

Developing Reimbursement Levels Using the Supports Intensity Scale (SIS) in Louisiana

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Introduction

In order to better calibrate its Home and Community Based (HCBS) New Opportunities Waiver (NOW) for stability, fairness, and understandability, and to simultaneously move the developmental disabilities service system toward assessment-informed person centered planning and resultant improvements in services, the Louisiana Office for Citizens with Developmental Disabilities (OCDD) chose to explore the use of the Supports Intensity Scale (SIS) as a resource allocation tool. This exploration began in 2005 with the OCDD investigation of several different assessment tools, the selection of the SIS tool, and a “trial” administration of the SIS to a group of individuals served by the NOW waiver, other community based waivers, and small private Intermediate Care Facilities for the Developmentally Disabled (ICFs/DD) in the Baton Rouge area as well as residents of two large public ICFs/DD. After evaluating the results of this trial administration, OCDD continued its work with the SIS and contracted with the Human Services Research Institute (HSRI) to assist the Office in developing a resource allocation model.

The purpose of this paper is to describe the process employed by OCDD and other participants in developing a SIS informed resource allocation guide for Individual Family Support and Attendant Care services (IFS/AC) for the NOW waiver, both for individuals initially coming to NOW services from the Request for Services Registry (Registry), and those already receiving services.

This paper begins with a brief description of the NOW waiver, follows with a discussion of the process employed by OCDD in collecting SIS data, presents the results from an examination of the SIS information collected, then presents a discussion of the resource allocation model adopted by OCDD for use as a guide to service authorizations, and concludes with a discussion of recent progress and lessons learned.

1. Background on the Developmental Disabilities HCBS NOW Waiver in Louisiana

In fiscal year 2004-2005, Louisiana provided services to 4,628 individuals with developmental disabilities in the New Opportunities Waiver (NOW). The cost of NOW services for the 2004-2005 state fiscal year was \$235,916,820. In the period between 2004 and 2008, Louisiana experienced considerable HCBS waiver growth. During this time, the number of NOW participants grew at an average annual rate of 6.63%, while the average costs per person increased at an average annual pace of 11.74% per year. The total increase in NOW expenditures for this period was 38.06% while the total increase in recipients was 20.59%.

SFY	EXPENDITURES	UNDUPLICATED RECIPIENTS	AVG. COST PER RECIPIENT	REQUEST FOR SERVICES REGISTRY
2004-2005	\$235,916,820	4,628	\$54,971	
2005-2006	\$240,163,728	4,662	\$58,117	13,789
2006-2007	\$261,722,309	4,833	\$60,200	14,768
2007-2008	\$325,716,469	5,581	\$67,836	9,453

SOURCES: MEDICAID DATA WAREHOUSE AND OCDD RATE AND AUDIT SECTION

Louisiana has served 6,344 individuals with developmental disabilities in the NOW for fiscal year 2008-2009. The projected 2008-2009 fiscal year expenditures for the NOW is \$375 million. As of December 31, 2008 there were 9,453 individuals on the Registry waiting for services. Because the Louisiana Legislature funded 1,500 NOW opportunities for fiscal year 2008 and 2,025 opportunities in fiscal year 2009, the number of people on the Registry is projected to be reduced over the next 12 months to less than 7,000.

Louisiana services and supports for people with developmental disabilities rely on five types of service options/settings that are quite different from one another, including:

1. Children's Choice Waiver is a capped support waiver developed in lieu of Louisiana's implementing the Katie Beckett (TEFR 124) Medicaid eligibility option due to cost concerns. Currently, the Children's Choice Waiver has served 998 participants for the 2008-2009 state fiscal year at a capped annual cost of \$17,000.
2. New Opportunities Waiver (NOW) is a comprehensive waiver which currently supports 6,347 individuals with an average cost per recipient of \$64,652 and no cap. Historically there has been a 9-12 year wait time for entrance. With the new NOW opportunities being offered this wait time is projected to be reduced to 5-6 years.
3. Public Intermediate Care Facilities for persons with Developmental Disabilities (ICF/DDs) serve about 1,304 individuals in state facilities.
4. Private ICF/DDs serve around 3,500 individuals in non state facilities.
5. The Supports Waiver is the state most recently created waiver for persons with developmental disabilities. It provides a variety of supports services centered around vocational services and training. The Supports Waiver currently serves 1,957 participants at an average cost of \$9,376 per recipient.

2. The Process

HSRI has developed a strategic planning framework for a state's movement to an assessment informed resource allocation method. This framework has four main phases: (1) preparation for the project, (2) data collection, (3) setting individual assessment levels, adopting a resource allocation model and associated service rates, and (4) implementation.¹ In the case of Louisiana, since the State had engaged in this project and was quite far along when HSRI was retained for consulting assistance, many of the early steps, with regard to project preparation and initial data collection, had already been executed by the time of HSRI's involvement.

The preparatory steps of setting goals, engaging stakeholders, conducting stakeholder meetings and the formulation of specialized committees had all largely been executed prior to HSRI's involvement. HSRI did prepare and share several "idea papers"² with state officials and

¹ Kimmich, M., Agosta, J., Fortune, J., Smith, D., Melda, K., Auerbach, K. & Taub, S. (2009) Developing Individual Budgets and Reimbursement Levels Using the Supports Intensity Scale. Houston: Independent Living Research Utilization (ILRU) Community Living Partnership.

² Fortune, J. & Agosta, J. (December 2007). Discussion of Key Resource Allocation Policy Issues in Louisiana, Office of Citizens with Developmental Disabilities Stakeholder Group, Baton Rouge, LA. AND;

Fortune, J. & Agosta, J. (January 2008). Policy Brief Analysis of Service Use and Expenditures in Louisiana, Office of Citizens with Developmental Disabilities, Baton Rouge, LA.

interested stakeholders, providing information on resource allocation models around the United States and the application of assessment-informed, person-centered planning at the first stakeholder meeting.

Below, we briefly discuss the collaborative process engaged in with the state to decide on appropriate data sources for the project, followed by details concerning sampling, data collection and analysis.

2.1 Selecting Data Sources and Tools

Key to successfully completing a project of this magnitude is the collection of valid data. Creating a resource allocation model requires data from four sources: 1) the Supports Intensity Scale (SIS); 2) additional assessment elements added to the SIS by the state; 3) additional individual-level data items; and 4) expenditure information.

The SIS: As indicated, the state had earlier undergone an extensive examination of several different assessment tools. In 2005, prior to engaging HSRI in this project, the state adopted the SIS as their assessment instrument and initiated a pilot study of all the people served by the NOW waiver in the capital city area of Baton Rouge. The pilot was undertaken to determine whether the SIS would be useful as part of a person-centered assessment process to identify individual support needs. In this focused sample, SIS results were gathered by a state-run SIS administration unit and a select group of assessors specially trained by this unit in SIS administration.

Selection of the SIS was based on consensus of a large stakeholder group that included family members, support coordinators, and providers who had met for over 6 months to evaluate different tools and instruments, including national instruments and various states' instruments used in approximately 20 states. The Baton Rouge area was chosen for trial administration because of its balance of rural and urban areas and its large population. Louisiana also completed its own study of the inter-rater reliability of the SIS during this trial administration period and evaluated methods for improving participants' understanding of the assessment process.

Additional Assessment Elements: The State expanded on the basic SIS in two ways: using the "to" "for" measures and adding additional assessment items in the form of "LA Plus", both of these elements are described below.

- Following the lead of a few other states, OCDD opted to expand all the sections of the SIS, adding to each question "to" and "for" measures, to assure that what is important to the individual is included. This expansion reflects the commitment of state leaders to enhancing the person-centered nature of the waiver programs. The stated intent, as in other states, was to embed the SIS within a larger person-centered assessment process to promote more individualized service planning. This included an extensive effort to computerize the writing of NOW waiver service plans in which supports identified as important to and for the person will automatically be loaded into the plan of care, requiring planners to address these needs.

- LA Plus is a 39-item tool created by OCDD to capture material equipment needs; supports relative to sensory impairments; professional service needs; additional employment needs and barriers; nighttime and supervision needs; and particular risks, supports, and needs related to caretakers, environment, behavior and health. It also now includes a new community safety risk question added at the advice of HSRI. These questions were compiled into a complimentary instrument which is delivered immediately following the SIS assessment.
- Additional Individual-Level Data Items: The third category of data collected by OCDD included items historically used to determine levels of service needs as well as a case review of the current authorized services for a subset of the assessed population. This valuable information yielded the living arrangement (e.g., living independently, living in the family home), the natural support hours utilized, the participation in a day program, and an evaluation of the current authorized hours of paid support.
- Expenditure Information: To supplement these three sources of client-level needs information, the OCDD assembled and provided three years of claims data for all individuals on the NOW to Burns & Associates, Inc., a firm collaborating with HSRI on the project.

2.2 Training for the SIS

Collecting and compiling the SIS data with trained SIS interviewers has been a major task for OCDD. During the first three years of the project, OCDD trained state staff to be SIS interviewers; four in the central office and the appropriate number of staff in each of the nine Waiver Regions. The central office SIS interviewers consisted of four staff members, of which two were trained on the tool by Dr. Marc Tassé, an author of the SIS. The others were later hired and trained by Dr. Scott Meche, the project director.

OCDD's interviewer training consists of two and a half days of classroom training followed by the conducting of a minimum of three assessments for training purposes. Each trainee is monitored/shadowed in their training assessments by a fully trained staff member who is already proficient in the process. An inter-rater reliability test is completed on each of the three shadowed assessments and the trainee is counseled on any problem areas after each training assessment. At the end of the three shadowed training assessments, the results are compared and a decision is made as to whether the trainee is to be certified to independently conduct assessments, or whether more classroom training or shadowed training assessments are required.

HSRI was asked to examine the training process. We concluded that the Louisiana SIS unit was well trained, aptly led, and very efficient in the administration of the SIS. In the Baton Rouge area, for example, the trained assessors along with SIS project staff were able to conduct two assessments each day until the NOW waiver population for the area had been fully assessed.

2.3 Constructing the Sample

Louisiana began the administration of the SIS and LA Plus for the pilot project in the Baton Rouge area, the pilot yielded SIS assessments on five hundred waiver participants. This pilot was originally undertaken to determine the feasibility of the SIS as part of a person-centered assessment process to identify individual support needs. However, the pilot results were not appropriate for the determination of a state wide resource allocation model because the pilot lacked geographic diversity. For the purpose of a resource allocation model it was necessary to collect a state-wide sample of SIS results.

In order to use the work that had been done on the Baton Rouge pilot, a state wide sample was created that also used a randomly selected proportionate subset (proportionate with regard to population statistics from the various geographic regions of the state) of the Baton Rouge sample. Consequently, a random representative statewide sample was filled out during 2007 which ultimately totaled 443 NOW participants with SIS and LA Plus data. The sample was considered to be of sufficient size and diversity to be useful in finding resource allocation variables. In the end, a smaller group of 437³ was used to build resource allocation levels and was judged to be reflective of the full waiver population.

In addition to the administration of the SIS and LA Plus to the active NOW participants, OCDD administered the SIS to a sample of 300 individuals on the Registry. These data were collected so that OCDD would have insight into the composition of the individuals on the Registry that would be moving into services during fiscal year 2009.

The OCDD entered the SIS results into its own database, and supplemented the results with the additional demographic and other data that had been compiled.

3 The SIS Results

This section presents findings resulting from the analysis conducted by HSRI of the SIS information from three different perspectives: the SIS Service Needs Index (SNI) score for the Louisiana sample with the SIS national norm group, the SNI compared to the scores derived from other states' support waiver participants, and a comparison of key predictor variables that have emerged from other HSRI work for resource allocation models to national norms.

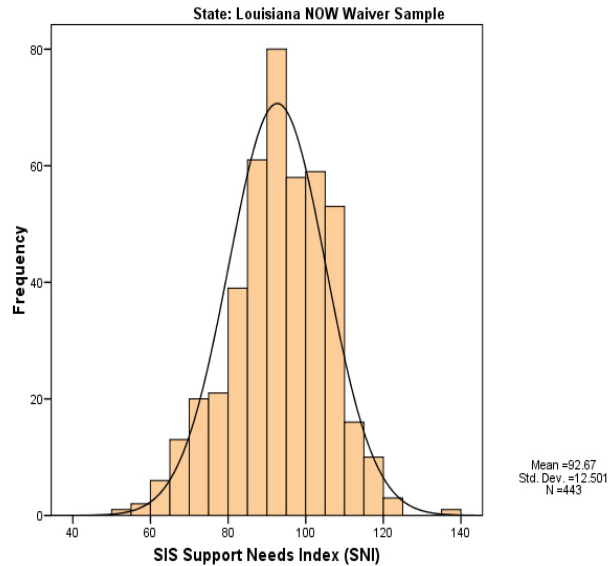
3.1 The SIS Support Needs Index: Louisiana compared to the national norm

This section examines the comparability of the Louisiana sample to the national population, in terms of SIS SNI scores. The SIS is normed using a nationwide sample of 1,306 adults 18 years of age or older with developmental and other disabilities in 33 states. One would expect the state waiver sample to look similar to the individuals in the SIS norm group. The SIS SNI has an IQ like distribution with an average score of 100 and a standard deviation of 15. Figure 1 supports this view by showing a distribution that has a very similar shape to the dark bell shaped line showing the shape of the Louisiana SNI results. It appears that the sample of 443

³ It was later determined that six individuals with SIS information did not have waiver expenditures.

waiver participants has a shape like the SIS norm group. This helps build confidence that the state's SIS sample reflects the underlying state waiver population in terms of support needs.

Figure 1: SIS SNI Results for Louisiana



While the distribution of sample SIS scores largely mirrors national norms, the distribution in this sample group leans toward scores below 100 – the average SNI score is 92.67, which is about seven points lower than the national norm. There are several possible explanations for this lower average SIS score. First and perhaps most importantly, is that the Louisiana scores are for individuals that are on the NOW, i.e., individuals who live at home or with family or relatives. HSRI has found this to be true in almost all the states we have worked in: waivers in which people live at home with their families or on their own tend to serve people with fewer support needs than the total national population which includes many people with 24 hour, 7 days a week of out-of-home residential placement. For example, the average SNI score for waivers where participants live with their family, on their own or with others (in the HSRI SIS database) is 91.50, while for participants in waivers with individuals living in residential placements out of their family home have an average of 100.3.

3.2 The SIS Support Needs Index: Louisiana Compared to Other Similar Waivers

Figure 2 (on the following page) illustrates the shape of SIS Support Needs Index (SNI) results for the Louisiana sample with the results of the supports waiver participants in Colorado, Missouri and Georgia.

In each of these charts, the SNI results are represented by histogram bars of 5 SNI. Each of the state results forms a similar bell shape curve. This indicates a similar distribution of SNI scores with the majority of individuals in each state having scores below the overall average norm of 100 and the norm standard deviation of 15.

3.3 Other Key Variables: Louisiana compared to other waivers where most people live at home with their families

While the SNI scores for states with similar waivers are alike, the Louisiana sample differs from other waivers in some important measures. The similarities and differences between Louisiana and selected other states is evident in Table 1 (below), which shows SIS results for four state waivers where individuals live at home with their families or relatives or on their own.

Figure 2. Shape of SIS SNI in Four States

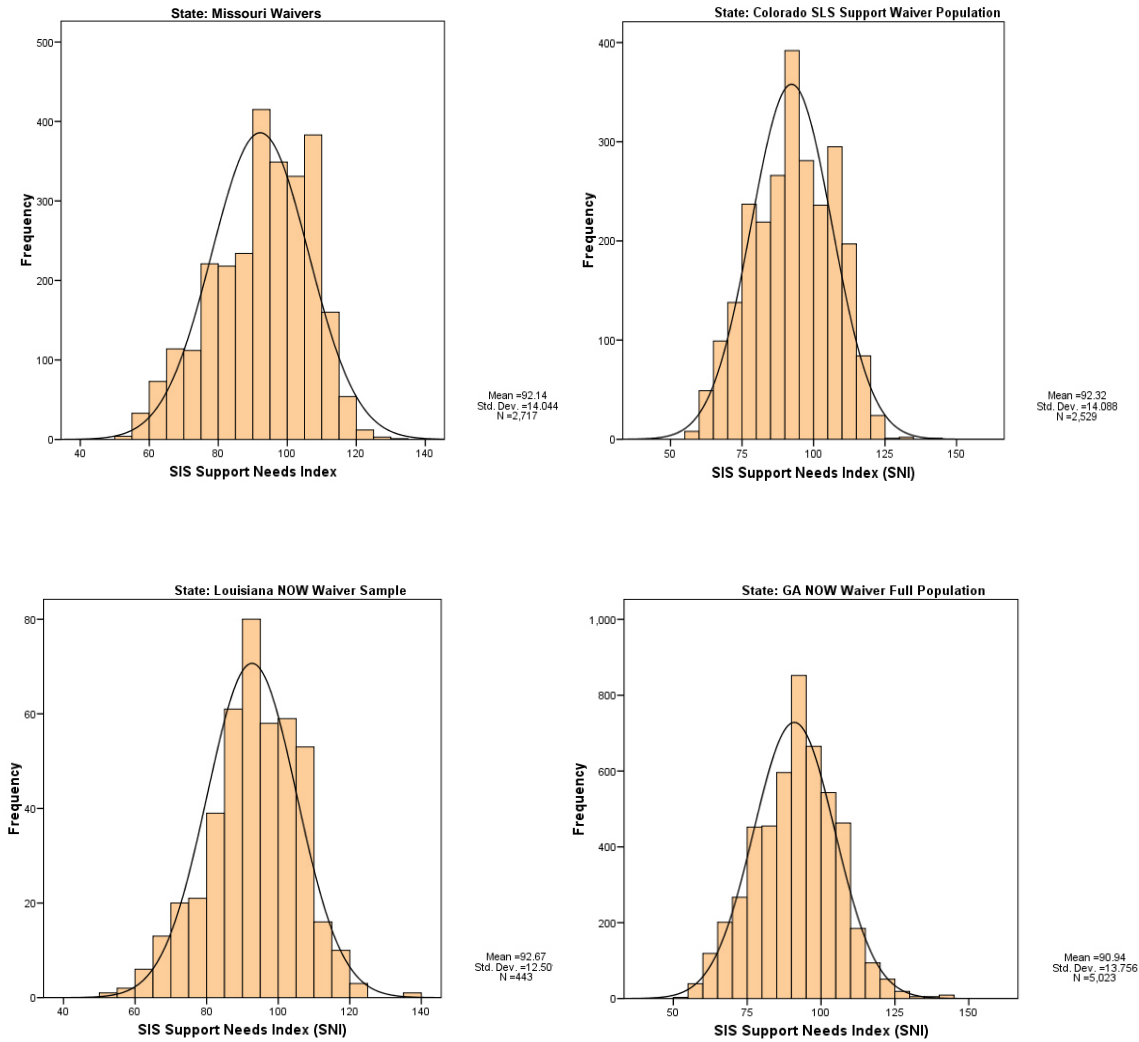


Table 1. HCBS Waivers Emphasizing Individuals with Their Families or on Their Own.

HCBS Waiver	People	SNI	ABE	Medical Total	Behavioral Total
LA NOW Waiver	443	92.67	28.14	1.92	1.90
CO SLS Waiver	2,530	92.32	25.37	2.78	2.93
GA NOW Waiver	5,023	90.94	25.27	1.26	1.77
MO Waivers	2,717	92.14	25.86	2.07	3.95

In this descriptive table, the SNI, the Medical Support Need, and the Behavior Support Need scores are presented for 10,713 people. In Louisiana, the NOW has a SIS representative sample with results that look very much like the full population SIS results for the Supported Living Arrangements (SLS) waiver in Colorado, the full population NOW waiver in Georgia, and the sample of results from three waivers in Missouri.

However, focusing on individual to individual comparisons using known SIS waiver expenditure predictor variables with three state waivers, the Louisiana NOW population is significantly different from the Colorado and Georgia waivers on ABE (Basic Support Needs) and total medical problems and from Colorado on total behavioral problems. The Colorado and Georgia waivers also significantly differed on total medical problems and total behavioral problems. No other support waiver group differences were significant among Louisiana, Colorado, and Georgia.⁴

4. Findings

This section presents findings resulting from the analyses conducted by HSRI. In the first analysis, HSRI used regression to determine which of the 700 variables worked well together to best predict waiver expenditures. The second analysis compared the SIS Service Needs Index (SNI) score for the state sample with the SIS national norm group. The third analysis examined scores on key predictor variables that emerged from the earlier regression analysis. Finally, we discuss the six waiver assessment and reimbursement levels that emerged from the data.

4.1 Results of Preliminary Regression Analysis

The state, with assistance from HSRI and Dr. Jeffrey J. Walczyk at the Louisiana Technical University, tested a plethora of factors to explain the state’s historical waiver allocations to individuals with developmental disabilities. From the SIS and the supplemental data sources outlined previously, the University tested over 700 variables, but found that most did not have any statistical significance. Their search was influenced by work done to develop the Wyoming DOORS model and the Service Based Rates (SBR) model in South Dakota.

⁴LA had a significantly higher Sum ABE score than GA (mean difference=2.87, SE=.35, p<.001) and higher than CO (mean difference=2.77, SE=.36, p<.001). LA also had a significantly higher 3a Medical Total Score than GA (mean difference=0.67, SE=.14, p<.001), but a significantly lower Medical Score than CO (mean difference=0.86, SE=.14, p<.001). GA had a significantly lower Medical Score than CO as well (mean difference=1.52, SE=.07, p<.001). LA and GA also had significantly lower 3b Behavioral Total Scores than CO (LA: mean difference=1.03, SE=.16, p<.001; GA: mean difference=1.16, SE=.07, p<.001).

Louisiana found after these extensive analyses that the existing system of resource allocation did not produce reasonable allocations based on the needs of participants. The state found the current allocation practices were not defensible and that funding was not adequately tied to support need.

HSRI then provided Louisiana with SIS predictors we had found valuable in our work in other states. These key predictor variables had proven to have face validity as well as a significant role in explaining statistical variance of waiver expenditures. The key variables consisted of the “ABE” score. This score is the composite score of support needs in three specific areas of the SIS: Part A: Home Living Activities; Part B: Community Living Activities; and Part E: Health and Safety Activities. The total SIS 3A Medical score is the intensity of exceptional medical supports that a person needs. The total SIS 3B Behavioral score is the intensity of exceptional behavioral supports that a person needs. Using the ABE scores Louisiana began to make considerable progress in explaining SIS scores and expenditures.

4.2 The Use of Key Variables

This section presents more in-depth information on the sample population in terms of the factors found to be significant in the regression model described earlier. Table 2 presents the basic metrics for the sample group. It is important to note that the SNI appears in the table as a frame of reference, even though it was not a significant predictor.

Table 2: Major SIS Results for Sample

SIS Results	# of People	Minimum	Maximum	Louisiana Average	Std. Dev.	U.S. Norms (averages)
SNI score	443	54	143	92.67	12.50	100.00
ABE Sum of standard scores	443	8	48	28.14	6.09	30.0
Section 3A Medical Support Needs total	443	0	19	1.92	3.17	2.47
Section 3B Behavior Support Needs total	443	0	15	1.90	2.66	4.99

The sample SIS results for these key variables are similar to the results of other similar support waivers in the United States where HSRI has worked, where people live at home with family or relatives or on their own. The composite of SIS ABE scores reached 28.14 for the Louisiana sample, while the national norm group is 30.00 (the 50th percentile for each part of ABE is a scaled score of 10). People in the sample have lower needs (in three key life activity areas) than the average person in the SIS population. By contrast, the Medical Support Needs Scale averages 1.92 and the Behavior Support Needs Scale averages 1.90. These average scores are comparable but lower than the national norms.

The diversity in where people live is also seen in the waiver expenditures associated with each setting. Table 3 shows that each of the community living arrangements has a distinctive cost. While, overall, placements have an average cost of \$59,951, the average waiver expenditures in this sample range from \$42,723 for people living with their parents or relatives to almost double that (\$81,046) for people living independently.

Community Living Arrangements	Average	People	Standard Deviation
Lives independently	\$81,046	196	\$31,239
Parent(s)/relatives	\$42,723	241	\$26,467
Total	\$59,951	437	\$34,447

Louisiana developed a new regression model using the ABE scores and place of residence which explained nearly half of the variability in individual awards – 45.6%⁵. Specifically, 15.6% of the variance is explained by the SIS results of the people using the waiver (including ABE, Section 3a Medical and Section 3b Behavioral Supports), and 30.0% of the variance is explained by the two types of residential setting. The state’s statistical consultant used a method know as stepwise regression with the SIS scores and each individual’s living situation considered by the regression formula. Additional explained variance might be provided by the age of the individual, presence of community safety risk, the circumstances of the individual’s use of day programs, and hours of natural support provided by family, friends, and the community.

A preliminary level system for Louisiana (which may be applied in 2009) initially inclusive of 6 levels was developed based on the LA statewide sample data and extensive examination of the data within different possible HSRI level configurations (i.e., those configured by HSRI for Colorado and Virginia). Based on additional statistical and clinical analysis of the levels, this model was revised to a 7 level system by subsequently splitting the first, most populous level (Level 1) into two levels (Levels 1a and 1b). Either HSRI configuration of SIS results could have been chosen by Louisiana, but the state leadership was drawn to the Virginia System in part because the SIS medical scores were so similar to those in Louisiana and, in part, because the state found it easier to relate to the Virginia specialty levels which captured individuals who appeared to constitute behavioral subgroups. The resulting 2009 Louisiana Resource Allocation Model has enabled the state to develop an understanding of the cost factors to prepare to serve individuals with the reference point of carefully designated NOW acuity levels of support need. These acuity levels may be exceeded in individual cases with justification supplied and approved. Any denial of additional service requested may be appealed.

It is noteworthy that applying either the HSRI configuration for Colorado or Virginia levels resulted in similar level assignments for the Louisiana sample, with 80.6% of individuals going to

⁵ r-squared of .473 (F=99.000, p=.000).

the same acuity levels. These level configurations simply associate an individual with a waiver acuity level and the number of Individual and Family Support/Day Services hours of service and their cost. Table 4 illustrates the distribution of individuals into new levels using both the Virginia and Colorado level systems:

Louisiana Assessment Level	HSRI Configuration VA System Levels	HSRI Configuration CO Reimbursement Levels
1	239	221
2	120	81
3	21	60
4	21	27
5	25	24
6	5	18

Louisiana’s current candidate Level System (adapted from HSRI’s SIS configuration for Virginia) appears at this time to be the best fit for the Louisiana citizens. In this model, 52.7% of the variability is not explained and is unknown. This result is no better or worse than other states where HSRI has worked and where they are wrestling with aligning their waiver reimbursement with individuals’ support needs.

Notably absent from predictor variables are the data elements which the State added to the basic SIS – the LA Plus supplemental risk information and the expanded response options for Sections 1 and 2. The important “to” and “for” information is useful, as is the entire LA Plus information, for people developing person-centered service plans across Louisiana. In this case, however, the original LA Plus risk items were not significant predictive contributors. This result is not entirely surprising. Other states have found it difficult to identify supplemental SIS questions which help predict waiver expenditures, as well. Louisiana added a community safety risk variable to the LA Plus allowing the state to use an item similar to the one used in Rhode Island, Colorado, Oregon and Virginia, which identifies an individual’s danger to others. When community safety risk needs are evident, people with this supervision support need are moved to the 6th level no matter what their other SIS results are. In over 200 SIS supplemental items, which HSRI has examined in various states, the Colorado community safety risk variable is the only one that has reliably predicted waiver expenditures

4.3 Levels of Assessment and Reimbursement

In this section we present the main analytic results -- the seven waiver assessment levels and the seven corresponding levels of waiver reimbursement that have emerged from the SIS representative sample of NOW waiver participants in Louisiana.

The bulleted list below includes descriptions of individuals that characterize each of the seven waiver assessment levels, derived using the 437 people in the sample with both SIS results and waiver expenditures. Levels 1 - 7 sort individuals into common levels of need, from least to most. Intensive inspection of the data allowed HSRI to establish these seven levels, with a reasonable number of people in each assessment level, and a reasonable amount of clinical separation in the average SIS results at each level. The assessment levels are built by grouping people with similar SIS results⁶, and then adjusting the groups as necessary to accommodate the medical and behavioral scores. Addition of the medical and behavioral scores increases the distinction among the levels. In the end, the levels should have symmetry, in that scores on the various SIS dimensions, at any given level, should vary from the adjoining levels. The number of people in the levels should diminish as the needs become more intense.

Two explanations may be helpful in understanding the bullets below. First, an individual was included in a particular level only if all of the identified criteria were met. Second, notation indicating a particular type of score is “not relevant” means that the scores on that factor varied too much to be helpful in defining a distinct level.

- Level 1A contains individuals with significantly below-average support needs relative to other individuals in the state with developmental disabilities, reflected in an ABE score at the 25th percentile or less. Individuals in this group also have few or no behavioral indicators as measured by the SIS Section 3B. The medical indicators are not relevant to this group.
- Level 1B contains individuals with below-average support needs, reflected in an ABE score between the 26th and the 50th percentile. Individuals in this group also have few behavioral indicators as measured by the SIS Section 3B. The medical indicators are not relevant to this group.
- Level 2 includes individuals with average needs, having ABE scores between the 51st and 75th percentile. People in this level also have moderate or fewer behavioral indicators as measured by the SIS Section 3B.. The medical indicators are not relevant.
- Level 3 consists of individuals with above-average support needs, having ABE results that fall into the 76th percentile or higher. This group includes people with moderate or fewer behavioral indicators as measured by the SIS Section 3B. The medical indicators are not relevant to this level.
- Level 4 is comprised of individuals with low-average to slightly above-average support needs but high behavior indicators. The ABE results are in the 33rd to 60th percentile, The behavioral indicators for this group are substantial as measured by the SIS Section 3B. The medical indicators are not relevant.
- Level 5 encompasses individuals with extraordinary medical support needs. The individuals in this group have mainly medical challenges, with several medical indicators as measured by SIS Section 3A. The ABE score and behavioral indicators are not relevant.

⁶ Roughly speaking, structuring the initial levels using quartiles of SIS ABE scores.

- Level 6 covers individuals with extraordinary behavioral support needs. The individuals have gravely significant behavior indicators requiring extensive supports as measured by SIS Section 3B. The ABE score and medical indicators are not relevant. This level is also where all the individuals with community risk safety concerns are supported. Individuals with the community safety risk variable are served in this level no matter what their other SIS results are.

Similar to the assessment levels depiction of increasing amounts of support needs, so too the waiver reimbursement levels capture increasing resource requirements to meet those support needs. In general, individuals in Levels 1A and 1B have a significant and necessary need for waiver services but their need is the least relative to people in the higher levels. One would expect them to need fewer resources, on average, to meet their support needs. By contrast, individuals with extensive behavioral needs – in Level 6 – likely require the largest resource allocation. The process of building the levels from the highest need to the lowest ensures that no individual with serious support needs and/or behavioral or medical indicators is hidden in a lower level. A lower reimbursement tier could lack the financial resources necessary to meet the needs of such individuals. Again, individuals who show a community safety risk and are in danger of injuring other people in a serious way are moved to Level 6 no matter what other SIS results are present. This is to help ensure they receive the necessary hours of support and supervision to avoid injury to others.

Applying the draft decision rules to the sample, HSRI calculated the average budget allocation across all members of each level. Table 5 presents average budget figures in the larger context of average SIS scores for each group with historical waiver annual expenditures. The levels progress from less to more support needs; consequently, it takes increasingly more funds to support the needs at each reimbursement level.

Table 5: SIS Metrics and Waiver Reimbursement Levels					
<i>Levels</i>	<i># of People</i>	<i>SIS Sum of ABE Standard Scores: Avg.</i>	<i>SIS Section 3A Medical Total: Avg.</i>	<i>SIS Section 3B Behavior Total: Avg.</i>	<i>Total FFY07 Average Cost⁷</i>
Level 1A	107	19.96	.063	1.16	\$46,644
Level 1B	132	27.58	.094	1.43	\$58,795
Level 2	124	33.11	1.96	1.77	\$63,082
Level 3	22	37.81	3.62	1.90	\$80,308
Level 4	22	28.32	.84	8.26	\$82,439
Level 5	27	33.56	11.68	1.0	\$67,330
Level 6	9	28.60	.80	12.4	\$108,253
Total: People	443	443	443	443	443
Average		28.16	1.92	1.90	\$59,951

⁷ Data is paid claims from 2006 through 2007 for sample of 443 persons

The metrics displayed in Table 5 offer strong support for the integrity of the seven proposed reimbursement levels. As the levels increase, one or more of the average SIS scores increase and the average waiver expenditure amount increases. The first three waiver reimbursement levels include a majority of the individuals -- 81.9%--which is expected. Also, the levels should be characterized by clinical results that are discernibly different at each level. This too appears to be the case. For example, the average individual in the first waiver reimbursement level has the lowest ABE score of any group, and also has the lowest medical and behavior scores. This person is relatively “easier” to serve than people in other levels, while still being clinically eligible for the waiver. Accordingly, the average waiver payment is \$46,644, substantially less than the average for the entire sample.

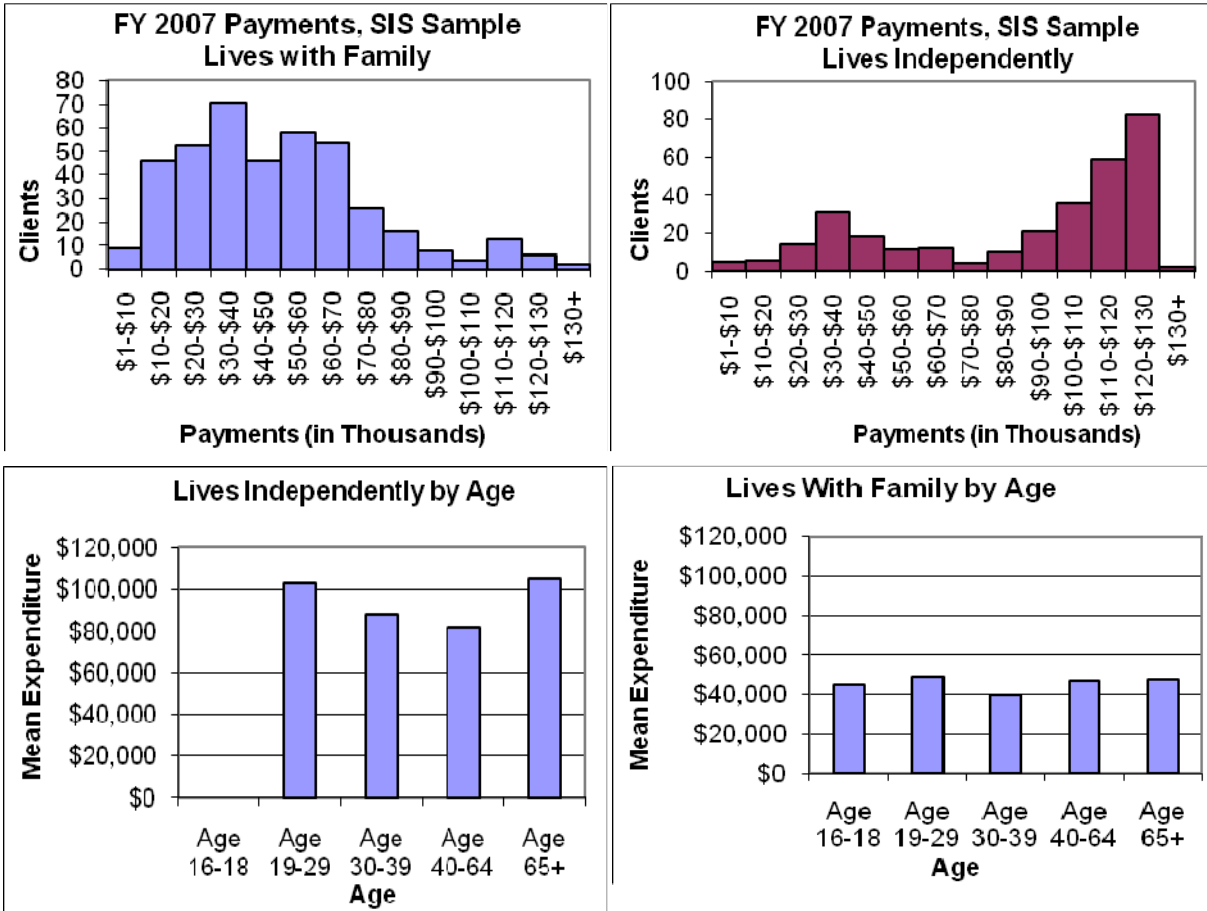
Levels 2 and 3 display a similar pattern. Individuals in the third waiver reimbursement level have slightly more medical and behavior support needs, and a higher average ABE result; their average budget amount is also higher, very close to the average overall. The individuals in Level 2 seem to have average support needs requiring average waiver resource allocations. Level 3 appears to be a “middle” group. It includes individuals with above-average support needs in two of the three SIS areas. The average budget allocation for this group is roughly half way between the figures for the lowest two levels and that for Level 6 -- \$108,253.

Level 4 brings together a mixed group of people. It has average ABE and Medical support needs somewhat lower than Level 3, but a much higher than average Behavior score. The Behavior support needs appear to be driving the average budget amount, slightly higher than for Level 3.

Finally, Levels 5 and 6 capture the individuals with the most extreme medical and behavioral needs. Level 5 includes all the individuals with the highest medical support needs. The medical needs score averages 11.68, much higher than the average medical needs score for the entire sample, 1.92. Understandably, the average budget amount is higher for Level 5 than for the sample overall -- \$67,330 compared to \$59,951. Level 6 metrics follow a similar pattern: the behavioral needs score averages 12.4, contrasting to the 1.90 average behavioral score for the entire sample. The budget amount is at its highest in Level 6, at \$108,253.

In addition to the above analyses, following advice from HSRI and Peter Burns & Associates, Louisiana undertook additional analyses consisting of individual case reviews of 100+ individuals who were existing NOW waiver service recipients and for whom SIS assessments had been completed. Individuals were selected from each level. For each person, a team consisting of clinical and programmatic OCDD staff with experience serving individuals in NOW waiver settings reviewed professional evaluations, assessments, and information as well as the individuals’ plans of care. The review team used this information to determine recommended amounts and types of supports and then made comparisons within and across levels. Review of individuals substantially supported that people within levels had generally comparable levels of support needs and across levels had different needs. That is, clinical review and detailed case inspection appeared to further support similarities within levels and distinctions across levels based on SIS scores.

Louisiana found that the SIS levels provided an excellent foundation to both reimbursement models that are based on the two living arrangements in the NOW waiver, lives with family or lives independently with other clients or alone.



State leadership, assisted by Burns & Associates, discovered that the community living arrangement and age of the NOW waiver participants also provided useful predictive information related to their average annual NOW waiver expenditure. Dollars increase up slightly, particularly to support the needs of frail elderly waiver participants. This result is present both in the SIS sample group and in the entire NOW waiver population. This builds confidence that when the SIS results and subsequently updated assessment levels emerge for the whole NOW waiver population. This suggests that age and the two community living arrangements will continue to work well with the SIS levels in the entire population of the NOW waiver.

These assessment levels were applied to two models resulting from the two living arrangements in the NOW HCBS Waiver. One model was built for people living with family, and the second model was built for people who live independently in the community.

The Louisiana budget is built upon a “model” profile of utilization by level. By using the model utilization, natural supports are brought in as an artifact of the model building process to add further accuracy. The models were informed by actual utilization and ultimately determined based on clinical judgment.

Louisiana plans to use the guidelines produced by the model to assist support coordinators in determining when to ask for

increased documentation before a plan is approved. Not all of the recommended hours have to be used. These guidelines are not intended to constitute ultimate spending caps for services, if more hours are required, additional authorization can be sought for individuals with special circumstances. OCDD plans to review each case individually if there is a request for additional IFS hours, with additional authorization granted when there is a substantiated need. HSRI has shared information about the need to plan for individuals who are outliers and the need for an exceptional care and cost process that has been built into OCDD plans. Clinical review of 100+ cases, referenced above, by clinical staff was used to help further refine outlier profiles. OCDD also plans to initiate a review of all cases with outlier SIS score profiles and authorize additional IFS hours for individuals where this is warranted even when the individual or support coordinator do not initiate the request for review.

In developing and reviewing payment rates, Louisiana used historical waiver expenditure for all of the individuals included in the sample SIS population and examined specific service plans along with a large subset of the waiver used, the hours of natural support provided by community, family, friends, the circumstances of the individual’s use of day programs, and each individual living situation. Importantly, the state found that the historical expenditures for two groups were quite different; individuals living at home with family or living in the community. As a result the level-based budget allocations (LBAs) were built recognizing these differences.

5. Benefits Derived from the Project and Challenges Encountered

The preceding sections of this report have described a successful process to design a prototype LBA system for waiver resource allocation, composed of seven distinct waiver reimbursement levels. Three major findings have emerged. First, the sample of 437 waiver recipients with SIS results and waiver expenditures does appear to be representative of the larger population of waiver participants and provides a useful basis for developing a new resource allocation system for individuals waiting for NOW waiver services. Second, application of the standardized Supports Intensity Scale has yielded greater understanding of the relationship between

Two models result two living arrangement :	
Lives With Family	
Lives Independently	
SIS Level	Base Rate (Units/\$)
Age	± Units/\$
Natural Supports	± Units/\$
Day Activities	- Units/\$
Recommended IFS/ACS	Units/\$

individual support needs and budget expenditures. Careful analysis has identified some key predictive factors in the state – several dimensions of support needs plus community living setting – which are ones that HSRI has found to be important in other similar work. Third, the resulting set of seven reimbursement levels display robust statistical characteristics that recommend them as a foundation for future system-wide development. In short, we conclude that the state office has the capacity to move forward, expanding and refining its existing data sources to construct a viable waiver reimbursement methodology for the NOW waiver recipients as additional SIS data is gathered on the whole population.

At the same time, our work surfaced several challenges which the state office will need to address before continuing to do further work on this prototype system design. The main issues include: using their new community safety risk factor, handling individuals with extraordinary needs, completing the SIS assessments of the covered NOW waiver population, assessing more individuals waiting for services and supports in the registry population, and continued training of case managers to use the SIS results to write better individual support plans.

In every state, HCBS Waivers serve some individuals who have extreme levels of need, and therefore particularly costly to support. In the Louisiana state sample, the average waiver user had an annual cost in FY07 of \$59,951, with the least expensive person costing \$48. The sample also included 49 people who cost more than \$120,000 (ranging from \$121,156 to \$143,454). Incorporating people with extraordinary needs – the “outliers” – into a systematic set of reimbursement levels can have the effect of inflating the average budget allocation for one or more of the levels. More efficient would be to treat such unusual individuals separately, exempting them from the decision rules that assign people to a reimbursement tier. In any reimbursement system, some exceptions will need to be made. This group of individuals might comprise as much as 7% of the waiver population. The Louisiana system proposes to continue to use its CMS-required person centered planning process to review such cases and, as appropriate, make available the necessary hours/dollars to pay for these exceptional or extraordinary support needs.

6. Recent Progress

This report documents that seven waiver reimbursement levels can be built creating a prototype state system based on the information collected from a sample of 437⁸ and a second sample of 802 individuals, using the AAIDD Supports Intensity Scale (SIS), a fiscal analysis of all NOW expenditures by person by service for three fiscal years, and a clinical analysis of sample individual cases. These levels and the decision rules used to build the levels can be expected to change over time, as new data are gathered from additional waiver recipients, as SIS results for existing participants change, or as revised waiver awards are made. Having this first system reimbursement model is a vital step in informing policy decisions and possibly increasing the relationship of funding to individual support needs. It also demonstrates to state officials that thousands of new individuals can join the NOW waiver with assessment informed reimbursement rates that will be stable for a number of years.

⁸ Six individuals who had SIS results did not have waiver expenditures

Despite the moderate explanatory power of the regression model -- explaining 47.6% of variance in recent waiver expenditures using individual SIS scores and residential setting -- the resulting system resource allocation model is an excellent *beginning* on which to build an improved waiver reimbursement level system. Because state DD systems generally seek cost-neutral waiver reimbursement solutions, it is desirable (and, indeed, probably necessary) to have SIS results for a substantial portion of the waiver population. In that way, the impact of any proposed "level" system can be accurately calculated for sub-state jurisdictions, providers, and even for families and individuals.

Any move toward assessment-based reimbursement, even if supported with extensive cost studies and professional rate setting, will result in dislocation for some parties, as waiver financial support is shifted to those most under-resourced and away from those whose needs can be accommodated with less funds. It is important to consider ways to phase-in any new system, reducing the immediate impact on many individuals while building support for the longer-term shifts. The state is committed to carefully review cases and to solve problems presented in individual cases with fairness and speed.

Having this basic understanding of the factors which most influence resource allocation is a crucial step in developing equitable and distinct waiver reimbursement levels. The state office has already taken steps in response to the HSRI project, beginning a multi-year process to develop a valid, rational reimbursement model applicable to the entire waiver population. In particular:

- ✓ Louisiana has begun to gather additional SIS assessments on all new NOW waiver recipients, and has proposed beginning to assess existing NOW recipients in the near future so that the state can use full-population data to create a valid resource allocation model.
- ✓ To improve the consistency and reliability of SIS interviews, the state has used skillful Master Trainers available to monitor and support the trained interviewers and has continued utilization of a sound initial and ongoing certification process with face-to-face monitoring of assessors during pre-certification training and again at regular intervals throughout the year to monitor for drift and implement corrective training when necessary.
- ✓ The state has adopted the Colorado risk-safety question. Age information is also important to the model with the tendency over a participant's lifetime to provide more resources to the aging individual.
- ✓ As part of its waiver service quality improvement initiatives, the planning process encourages exploration of natural supports, community inclusion activities, and day activities including school and employment activities which will in some instances reduce the need for paid supports. Louisiana is encouraging this exploration in connection with stated values and assumptions: that individuals should be included in their communities, that people should have full lives that include day activity options, and that paid staff supports should not be over-utilized when viable natural supports exist. Louisiana has stated that incorporation of these supports is intended to result in people having fuller lives as well as reducing one-on-one paid supports.

- ✓ The state team uses a statistical analyst to manage the dataset, giving them the ability to inspect the data for completeness and accuracy. This includes additional scrutiny of the hours of service, paid claims and waiver expenditures from each of the state's regions.
- ✓ Louisiana has an additional 600 individuals who will soon begin waiver services who have had recent SIS assessments. These persons' SIS assessments, which identify individual support needs, are being used in combination with other components of assessment/discovery to complete planning. While SIS scores and Levels have not yet been utilized to determine guidelines for numbers of IFS hours for new waiver recipients, by conducting SIS assessments and incorporating needs-based information in planning, the state is positioned to begin utilization for resource allocation purposes when implementation is approved.

As an integral part of this full-population enterprise, HSRI and Burns & Associates are continuing to provide advice about sampling, data clean-up, data integrity, staff assessment training, statistical analytical needs, statewide SIS assessment, and resource allocation model building. The state expects to have full data and a new Louisiana Resource Allocation Model implemented by 2010.

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Internet Resources

- Discussion of Key Resource Allocation Policy Issues in Louisiana, January 17, 2008
<http://www.nasdds.org/pdf/LouisianaPolicyIssues-FinalJanuary-17-2008.pdf>

HCBS Community Living Clearinghouse Exchange Collaboration

<http://www.communitylivingta.info/>

Improving Home and Community Based Services Waiver Resource Allocation: Cross State Examination of Efforts to Develop Reimbursement Levels and Individual Budgets Using the Support Intensity Scale at the 24th National Home and Community Based Services Conference, Boston MA October 1, 2008

http://www.nasua.org/hcbs_conference/hcbs_08.html

Level Building Models for DD Waiver-SIS Assessment Based Reimbursement SIS Leadership Forum, Washington DC May 27, 2008

www.hsri.org/docs/SIS_Reimbursement.PPT

National Core Indicators

<http://www.hsri.org/nci/>

Person-Centered Planning and Individual Budgeting Audio Conference – 10-12-2004 and presentations by Wyoming and New Hampshire

<http://www.hcbs.org/moreInfo.php/nb/doc/977>

Sustainable Care Presentation by HSRI Val Bradley

http://www.hsri.org/docs/sustainfuture_OC.ppt

Use of the SIS in evaluation of costs of services for persons with disabilities: experience in the USA, November 12, 2008

www.anffas.net/download.asp/file=J_FORTUNE.pdf

Virginia Tools of Transformation Supports Intensity Scale, DMHRSASA 2008

<http://www.dmhmrzas.virginia.gov/OMR-SIS.htm>

Waiting Lists and Olmstead: Promising Practices: Standard 2 Virginia utilizes the Supports Intensity Scale by Tony Records, TRA Inc. Reinventing Quality Conference, Baltimore, MD, August 10, 2008

<http://www.reinventingquality.org/docs/Tonyrecords-08.pdf>

Wyoming Individual Budget Methodology, a CMS promising practice – 12-18-2007

<http://hcbs.org/files/67/3331/Wyoming--IndividualBudgetsupdate.pdf>

Appendices

Appendix A: Validity Results of the SIS

Appendix B: Applications of the Supports Intensity Scale (SIS) for Informing Resource Allocation

Appendix C: About HSRI and the Sage Resources Author Team

Appendix A: Validity Results of the SIS

- ✓ Face Validity. Developed to measure the construct of supports, the SIS has greater face validity than the ICAP or other traditional assessments. The assessment of support needs using the SIS is done directly by persons with first-hand knowledge of the individual. The SIS directly measures the level of supports needed to enable an individual to participate successfully in the life of his or her community. It necessarily looks at more than skills and deficits, considering motivation, health, etiology, problem behavior, environment and other variables influencing the need for supports. By measuring individual support needs directly, it avoids the error inherent in inferring support needs statistically based on adaptive and maladaptive behavior scales. It is transparent. The SIS assessment of needed supports is more explicit and straightforward than other traditional instruments, and hence is a more open platform for the stakeholder deliberation and decision-making that attends individual resource allocation and payment processes. The SIS uses multi-point scales to rate the type (monitoring – full physical assistance), frequency (none to hourly) and intensity (no time to more than 4 hours in a 24 hour period) of supports needed by an individual to participate in 57 distinct aspects of life in their communities. Behavioral, health and other factors affecting support needs are considered.
- ✓ Content Validity. To assure its content validity, the SIS was constructs were tested by 74 professionals working in the field of developmental disabilities. Using a Q-sort methodology, they narrowed the 130 candidate support indicators to 57, and reduced the 12 domains containing these indicators to seven. This makes the instrument more concise while still asking the right questions. Efforts have been made to see the efficacy of the SIS in predicting extraordinary support needs (N=274)⁹.
- ✓ Internal Consistency. The SIS is internally consistent¹⁰. It has good inter-item reliability (all items or subscales in the measure are measuring the same construct). The internal consistency reliability coefficients for all the SIS subscales, computed using Cronbach's Alpha method¹¹, exceeded .90, which is the level widely accepted as demonstrating an acceptable level of internal consistency in assessment scales. The SIS also has a high degree of inter-rater reliability¹²: the SIS Index (total score) correlation coefficient was .87 (same interviewer, different respondent), .90 (different interviewer, same respondents), and .85 (different interviewer and different respondents) (N=40).
- ✓ Construct and criterion validity. The high correlation of SIS subscale scores with one another shows that the SIS measure has good construct validity, meaning that scores on the SIS are highly correlated with scores on measures of other constructs (for example, adaptive behavior and intelligence) that are believed to be correlated with the construct measured by the SIS. To establish its criterion validity, the SIS measures of support needs were correlated with an independently constructed "criterion measure" - a Likert-type scale of support needs. All correlation coefficients exceeded the .35 minimum level required to demonstrate criterion-related validity¹³. Support for the construct validity of the Supports Intensity Scale based on clinician rankings of need (N=50) was explored in Ontario Canada in 2009.¹⁴

⁹ Wehmeyer, M., Chapman, T. E., Little, T.D., Thompson, J. R., Shalock, R., and Tassé, M. J. Efficacy of the Supports Intensity Scale (SIS) to Predict Extraordinary Support Needs. *American Journal of Intellectual and Developmental Disabilities*, 114(1), 3-14.

¹⁰ Tassé, M. J. Thompson, J. R. & McLaughlin, C. (2006). *Inter-interviewer and inter-respondent concordance on the Supports Intensity Scale*. Poster presentation at the International Summit for the Alliance on Social Inclusion. May 3-5. Montreal, Canada.

¹¹ Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

¹² Thompson, J. (Feb 21, 2006). SIS reliability: preliminary findings and procedures. Email from J. Thompson to J. Ashbaugh.

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¹⁴ Weiss, J. A., Lunskey, Y., Tassé, M. J., & Durbin, J. (2009). Support for the construct validity of the Supports Intensity Scale based on clinician rankings of need. *Research in Developmental Disabilities*. 30, 933-941.

Appendix B



INFORMATION BRIEF

Applications of the Supports Intensity Scale (SIS) for Informing Resource Allocation

June 8, 2009

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While the SIS has only been available for five years, it has stirred considerable interest in the United States and other countries:

- In Europe, three European Union countries are considering using the SIS for resource allocation purposes (The Netherlands, Belgium and Italy). The Netherlands and Belgium together have 14,000 completed SIS interviews. Italy has begun work on resource allocation in a northern province using the SIS. The tool has been translated into thirteen languages. Other countries as far spread as Iceland, Ireland and Taiwan have recently been visited by SIS authors.
- In Canada, five provinces are exploring the SIS (Alberta, Ontario, British Columbia, Manitoba, Ontario, and Saskatchewan). Ontario has taken the lead in 2008 by building the SIS into their application for services, and now has at least 700 completed SIS interviews. Alberta has a work plan for using the SIS for resource allocation over the next three years after changing their contracting procedures in 2007 and finishing a successful pilot with the SIS in 2008.
- In the US, fourteen states, local jurisdictions or organizations utilize the SIS for assessment and/or resource allocation purposes. As of January 2009, SIS Online had acquired 90,000 SIS administrations.

Colorado, Georgia, Louisiana, Missouri, Oklahoma, Oregon, Pennsylvania, Utah, Virginia, and Washington have selected the SIS as their baseline assessment tool. Nebraska is assessing the utility of employing the SIS. North Carolina is using the SIS for people self directing in their new support waiver. Several states have chosen to supplement the SIS:

- Utah¹⁵, Oregon, Rhode Island, Virginia, and Louisiana have designed supplemental questions to the SIS to capture additional information.

¹⁵ Information about the Utah supplement and the state's implementation of SIS is available at: hsdspd.state.ut.us/sis.htm

- Washington also has added a limited number of additional items to the SIS. Washington spent 3.5 million dollars making the SIS an integral part of their standard agency dataset and application for services. Interest also has been expressed by state mental health agencies in employing the SIS as a supplementary assessment tool for assessing the support needs of people with serious mental illnesses.
- Pennsylvania is supplementing the SIS with information that is presently captured through its Prioritization of Urgency of Need for Services (PUNS) waiting list profiling tool. However, Pennsylvania does not have active plans to employ SIS for resource allocation purposes.
- In North Carolina, Piedmont Behavioral Healthcare uses the SIS as its baseline assessment tool and to support person-centered planning in its HCBS b/c five county waiver. The state is requiring the use of the SIS for people who self direct in their 2008 support waiver.

By and large, the early state adopters of the SIS are focusing on applying it for its principal intended purpose – i.e., supporting the individual planning process. However, other applications also are emerging, including funding.

Funding-Related Applications of the SIS¹⁶

Not surprisingly, only recently have funding-related applications of the SIS emerged. Georgia and Washington State are the furthest along in employing the SIS along these lines:

- **Florida** is using the SIS in a pilot to compare results to their locally designed Florida QSI instrument.
- **Georgia** is redesigning its two HCBS waivers for persons with mental retardation and began a new comprehensive and support waiver in November 2008 with CMS approval. Georgia has the oldest comprehensive community waiver in the United States. Now there will be a new comprehensive and a new supports waiver. Both waivers will feature service plan authorization limits. These limits will be based in part on each individual's historical spending and in part on an amount figured by applying a DOORS-like methodology that uses SIS, results to calculate an individual budget amount. This methodology employed statistical methods to find a best statistical fit between SIS data elements and current expenditures. The Georgia design is intended to begin the process of shifting individual resource allocations to rely increasingly on assessed need and other situational factors as prime determinates. The Georgia approach is a resource allocation approach. Service rates will still be based on a state determined fee-schedule. In part, the Georgia approach also is driven by the state's objective of incorporating self-direction features into its waivers. Georgia has over 10,500 new individual budgets for participants in the two new waivers in play as 2009 began.
- **Washington** has developed a payment model that incorporates selected elements of the SIS and other consumer-related factors into a unified methodology for determining payments for people who receive community residential services (either in the form of group home or supported living

¹⁶ The AAIDD White Paper on Resource Allocation by Fortune, et al. at <http://www.siswebsite.org/cs/SISwhitepaper/Resourceallocation> is an excellent resource.

services). The design of this payment model is very sophisticated and entailed calibrating the model to the results of a concurrent independent survey of experts to estimate service hours needed by level of support. This model operates in conjunction with seven broad levels of residential support intensity but generates individual payment amounts. Development of this model began in 2005; the model is still being refined but was implemented statewide in 2007. It has continued to be refined in 2008. It is important to point out that the SIS and other consumer-related factors drive the “direct supports” portion of the residential rate. Transportation and other administrative costs are figured separately. Washington’s approach has many compelling features and was based on an especially well-conceived research design. The state also has completed work to develop payment models for employment and adult community access services that also will selectively integrate SIS and other information about individuals into the models.

- **Colorado** is using the SIS to form levels for its Comprehensive HCBS-DD waiver in January 2009 and is working on individual caps for its SLS waiver for July 2009. Historically Colorado led the way in early SIS informed resource allocation. The Resource Exchange in Colorado Springs was one of the first organizations nationwide to adopt the SIS. By report, The Resource Exchange in 2006 already employed the SIS in making resource authorization decisions based on support needs. Colorado Springs was the first city to adopt the SIS for use. Colorado rolled out SIS informed resource allocation models for comprehensive services in January 2009 and for support services in July 2009. Colorado was the first state to field a support waiver (SLS waiver).
- **Oregon** is using the SIS results for reimbursement of residential adult services on their comprehensive waiver.
- **Utah** officials report that they also may employ the SIS to revamp the state’s present resource allocation scheme. Utah developed one of the first supplemental sets of SIS questions and has used it for a number of years.
- Alta Regional Center in **California** (which serves about 13,000 children and adults with developmental disabilities) has started work on developing SIS-based individual resource allocations. Harbor Regional Center is also piloting the SIS and studying the use of the SIS to inform planning and explore reimbursement allocation potential.
- The Macomb-Oakland Regional Center and The Authority in **Michigan** is considering developing an individual resource allocation system based on the SIS. They serve one fourth of the people with intellectual disabilities in Michigan.
- **Virginia** has completed a 521 person pilot using the SIS and is exploring the SIS statewide.
- **Missouri** has completed 4,000 SIS assessments and anticipates a statewide SIS informed resource allocation model perhaps as early as 2010 with individual budgets for their three waivers and over 8,000 waiver participants.
- **Maryland** is using the SIS to help people move from an institutional setting to the community.
- **New Jersey** is exploring the use of the SIS for resource allocation.

- **Oklahoma** began SIS assessments on their multiple waiver populations in 2008.
- **Rhode Island** began a 500 person pilot study of the SIS in 2008 with everyone they serve and is exploring resource allocation applications for people with intellectual disabilities as they prepare to merge into a global waiver with 11 Rhode Island waivers.

Other states, for example, Hawaii, Illinois, Massachusetts, Nebraska, New Jersey, Oklahoma, Ohio, and Texas have also have expressed interest in using the SIS along these lines.

Appendix C

About HSRI and the Author Team

The Human Services Research Institute (HSRI) was founded in 1976 and is a non-profit, tax-exempt corporation with offices in Cambridge, Massachusetts and Portland, Oregon. For over 30 years, HSRI has assisted states and the federal government to enhance services and supports to improve the lives of vulnerable citizens, such as those with developmental disabilities or mental illness, or low income families. HSRI has provided consultation in such areas as strategic planning and organizational change, funding, systems integration, quality management and assurance, program evaluation, evidence-based practices, family support, self-advocacy, self-determination, and workforce development. For more information, visit: www.hsri.org. This report was prepared by the following staff:

John Agosta, Ph.D., is an HSRI Vice President. He completed his doctorate in Rehabilitation Research at the University of Oregon, specializing in research methods and community supports for people with disabilities. Employed at HSRI since 1983, he has been involved with nearly all efforts at HSRI surrounding family support issues, facilitated development of strategic plans, conducted analyses of state systems for people with developmental disabilities (e.g., Arkansas, Florida, Illinois, Idaho, Oregon, Hawaii, and Texas), and has studied specific facets of the field (e.g., trends in supported employment, managed care, self-determination). He is a nationally recognized expert in topic areas such as family support, self-directed supports and community systems regarding policies that affect individuals with developmental disabilities. He leads the project at HSRI called Sage Resources Person Centered Funding. This effort concentrates on assessment informed person centered adult waiver reimbursement techniques.

Karen Auerbach, Ph.D., Karen is currently working as a Statistician and Senior Research Analyst on several developmental disabilities projects at HSRI, primarily the National Core Indicators project and the Sage Resources Person Centered Funding project. Over the past twelve years she has developed her research, analytic, and data management skills on education and substance use research projects at the Harvard Graduate School of Education, Boston College, the Education Development Center in Newton, MA, and at Pennsylvania State University. She has a Masters in Developmental and Educational Psychology from Boston College, and a Masters and Ph.D. in Human Development and Family Studies with a minor in Statistics from Penn State. She has worked on reimbursement in British Columbia, Colorado, Oregon, Rhode Island, and Virginia.

Jon Fortune, Ed.D., is a Senior Policy Specialist at HSRI. Dr. Fortune has solid research skills as well as hands on experience as a state administrator. In 1990, he joined the Wyoming Department of Health Developmental Disabilities Division where he has held senior management positions. He was instrumental in designing and implementing Wyoming's system of community services for people with developmental disabilities and acquired brain injury, including developing Medicaid HCBS waivers for both populations. During his tenure in Wyoming, the state substantially reduced the number of people served in its large state facility and built an especially strong system of quality community supports. Dr. Fortune was also the chief architect of the precedent-setting Wyoming DOORS model through which people with

disabilities are assigned individual budgets based on their assessed needs and other factors. Prior to joining the Wyoming Department of Health, Dr. Fortune managed a community agency in Wyoming and held other positions in Colorado and Illinois and has worked on financial architecture in DD jurisdiction wide services systems in Alberta Canada, Colorado, Florida, Louisiana, Michigan, Missouri, North Carolina, Oregon, Rhode Island, and Virginia.

Madeleine Kimmich, D.S.W. As Senior Research Fellow in HSRI's Oregon office, Madeleine Kimmich currently co-directs the office and leads several projects in child welfare and in developmental disabilities. Dr. Kimmich has been engaged in evaluation research and policy analysis of human services for over three decades. She has assisted decision-makers at federal, state, and local levels to work collaboratively with consumers and families to improve the effectiveness of programs targeted to low-income children and families, adolescents, the elderly, and people with disabilities. Her work in systems reform, outcome measurement and quality assurance has included projects throughout the US.

Dr. Kimmich is currently conducting an analysis of Oregon's public sector efforts to address substance abuse, with particular attention to service gaps, expenditures and quality management at state and county levels. She also directs a twelve-year evaluation of Ohio's Title IV-E Waiver Demonstration Project, which examines the impact of flexible but limited federal funds on local child welfare reform initiatives. She currently participates on HSRI's team to develop HCBS waiver reimbursement methodologies, and has contributed to the development of performance indicators for consumer-directed service approaches in developmental disabilities. As co-editor of *Quality enhancement in developmental disabilities: Challenges and opportunities in a changing world* (2002) and as director of numerous state-level studies on quality management, Dr. Kimmich has maintained an active presence in the quality assurance and systems improvement arena, to increase efficiency and equity of service and support systems for all vulnerable populations.

Kerri Melda, M.S., is a Policy Associate at HSRI. She holds a Master's Degree in Public Policy and Administration (University of Oregon) and a Bachelor's Degree in Special Education (Indiana University). Ms. Melda has been employed with HSRI since 1992, and her primary responsibilities include project leadership, policy and statistical analyses, program evaluation, and provision of training and technical assistance. Specifically, her work focuses on projects related to family support policy and practice, person-centered funding, performance gap analyses, and studies assessing the impact of change on service recipients. Ms. Melda currently serves as Director of HSRI's Juntos Podemos (Together We Can) Family Center, connecting Latino families who have children with disabilities to community services and supports. She oversees the family support related activities of the National Core Indicators project, which analyzes family support satisfaction data across 30 states. She recently completed a study of the impact of service reductions on Florida's service population, and has worked on reimbursement projects in Colorado, Rhode Island, and Virginia.

Drew Smith, B.A., is a Policy Assistant at HSRI. He is a graduate of Portland State University in Business Administration, and currently works on several HSRI projects tied to: developing person-centered funding strategies, assessing the impacts of service changes and reductions, and supporting self-advocacy. He has worked on waiver reimbursement projects in Colorado, Florida, Oregon, Rhode Island, and Virginia.

Sarah Taub, M.M.H.S., is a Senior Policy Specialist who is primarily responsible for managing the National Core Indicators (NCI), an effort that began in 1997 to develop indicators and benchmarks of performance across state developmental disabilities service systems. She also provides technical assistance under the CMS National Quality Enterprise and works on various projects related to quality management system development, resource allocation models, and program evaluation. She holds a Masters Degree from the Heller School at Brandeis University. Sarah Taub has led the effort in the development of the Georgia SIS informed individual resource allocation model.

Summary Qualifications of Peter Burns of Burns & Associates, Inc.

In addition to these HSRI staff, we will also be joined by Peter Burns of Peter Burns & Associates. (Go to: <http://www.burnshealthpolicy.com>) Burns & Associates, Inc. (B&A) is a health care consulting firm that specializes in assisting state governments and private entities develop customized, innovative approaches to the financing and delivery of health care and human services. Our specialties include strategic planning, financial model development, evaluation and audit, rate setting, and support of operations of health care programs. B&A's principals have been involved in the full cycle of public programs in 18 states from conceptualization, financing, implementation, and subsequent evaluation.

Peter Burns, MBA, B&A's President, has over 25 years of experience in public policy, with specialties in the areas of finance, forecasting, administration, operations, strategic planning and legislation. During his public policy career, Mr. Burns has been a senior advisor for three governors and has served as a state budget director, the director of a statewide in-house management consulting office, the chief research economist for a legislative body, and a tax manager for a FORTUNE 500 corporation. Mr. Burns has worked as a consultant since 1998. Mr. Burns' expertise and experience extends across a wide range of state programs at various levels, from conceptualization and policy development to rate-setting, operations, evaluation, budgeting and accounting. Mr. Burns has been supporting state Medicaid agencies and managing both short-term and long-term projects for over 12 years. A primary focus in the last five years has been supporting state agencies in the design, operations, and evaluation of their home- and community-based service programs. Mr. Burns has focused on the operations of HCBS programs in the last six years. For instance, he has led the efforts on behalf of the Arizona Division of Developmental Disabilities (DDD) in setting rates for all of its home and community-based over the last five years, including periodically updating the rate. Likewise, he is currently involved in numerous other states (e.g., RI, NC, OR, LA) to complete similar work.