonstrates behaviors that cause minor self-injury which may require treatment or other intervention but averaging to less than two interventions per month over the past year.
3	**Self-abuse needing medical/nursing attention or other intervention 2 OR MORE times per month:** Demonstrates behaviors that cause minor self-injury, which may require treatment or other intervention, but averaging two or more interventions per month over the past year.
4	**Self-injury interferes with the ability to engage in structured activities, requires increased staffing or causes extensive physical harm:** May be due to an existing behavioral pattern or the result of a single, isolated incident.

Behavior - Aggression (Item G)	
Score	**Expanded Explanation**
0	**No aggression within the past 12 months.**
1	**LESS than 5 incidents per month of minor aggression (verbal or physical) WITHOUT injury to others or property damage within the past 12 months.**
2	**5 OR MORE incidents per month of aggression (verbal or physical) WITHOUT injury to others or property damage within the past 12 months.**
3	**LESS than 5 episodes of aggression per month WITH minor injuries to others (injuries not needing medical TREATMENT) or property damage within the past 12 months.**
4	**Episodes of aggression have required increased staffing ratios, restrictive interventions OR caused serious physical harm within the past 12 months.**

Behavior - Physical Restraint (Item H)	
Score	**Expanded Explanation**
0	**Has NOT been physically restrained in the past 12 months.**
1	**Has been physically restrained less than once per month on average in past 12 months:** May include restraints used to facilitate some type of urgent medical procedure or care that without using restraint would have been impossible OR an acute behavioral event that required an immediate response.
2	**Has been physically restrained more than once per month on average in past 12 months:** Restraint use would require a physician's approval. Less restrictive options would have been explored and ruled out.
3	**Use of physical restraint procedures or devices MORE than 5 times per month on average but LESS than 12 hours per day:** Generally has behavioral issues (hitting, biting, head-banging, etc.) that cause injury to self and/or others. May wear protective devices, including helmets to protect from injuries due to anticipated falls.
4	**Individual sustained and injury requiring medical TREATMENT as the result of application of physical restraint procedures/devices OR use of some sort of device 12 or more hours per day:** Generally has significant behavioral issues (severe and continuous tissue damage, significant aggression, causing injuries). Includes use of helmets to protect from injuries due to anticipated falls or confinement of individual to a restricted space such as a prison cell.

Behavior - Chemical Restraints (Item I)	
Score	**Expanded Explanation**
0	**Has NOT received additional medications to control mood, mental status or behavior in the past 12 months:** May have behavior issues but coping skills and behavioral intervention are sufficient to help the individual calm down without the necessity of drug/medication administration.
1	**Received pre-sedation before any medical or dental appointment in the past twelve months:** Anxiety/pain threshold has resulted in use of drugs prior to medical or dental procedure.
2	**Has received medications to control mood, mental status or behavior 1 time in last 12 months.**
3	**Has received medications to control mood mental status or behavior 2-3 times in last 12 months.**
4	**Has needed medications to control mood, mental status or behavior 4 or more times in last 12 months.**

Behavior - Psychotropic Meds (Item J)	
Score	**Expanded Explanation**
0	**Has NOT received medication to control behavior or a psychiatric disorder within the past year.**
1	**Receives 1 medication not associated with or known to cause tardive dyskinesia (TD) to control behavior or psychiatric disorder. Medication dosage has NOT CHANGED within the past year.**
2	**Receives 2 medications not associated with or known to cause tardive dyskinesia (TD) to control behavior or psychiatric disorder. Medication dosage has NOT CHANGED within the past year:** May or may not be taking a traditional psychotropic drug, but is taking medication (e.g., Benadryl, Inderal, Tegretol) for identified behavior or psychiatric diagnosis.
3	**Receives 3 or more behavioral or psychiatric medications not associated with or known to cause tardive dyskinesia (TD) OR psychotropic medication type or dosage has been changed in the past year:** On 3 or more medications to control behavior or psychiatric disorder OR receives ANY medication to control behavior or psychiatric disorder with at least one change in type or dosage in past year. Individuals on a drug tapering program will remain a 3 for one year after the medication is discontinued.
4	**Has received one or more medications associated with or known to cause Tardive Dyskinesia within the past year:** Includes medications such as metoclopramide (Reglan), even when they are not used for psychiatric purposes.

Physiology - Gastrointestinal (Item K)	
Score	**Expanded Explanation**
0	**None:** No GI concerns within the past 12 months AND no history of GI bleed.
1	**Occasional (2 or less) episodes of GI symptoms per month in the absence of acute illness**: Health is very stable. Only has an occasional episode of GI symptoms (2 or less per month). GI distress occurs with no apparent explanation.
2	**3-6 episodes of GI symptoms per month:** Occasional episodes of GI symptoms occurring 3 - 6 times per month. A documented pattern of incidents may be developing. These episodes are more likely to be associated with a disorder of the stomach or GI tract instead of an acute illness like the flu. This includes individuals who take over the counter medications for upset stomach, heartburn or other GI symptoms.
3	**MORE than 6 episodes of GI symptoms per month, OR coughing within 1-3 hours after meals or during the night, OR hand-mouthing or PICA behaviors, OR has a history of GI bleeding OR has a current diagnosis of gastroesophageal reflux (GER)** *Note: The influence of this item on the HCL extends beyond 12 months, because it relates to "history of"*.
4	**GI condition requiring hospital admission in past 12 months OR receives more than one medication for GER: Conditions requiring hospital admission include GI bleeding, ulcerative conditions, vomiting, persistent dehydration, aspiration pneumonia, intestinal infections, bariatric surgery, gallbladder or pancreatic surgery, bowel impaction, obstruction or ileus, parasites, etc. OR individual regularly takes more than one medication (including over-the-counter medications) to control GER.**

Physiology - Seizures (Item L)	
Score	**Expanded Explanation**
0	**No seizure in lifetime OR more than 5 years since last seizure:** Individual has never had seizures OR has a known seizure history but has not had a seizure in more than 5 years. May or may not be taking antiepileptic medication.
1	**More than 2 but less than 5 years since last seizure:** Has a history of seizure activity but has been seizure-free for at least the last 2 years. May or may not be taking antiepileptic medication.
2	**Less than 1 seizure per month which DOES NOT interfere with functional activity:** Seizure activity occurs less than one time per month AND does not affect the person's ability to engage in functional activities for longer than 30 minutes.
3	**Seizure activity that DOES interfere with functional activities:** Seizures of any type which occur more than once a month OR seizure activity of ANY frequency that interferes with functional activities for longer than 30 minutes.
4	**Has required hospital admission for seizures in past the 12 months:** Any classification of seizure requiring a hospital ADMISSION (not just an ER visit) to treat seizure complications, diagnose or evaluate a seizure disorder or for surgery to treat a seizure disorder.

Physiology - Anticonvulsant (Item M)	
Score	**Expanded Explanation**
0	**None:** Has not taken antiepileptic medication within the past year.
1	**Use of SINGLE antiepileptic medication:** Dosage or medication type has NOT CHANGED within the past year.
2	**Use of 2 antiepileptic medications:** Dosage or medication type(s) have NOT CHANGED within the past year.
3	**Use of 3 or more antiepileptic medications OR any change in antiepileptic medication type or dosage in past 12 months OR receives valproic acid derivatives (Depakene or Depakote, etc.) in combination with any other antiepileptic medication OR receiving felbamate (Felbatol):** Individuals on a drug tapering program will remain a 3 for one year after the medication is discontinued.
4	**ER visit OR hospitalization due to antiepileptic drug toxicity in past 12 months.**

Physiology - Skin Breakdown (Item N)	
Score	**Expanded Explanation**
0	**No current or potential skin problems within the past year:** No issues with skin integrity in the past 12 months AND no known conditions associated with increased skin vulnerability.
1	**Red or dusky discolorations or other minor disorders of skin:** Skin may be reddened or have signs of poor circulation. This may also include individuals with typical presentations of psoriasis, acne, eczema, severe dryness or other skin issues. Individuals with diabetes mellitus or other issues associated with skin vulnerability require a higher score (3 or greater).
2	**Either currently has or has had significant disruptions of skin integrity within last 12 months OR has a history of pressure sores:** Includes ANY significant wound, including surgical wounds, in individuals who do not have a known condition associated with skin vulnerability AND individuals who have had pressure sores, even if they resolved more than 12 months ago. *Note: The influence of this item on the HCL extends beyond 12 months, because it relates to "history of".*
3	**Within the past 12 months a significant break in skin has developed which required MORE than 3 months to heal OR has a condition directly associated with skin vulnerability:** Examples include spina bifida, spinal cord injury, nutritional compromise, low serum albumin, diabetes mellitus, continuous incontinence, self-injurious behaviors involving skin damage. Individual may NOT have had any actual issues with skin integrity in the past year.
4	**The skin condition required recurrent medical treatment or hospitalization in past 12 months:** Individuals have required hospitalization or surgery for a skin problem (invasive skin cancer, graft surgery for wounds or burns, etc.) OR have required visits to a wound care clinic, infectious disease or other specialist for a severe or potentially life-threatening skin issue.

Physiology - Bowel Function (Item O)	
Score	**Expanded Explanation**
0	**No bowel elimination problems within the past year AND no history of hospitalizations for bowel obstruction or ileus** *Note: The influence of this item on the HCL extends beyond 12 months, because it relates to "history of".*
1	**Bowel elimination is easy to manage with diet:** Receives a diet modification and/or increased fluids to assist with proper elimination.
2	**Bowel elimination is easy to manage with diet and routine supplements:** Has slight problems with constipation requiring intermittent or routine stool softener or fiber supplement.
3	**Receives at least one medication that affects bowel motility OR regularly receives more than one supplement or medication of ANY type to treat diarrhea or constipation:** Has recurrent problem with constipation or experiences episodes of intermittent diarrhea. May require suppositories, enemas or manual assessment for impaction.
4	**Any hospitalization in past 12 months required to treat an impaction, bowel obstruction or ileus OR history of ANY hospitalizations for bowel obstruction or ileus** *Note: The influence of this item on the HCL extends beyond 12 months, because it relates to "history of".*

Physiology - Nutrition (Item P)	
Score	**Expanded Explanation**
0	**Within ideal body weight range and able to maintain weight:** Requires no diet modifications, prescribed nutritional supplements or other intervention to maintain health. Individual may voluntarily take vitamins or other nutritional supplements without physician prescription or recommendation.
1	**Is slightly above or below ideal body weight range. May require extra calories or some dietary restrictions:** Health is generally stable, though weight is not within ideal range (not more than 10% above or below the far ends of the ideal body weight range.) May require additional calories through supplemental products or snacks, OR may require dietary restrictions (single servings at mealtime, low fat and low-calorie foods, restricted sweets, etc.).
2	**Is well managed on a prescribed diet:** Within desired weight range, but has a diet prescription for health maintenance or health concerns which have been under control for the past 12 months (low sodium, low cholesterol, etc.) This includes individuals receiving tube feeding formula who are otherwise nutritionally stable and well maintained.
3	**Has demonstrated weight instability in the past OR has an identified nutritional risk which required nutrition status monitoring within past 12 months: May have displayed unstable nutritional status episodes or trends in past 12 months which have produced health issues requiring intervention to maintain health OR is being monitored for one or more of the following:**
	Inability to reach or maintain desired body weight.
	Unplanned changes/trends in body weight (up or down).
	A chronic medical condition which affects nutritional status (diabetes mellitus, anemia, low serum albumin, renal or hepatic disease, GI disorder, impaction, pressure ulcer, etc.).
	Medical conditions that require monitoring and control of fluid intake levels.
	Difficulty consuming adequate intake, poor appetite or frequent meal refusals.
	Food allergies or intolerance which limits intake of major food groups.
4	**Nutritional status unstable within the past 12 months: High risk with an unstable nutritional status. Required intensive nutritional intervention to address any of the following conditions:**
	Unplanned weight loss >10% of usual weight in past 12 months.
	Morbid obesity (body weight 100 pounds greater than, or twice the desired weight range or BMI >35).
	Hospitalization and/or treatment in the past 12 months for recurrent aspiration pneumonia, choking episodes, GI bleeding, unresolved diarrhea, vomiting or unresolved wounds caused by pressure, diabetes, circulatory disorders, etc.
	Inability to consume an adequate diet due to chewing or swallowing disorder (for individuals receiving only oral intake).
	Gastrostomy or jejunostomy tube placement OR complications with existing enteral tube in the last 12 months.

Physiology - Requirements for Licensed Intervention (Item Q)	
Expanded Scoring Descriptors	
Treatments -- Includes interventions or procedures which MAY be performed independently or by unlicensed family/staff but, by their nature, are inherently high-risk. Also includes treatments which may not, under ANY circumstances, be delegated to non-licensed personnel. Scoring is intended to be consistent from setting to setting, regardless of policies dictating professional practice delegation. In many cases a Q-score qualifies the person to receive 24-hour nursing services, although not all individuals require such a restrictive setting. Item is scored either 0 or 4 regardless of how many qualifying issues apply.	
1	**Tracheotomy that requires suction.**
2	**Ventilator dependent.**
3	**Nebulizer treatments one or more times daily**: Receives medications such as Ventolin or Theophylline, by oxygen mist nebulizer at least once per day.
4	**Deep suction:** Requires deep suction, which means entering a suction catheter 6" or more into or below the voice box either via tracheotomy, oral or nasal routes.
5	**Requires complex medication calculations for insulin given via insulin pump or injection.**
6	**Has an unstable condition that requires ongoing (usually daily or more frequent) assessment and treatment by a licensed health care professional. Including but not limited to:**
	Medication therapy requiring intramuscular or intravenous injections or hemaport irrigations one or more times daily.
	Daily or more frequent catheterization, requiring sterile technique.
	Physician ordered treatments that CANNOT be delegated to a non-licensed person such as chemotherapy or renal dialysis.
	Sterile dressing/wound treatments routinely performed only in clinical settings or by licensed practitioners.
	Individuals in acute and/or end stages of cardiac, liver, lung or kidney disease.
	End-stage terminal illness (cancer, AIDS) or persons with end-stage progressive neurological disorders (Sanfilippo Syndrome, Multiple Sclerosis, Huntington's chorea).
7	**1:1 staffing for behavioral issues:** Requires 1:1 staffing 16 or more hours EACH day due to behavioral issues.

Safety - Injuries (Item R)	
Score	**Expanded Explanation**
0	**No injury within the past year OR minor bruises/abrasions requiring only simple first aid:** Small cuts or scratches that do not require attention beyond cleansing and simple bandaging or minor bruises, sprains or strains that do not require immobilization.
1	**Bruises or cuts 1 or 2 times in the past year requiring first aid or nursing intervention within the past year:** Injuries of any type requiring minor first aid or nursing attention (but NOT physician treatment).
2	**Bruises or cuts requiring first aid or nursing intervention occurring 3 or more times within the past year:** Injuries of any type requiring first aid or nursing intervention (but NOT physician treatment) occurring 3 or more times within the past year.
3	**Injury requiring medical TREATMENT in the past year:** Sustained an injury that required treatment by a physician or in an emergency room (sutures, casting a fracture, etc.) within the past year. Injuries receiving physician evaluation as a precaution but NOT requiring treatment should receive a lower score.
4	**Major injuries requiring hospital admission within the past year:** Has documented evidence of fracture or other major trauma which required hospital admission within the past year.

Safety - Falls (Item S)	
Score	**Expanded Explanation**
0	**No falls within the past year.**
1	**1 - 3 falls within the past year.**
2	**4 - 6 falls within the past year OR wears a helmet to protect from injuries due to anticipated falls from events such as seizures or narcolepsy.**
3	**More than 6 falls in the past year.**
4	**Any fall that resulted in a fracture or hospital admission due to injuries in the past year.**

Frequency of Services - Professional Healthcare Services (Item T)	
Score	**Expanded Explanation**
0	**No visits other than routine screening or health maintenance visits within the past year:** Visits to licensed health care providers that did NOT identify or manage a diagnosed condition. These visits are normally only to primary health care providers and NOT to specialists.
1	**Required 2 visits per quarter on an average over the past year to health care provider(s):** Visits to ANY health care providers intended to identify or manage a diagnosed condition.
2	**Required 1-2 visits per month on average to health provider(s) OR required daily nursing services greater than 14 days continuously in past 12 months.**
3	**Required 3 visits per month on average to health care providers within the past year.**
4	**Required 3 visits per month to health care providers PLUS unscheduled appointments within the past year:** In addition to 3 or more visits per month, unplanned visits to health care providers were required to treat acute health incidents within the past year.

Frequency of Services - Emergency Room Visits (Item U)	
Score	**Expanded Explanation**
0	**No emergency room visits within the past year.**
1	**Emergency room visit due to physician absence or non-emergency situation within the past year.**
2	**One emergency room visit in last year for acute illness or injury.**
3	**Two or more emergency room visit for acute illness or injury in the past year.**
4	**Any emergency room visit in the past year that resulted in hospital admission.**

Frequency of Services - Hospital Admissions (Item V)	
Score	**Expanded Explanation**
0	**No hospital admissions within the past year.**
1	**Hospital admission in the past year for scheduled surgery or procedure:** Normally for conditions that are not deemed urgent where there is an elapsed period of time (days to weeks) between diagnosis and admission, including routine childbirth.
2	**Hospital admissions for acute illness or injury within the past year:** Often occurs from an emergency room or physician's office with little or no elapsed time between diagnosis of the condition and hospital admission. Includes admissions to psychiatric facilities or ICFs.
3	**2 or more hospital admissions for acute illness or injury in the past year.**
4	**Admission to ICU during a hospitalization in past year:** Initial hospitalization may have been for an acute illness or injury, but ICU admission may also occur as the result of scheduled or elective procedures.