

# **Assessment Instruments and Community Services Rate Determination: Review and Analysis**

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Prepared for:

**Division for Developmental Disabilities  
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# Executive Summary

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## Description of Project

The Colorado Division for Developmental Disabilities engaged the Human Services Research Institute (HSRI) to review and analyze assessment tools that the state might employ to establish tiered funding rates that are tied to consumer support needs for residential and day services furnished through the HCB-DD (Comprehensive) Waiver. HSRI also met with stakeholders to obtain their views regarding the selection of an assessment tool.

## Review and Analysis of Assessment Tools

Altogether, HSRI identified 10 tools that states apply to funding for developmental disabilities services. These tools are a mixture of “national tools” and tools that individual states have developed on their own.

The HSRI review and analysis focused primarily on three tools: (a) the Inventory for Client and Agency Planning (ICAP); (b) the AAMR Supports Intensity Scale (SIS); and, (c) the Colorado Assessment Tool (CAT), which was being finalized during the period of the project. The review focused on the validity and reliability of each tool, the tool’s suitability for Colorado’s intended uses, and the costs/challenges of implementing the tool. The SIS and the CAT emerged as the most apt candidate tools.

## Stakeholder Views

HSRI staff met with a wide range of stakeholders. No broad support expressed was expressed for the selection of any particular tool, although some stakeholders urged that Colorado select the SIS. However, stakeholders expressed many views that merit serious consideration regarding the selection of a tool (for example, desirable characteristics of a tool) and, more importantly, its application in the Colorado developmental disabilities service delivery system.

## Tool Selection

**All other things being equal, HSRI believes that Colorado would be best served by selecting the Supports Intensity Scale.** For several reasons, HSRI found that the SIS exhibits better properties than the CAT in assessing individual support needs. In the judgment of HSRI, the SIS yields more reliable and valid information about individual support needs and, thereby, a better foundation for linking funding to such needs. The SIS has the potential added advantage of providing relevant information to support individual service plan development. The SIS already has been adopted by five states even though the tool only became available less than two years ago.

However, the CAT – despite its shortcomings – could be employed for the narrow purpose of establishing funding tiers. HSRI determined that implementing and maintaining the SIS would entail greater time, effort and expense than the CAT. Either tool could be used to fashion funding authorization tiers for the SLS waiver program. However, each tool would have to be supplemented/modified for this purpose.

# Introduction

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## Project Background

As a result of follow up to its 2004 review of the Colorado HCBS-DD Waiver (Comprehensive Services Waiver), the federal Centers for Medicare and Medicaid Services (CMS) has required that the state implement a uniform rate-setting methodology. In July 2006, interim, standard payment rates will be implemented for waiver services. These interim rates will enable the migration of service billings/ payments to the state's Medicaid Management Information System (MMIS), an important first step in state's meeting CMS requirements.

Going forward, Colorado recognizes that it needs to design and implement a satisfactory and sustainable rate-setting methodology. At best, the interim rates are a stop-gap. The state has decided that the new rate-setting methodology should incorporate the results of the administration of a standardized assessment tool so that payment rates reflect the intensity of each waiver participant's support needs and/or "difficulty of care." In the near term, Colorado expects to focus on linking payment rates for Comprehensive Services Waiver residential and day services to assessment results. Downstream assessment results also may be factored into payments for other services and/or Supported Living Services (SLS) waiver funding authorizations.

The decision to tie payments to assessed participant support needs recognizes that some waiver participants require greater support (and, hence, higher funding) due to behavioral, medical, adaptive behavior problems as well as other challenges. If flat unit rates were paid for services and proved to be insufficient to support individuals with greater challenges, providers would be unable to serve such individuals or such individuals would not receive the intensity and type of support that they require. As a consequence, Colorado believes that it is necessary and appropriate to adopt a uniform rate structure for HCB-DD waiver residential and day services that factors in an assessment of each waiver participant's characteristics and support needs that affect the costs of supporting the person, principally with respect to the amount of direct support staffing that each individual might require. In Colorado, additional services such as behavioral and nursing services that waiver participants may require are separately authorized and paid.

CMS recognizes that it may be appropriate for states to vary payment rates in order to address "difficulty of care" factors. The CMS November 2005 HCBS waiver technical guidance states that "Rates may incorporate 'difficulty of care' factors to take into account the level of provider effort associated with serving individuals who have differing support needs, rates may also include geographic adjustment factors to reflect differences in the costs of providing services in different parts of a state."<sup>1</sup>

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<sup>1</sup> Centers for Medicare & Medicaid Services (2005). *Application for a §1915(c) Home and Community-Based Waiver [Version 3.3]: Instructions, Technical Guide, and Review Criteria*. Available at: [hcb.org/files/82/4063/Instructions\\_Technical\\_Guide\\_and\\_Review\\_Criteria\\_-\\_November\\_2005.pdf](http://hcb.org/files/82/4063/Instructions_Technical_Guide_and_Review_Criteria_-_November_2005.pdf)

Many of the states that border Colorado already have linked funding for community services to assessment results.

Heretofore, Colorado has not mandated the use of a standard assessment tool for community developmental disabilities services. A limited number of Community Centered Boards (CCBs) have employed a tool (the Comprehensive Services Assessment Tool (C-SAT)) developed by the Imagine! CCB to guide resource allocations and rate determination for Comprehensive (HCB-DD) waiver services. With DDD sponsorship and financial assistance, a new tool (the Colorado Assessment Tool) is under development. One CCB (The Resource Exchange in Colorado Springs) has employed the AAMR Supports Intensity Scale (SIS) assessment tool to support decision-making concerning waiver funding. In order to tie payment rates to consumer characteristics and individual support needs that affect costs, Colorado's first step is to select and implement a statewide standard assessment instrument.

## **Project Scope**

The Division for Developmental Disabilities (DDD), Colorado Department of Human Services, engaged the Human Services Research Institute (HSRI) to research and analyze assessment instruments that potentially could be used to construct statewide tiered rates for HCB-DD residential and day services that are graduated to take into account individual consumer characteristics and service needs that affect provider costs.

DDD instructed HSRI to review and analyze the following assessment tools:

- Colorado Assessment Tool (CAT) and the predecessor Comprehensive Services Assessment Tool (C-SAT) (Developed by Imagine!)
- Inventory for Client and Agency Planning (ICAP)
- Supports Intensity Scale (SIS)
- Such other tools that might merit consideration.

HSRI also was instructed to research the following topics with respect to each assessment tool:

- The reliability and validity of the tool for its intended purpose;
- The ease with which the tool can be administered;
- Whether the tool is appropriate (or could be modified) for use with adults, children, or both;
- Costs to acquire the tool for use statewide as well as any on-going costs;
- The training needed to assure proper administration of the tool; and,
- Experiences of other states in using assessment tools in their rate setting system

The results of this research and analysis are presented in the ***Assessment Tools*** section of this report. As will be seen, HSRI examined several tools over and above those specified by DDD.

HSRI also was instructed to solicit the views of Colorado stakeholders about their concerns regarding the use of an assessment tool in setting rates, their ideas for mitigating potential problems, and what tool(s) if any they believe might be best

suiting to this purpose. To this end, the HSRI project team conducted a three-day visit to Colorado June 5-7, 2006. During this site visit, HSRI met with:

- The Developmental Disabilities Policy Advisory Committee;
- Self-advocates;
- CCB representatives;
- Service agency provider representatives;
- Representatives of the Arc of Colorado and local Arc chapters;
- Imagine! officials and the contractor responsible for the design of the CAT; and,
- DDD officials

HSRI also conducted follow-up telephone interviews with selected stakeholders. HSRI expresses its appreciation for the willingness of all stakeholders to candidly share their views about this important albeit complex topic. The results of these interviews are reported in the **Stakeholder Views** section of this report.

Finally, HSRI was instructed to prepare a final report. In the final report, HSRI was asked to pay particular attention to the following topics:

- The pros and cons of each tool for meeting Colorado's needs, including any factors that should be considered for supplementing the tool to increase its utility for setting rates. DDD officials noted that the most urgent application of a tool would be to identify categories of service needs that can be tied to rate tiers for residential and day services as defined in the HCB-DD waiver. With respect to day services, DDD also noted that the setting in which day services are furnished (group or individual) is also believed to be a primary factor in the rate for that service.
- DDD also identified the potential that such a tool might be used to identify tiers for the maximum amount of funding that is authorized under the SLS waiver and/or to identify authorized amounts that could be consumer directed for personal assistance services via CDAS (Consumer Directed Attendant Services). As a consequence, HSRI examined tools for their potential suitability for these purposes.
- The extent to which each tool (or portion/sub-domain of each tool) could effectively be used to group individual levels of needs so that they could be translated into rate levels/tiers for specific service. For example, would the total tool score be used or would some sub-set of the score prove to be more applicable to one service or another? That is, might a different process be used for residential than for day services (e.g., total score for both, or different sub-sets of the tools for each of those services)?
- Relevant information from other states about their experiences in using any of the identified tools as part of a rate-setting methodology, including:
  - What if any modifications/additional factors were included when applying the tool for rate setting purposes;
  - The state's approach for establishing initial tiers and associated rates for example, whether a sample (how large, how selected, etc.) of individuals were used or the entire current population was considered in establishing tiers and rates; and,
  - What method and frequency states used to adjust rates.

HSRI also was invited to identify other relevant information that the Colorado should take into account when selecting an assessment tool.

## Organization of the Report

The final report has four major sections:

- The next section (***Using Assessment Tools to Determine Payment Rates and Funding Allocations***) briefly discusses the role that assessment results can play in developmental disabilities community services rate setting and resource allocation.
- In the following section (***Assessment Tools***), the results of the HSRI review and analysis of various tools are presented.
- The next section (***Stakeholder Views***) reports what we learned from our meetings with Colorado stakeholders.
- The final section (***Selecting a Tool***) discusses the pros and cons of Colorado's selecting one of the two assessment tools (the SIS and the CAT) that HSRI believes are the strongest candidates for meeting Colorado's needs. It also offers some observations about related topics that Colorado might consider going forward.

Separately, we have transmitted to DDD officials many of the source documents that are referenced in this report.

## HSRI Project Team

This project was conducted by Jon Fortune, an HSRI Project Director, and Gary Smith, an HSRI Senior Project Director. Mr. Fortune joined HSRI in February 2006. Prior to joining HSRI, he was a senior administrator for the Wyoming Division of Developmental Disabilities. Mr. Fortune designed and implemented the Wyoming DOORS model which employs assessment data to generate individualized budget allocations for Wyoming waiver participants. He also is intimately familiar with various assessment tools, including their strengths and weaknesses. Mr. Smith is familiar with efforts in other states to build assessment-driven payment systems. He also is intimately familiar with federal Medicaid requirements.

# **Using Assessment Tools to Determine Payment Rates and Funding Allocations**

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There is wide acceptance for the proposition that payments for community developmental disabilities services should be linked to individual support needs. People who have more intensive support needs require more direct assistance to function successfully in the community. However obvious this proposition, states face the challenge of defining the specific relationship between support needs and payments. This section of the report briefly discusses the evolution of and the present state of the art in connecting payments to assessed individual support needs.

## **Historical Backdrop**

As a general matter, interest in tying payments to assessed individual support needs stems from the changing scope, nature and financing of community developmental disabilities services. In the past, many state community developmental disabilities service systems used "grant-in-aid" funding rather than "fee-for-service" payment structures. Grant-in-aid funding usually featured the use of "sum-certain" contracting with provider agencies wherein the provider agreed to serve a minimum number of individuals and furnish a minimum volume of one or more types of services. So long as the provider agency met the contract minimums, it was paid the full amount of the contract. Often, the amount of the contract was based on negotiations around a budget submitted by the provider and the comparison of the budget to past expenditures. Community services typically were financed principally with state-only dollars and/or federal Title XX (now Social Services Block Grant) funds. Where states employed fee-for-service payment methods (as was the case in Colorado prior to the 1983 launch of the HCBS waiver), total payments were usually subject to contractual maximums. As a general matter, states did not differentiate payments/funding to reflect differences in individual support needs.

The rapid paced expansion of community services coupled with the downsizing and closure of state institutions fundamentally altered the scope and nature of community services. Community service delivery systems were tasked with supporting individuals who had more intensive support needs and diversifying the types of services furnished in the community. This led to many states to start differentiating payments based on support needs in a variety of ways. For example, Colorado created different classifications of group homes (moderate and intensive) based on broadly defined differences in support needs of individuals, in part to accommodate the ongoing downsizing and closure of the state Regional Centers.

Concurrently, states also shifted more and more of the funding for community services to Medicaid, principally through the HCBS waiver program. This shift had two effects. The first was to cause many states to adopt standardized fee-for-service payment methods and schedules and drop the practice of negotiating rates provider-by-provider. The second was to prompt states to shed the practice of seeking to control spending through provider or regional agency funding caps. Such caps are

inconsistent with the fundamental nature of the Medicaid program. Many states adopted standardized, statewide fee-for-service payments when they launched their HCBS waiver programs. Standardizing payments is especially important in promoting consumer choice of provider and funding portability. However, some states have attempted to cling to their pre-Medicaid legacy payment systems by converting negotiated, provider-by-provider contracts to fees, often with the result that payments for similar services vary considerably provider-by-provider.

State efforts to more systematically tie payments to consumer assessment results date from approximately the early 1990s. Since then, a growing number of states have linked payments to assessment results. Activity in this arena is stepping up across the states, in large part due to the need for states to modernize their payment/funding systems and comply with fundamental Medicaid requirements. More and more states now recognize that it is important to operate standardized payment/funding systems and the necessity of linking dollars to assessed needs. Moreover, CMS has required several states where local developmental disabilities authorities have been tasked with the responsibility to set payment rates, authorize funding, and contract for services to revamp their systems to adopt uniform statewide policies and procedures to ensure the comparability of services in all parts of a state.<sup>2</sup>

## **Linking Payments/Funding to Assessed Individual Needs**

There are two main threads in how states are linking payments/funding to assessed individual needs for community developmental disabilities services:

### **Resource Allocation Models**

“Resource allocation models” are designed to establish an overall limit on the amount of funding that may be authorized in a person’s waiver service plan. These models prospectively determine the total amount of funds that are available and are designed to promote flexibility and individual choice in the selection of services and supports to meet the needs of individuals. Such models are constructed by tying assessment data to “usual and customary” expenditure/service consumption patterns of persons who have similar characteristics/support needs. These models vary in their sophistication. For example, the Wyoming DOORS model generates individual resource allocations by the application of relatively advanced statistical methods to identify consumer characteristics (as measured by the Individual Client and Agency Profile (ICAP) assessment tool) and other factors (e.g., living arrangement) that are predictive of expenditures. New Mexico has established Annual Resource Allocations (ARAs) that are tied to age and certain consumer characteristics. The New Mexico ARAs are defined as tiers rather than by individual, as is the case in Wyoming.

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<sup>2</sup> For example, Ohio and Pennsylvania are engaged in major reforms of the operation of their HCBS waivers for people with developmental disabilities, especially with respect to the roles that county agencies/authorities have historically played in determining payment rates and contracting with service providers.

Resource allocation models operate at the service plan level. Within the amount of an individual's resource allocation, service plans are developed by selecting services and determining the amount of each service that a person receives during the individual service plan development process. Usually, these models operate in tandem with a standard unit-rate fee schedule. Resource allocation models are commanding more attention among states, principally as a means of tying dollars to individuals and supporting more customized service design. Resource allocation models also provide a framework for creating individual budgets under more full-featured approaches to self-direction of HCBS waiver services that permit individuals and families to shift dollars within the individual budget among different types of services.<sup>3</sup>

In the present Colorado context, the development of a resource allocation model likely has more immediate relevance to the SLS waiver than the Comprehensive Waiver. We will return to this topic in the final section of the report.

### **Service-Based Rate Models**

Service-based rate models vary the amount of the provider payment rate for specific types of services based on assessed individual needs. Such models typically take one of two forms. One is to scale provider rates to reflect differences in individual support needs. This frequently takes the form of creating "tiered-rates" that are linked to assessed level of need (as in Tennessee where payments are tied to six levels of need; the Tennessee approach is discussed in more detail in the next section of the report). However, Washington State recently has designed a more sophisticated approach to determine individually-variable residential payment rates based on assessment results and other factors. The development of service-based rates is discussed in more detail below. Service-based rates are somewhat analogous to case-mix reimbursement schemes that are used in conjunction with the delivery of nursing facility services.

The second way to link payments to assessment results to payments is to employ assessment results to determine the volume of services that may be authorized on a person's behalf. This approach is commonly used to authorize the number of hours of personal assistance services that are furnished to an individual. For example, Washington State operates a "CARES" system that links assessment results to the authorization of personal assistance services across all eligible Medicaid beneficiaries. Washington State also has developed a tool of this type to authorize respite care hours for its HCBS waiver programs for people with developmental disabilities.

### **Service-Based Rate Model Design**

Clearly, the near-term interest in Colorado is the development of service-based rates that reflect differences in assessed consumer support needs. In this regard, the most common practice is to build service-based rate models. Service-based rate models are usually developed in the following fashion:

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<sup>3</sup> For example, Minnesota establishes an individual budget for persons who elect to direct their own waiver services and supports based on a statistically-derived formula that takes into account support needs and other factors.

- Costs are classified into four major groupings: (a) direct services; (b) program management; (c) other operating expenses; and, (d) administration/overhead;
- Payments for the direct services component are structured to compensate service providers to maintain a pre-defined staffing level and/or staffing schedule. In turn, necessary staffing levels are linked to consumer assessment results. Once the appropriate staffing level is specified, it is monetized by specifying wage rates, fringe benefit and related costs;
- Program management costs (e.g., the costs of supervisory personnel) are added on, usually in the form of ratio to direct service costs;
- Operating expenses are added on, usually based on a cost study of provider usual and customary costs for the type of service; and,
- Finally, an allowance for administration/overhead costs is added, usually as a fixed percentage of total "direct" costs.

This basic rate building methodology has been most often employed to build rates for "comprehensive-type" services. Typically, rates are varied to take into account the size of residential setting (how many people are supported at a site) and may also be varied to take into account geographic differences in wage rates and other operating costs. The usual outcome of building a service rate model is a grid where payments are linked to assessed level of need, facility size, and, in some cases, geography. Sometimes, states develop multiple-grids, especially for residential services (creating distinct grids for group home and supported living services). Day program rates are structured similarly, especially for "group" service delivery models. However, it is not uncommon for states to develop distinct rates for "facility-based" and "non-facility" day services and provide for "individual" (one-on-one) rates and "group rates." For present purposes, it is important to note that the assessment of consumer support needs principally affects one (albeit extremely important) component of the rate: direct staffing.

There are variations among the states in how these service model rates are built. Some states have developed relatively elaborate grids that reflect a wide variety of staffing arrangements (e.g., whether overnight staff must be awake) and consumer profiles. Arizona, for example, has developed an especially complex rate grid. A challenge for states in building service model rates is deciding how elaborate a grid to build.

The clear advantage in building service model rates is that they make explicit the basis for each rate. At the same time, building rates in this fashion can be time/labor intensive since it is usually necessary to collect cost information as part of the rate building process and secure stakeholder agreement about the proper relationship between assessed needs and staffing intensity.

## **Assessment Tool Selection**

As will be evident in the next section, states have followed one of two courses in deciding what assessment tool will be employed to link payments to assessed need. Some states (e.g., Maryland) have elected to design their own assessment tools. In general, these tools can be labeled "*cost-driver*" tools since they are based on

judgments and/or evidence about the consumer-related factors that are expected to bear most directly on the amount of resources necessary to support people in the community. Usually, these tools have high face validity. Some of these tools have undergone very careful development; however, many have not and are relatively rough-and-ready tools.

The second route that states have taken is to select one of the available recognized “national” assessment tools (e.g., the Inventory for Client and Agency Planning (ICAP)) and adapt the tool in one fashion or another for funding/payment applications. As a general matter, the national assessment tools were designed to serve other purposes than funding/payment determination. However, some of these tools have proven to be adaptable to funding/payment applications since each can serve as a means of distinguishing among individuals with respect to their support needs. In many cases, states (e.g., Wyoming and South Dakota) simply selected a tool that they already were employing for other purposes and applied the tool to funding/payments. Employing a national tool avoids the challenges associated with *de novo* tool development. In general, the national tools sometimes enjoy broader stakeholder acceptance because they are less subject to tinkering and have more credibility.

Whether a state-developed or a national tool is selected, a very important consideration is how robust the tool is in terms of measuring support needs. Individual support needs are multi-dimensional. In practice, the less robust a tool, the more difficult it is to link payments/funding to support needs accurately and appropriately. As a general matter, if a tool is not robust, the more likely it is that individuals may not be grouped appropriately. As a consequence, while it can be important to select a tool that is quick to administer, the danger with very brief tools is that they are insufficiently sensitive to key differences among individuals.

## **The Outlier Problem**

When payments are linked to assessment results, the outcome is to standardize payments for people who have similar needs and circumstances. Standardization occurs by tying payments to observed (or desired) levels of support for people who have similar needs. However, as a general matter, establishing this linkage is extremely difficult to accomplish in the case of individuals who have extraordinary needs or relatively rare conditions. Many assessment tools are normed and therefore are not designed to handle individuals who are sometimes termed “outliers.” As a consequence, whether in rate setting or resource allocation applications, the standard practice among states is to exclude outliers and address such individuals apart from regular rate-setting/funding allocation processes. Typically, outliers make up only a small proportion of the total number of individuals who receive services.

## **The State of the Art**

States are making considerable progress in tying funding for community developmental disabilities services to assessed support needs. Rate setting methodologies themselves are improving, principally through improvements in the

acquisition and analysis of provider cost and other data. In this vein, Arizona's approach stands out as a particularly thoughtful approach to building service rate models that reflect a solid understanding of how to tie rates to underlying costs and important factors that affect service delivery.

Relatively crude methods of tying rates to assessment results are giving way to more sophisticated, instrument-based models that exhibit greater sophistication in appropriately applying assessment results to build rates and rate models. There is greater appreciation of both the opportunities afforded by the use of assessment tools in rate setting as well as their limitations. Along these lines, the approach adopted in Washington State to redesign its residential services payment rates represents a major breakthrough in more tightly tying payments to consumer support needs. The development of the SIS also has important implications for establishing sounder linkages between payments and support needs.

Finally, there have been substantial advances in the development of assessment-driven individual resource allocation strategies, aided by the use of powerful statistical tools. This technology is maturing rapidly.

At the same time, it also is obvious enough that considerable work remains in identifying and developing the proper linkages between assessment results and funding. The "science" remains inexact, especially in establishing firmer, data-based relationships between assessed support needs and the resources necessary to meet those needs.

### **Implications for Colorado**

Colorado faces the major challenge of completely resigning rate setting and resource allocation for its HCBS waiver programs. The decision to link funding with assessments of individual support needs is sound. However, the selection of an appropriate assessment tool is but one element in system redesign. Potentially, the greater challenge lies in deciding how assessment results will be applied.

# Assessment Instruments

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This part of the report reviews and analyzes the assessment tools that states employ to link the funding of community developmental disabilities services to individual assessment. The following tools are profiled:

- A. Inventory for Client and Agency Planning (ICAP)
- B. Developmental Disabilities Profile (DDP)
- C. Supports Intensity Scale (SIS)
- D. North Carolina Support Needs Assessment Profile (NC-SNAP)
- E. Montana Resource Allocation Protocol (MONA)
- F. Maryland Individual Indicator Rating Scale
- G. Connecticut Level of Need Assessment Tool
- H. Oregon Basic Supplement Criteria Inventory
- I. Imagine! CSAT (Comprehensive Services Assessment Tool)/Colorado Assessment Tool (CAT)

Most (but not all) of the profiles contain the following information:

- The instrument's scope and intended primary use;
- A more detailed description of the instrument;
- The instrument's psychometric properties;
- Strengths and weaknesses of the instrument;
- The amount of time/level of effort to administer the instrument;
- Training/skill set necessary to administer the instrument properly;
- Initial acquisition and ongoing costs of the instrument;
- Training/administration costs
- Information technology (I/T) considerations associated with the instrument;
- Availability of ongoing technical support for the instrument;
- How the instrument is used in states; and,
- Potential suitability of the instrument for Colorado's intended use.

## **A. Inventory for Client and Agency Planning (ICAP)**

### **1. Scope and Intended Primary Use of the Instrument**

The ICAP was developed during the early 1980s and released in its present form in 1986. The ICAP is designed as a structured assessment of an individual's: (a) adaptive behavior and (b) problem behaviors (maladaptive behavior). The instrument also captures selected additional information about a person (e.g., age, types of disabilities, services received and services desired). The stated purpose of the ICAP is to "aid in screening, monitoring, managing, planning and evaluating services [for persons with developmental disabilities]." A common use of the instrument is to assist users (service providers, regional authorities, and state agencies) to compiling standardized profile information about individuals who receive services. The instrument was not developed principally to support rate determination or resource allocation strategies, although it has been employed by several states for such purposes. The ICAP is intended for use with adults and children who are at least three years of age.<sup>4</sup>

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<sup>4</sup> Background information about the ICAP, its development and applications is available at [cpinternet.com/~bhil/icap/](http://cpinternet.com/~bhil/icap/)

## **2. Description of the Instrument**

The ICAP is composed of 77 items related to an individual's adaptive behavior (i.e., a person's skills) and nine items related to problem (maladaptive) behaviors plus additional items that compile diagnostic information (e.g., type(s) of disability), demographic information (e.g., age), functional limitations and needed assistance (e.g., health limitations), information about services received and recommended changes in services, and other information. Altogether the ICAP has 185 items.

Adaptive behavior is assessed along four dimensions:

- Motor Skills
- Social and Communication Skills
- Personal Living Skills
- Community Living Skills

Adaptive behavior is rated using the following scale:

- Never or rarely does well, even if asked
- Does, but not well (or 1/4 of the time)
- Does fairly well (or 3/4 of the time)
- Does well without being asked

The instrument generates a composite scale score for each adaptive behavior dimension plus a composite "broad independence" score that cuts across all four dimensions.

Maladaptive (problem) behavior is assessed along eight dimensions:

- Hurtful to Self
- Hurtful to Others
- Destructive to Property
- Disruptive Behavior
- Unusual or Repetitive Habits
- Socially Offensive Behavior
- Withdrawal or Inattentive Behavior
- Uncooperative Behavior

Problem behaviors are rated as to their frequency and severity. The instrument combines these items into four maladaptive behavior indices (scale scores) and an overall maladaptive behavior index score.

The ICAP also includes an algorithm that produces what is termed a Service Level Index score. This score is intended to measure the relative overall intensity of supervision and/or training that a person might require. Service Level Index scores are grouped into nine levels. ICAP Service Level scores are inverse – namely, the higher the score, the less assistance a person is likely to need. Service Level Index score categories range from "total personal care and supervision" to "infrequent or no assistance for daily living." The ICAP Service Level Index score is a blend of the adaptive behavior (70%) and problem behavior (30%) parts of the instrument.

## **3. Psychometric Properties**

The ICAP has acceptable psychometric properties. The tool was developed using state-of-the-art techniques for the design and testing an instrument of this type.

The tool was normed. There are some weaknesses in the norming for certain age groupings, principally children. Inter-rater reliability and test/re-test reliability are within acceptable ranges, although reliability levels vary with respect to sub-domain.<sup>5</sup> The tool was developed using a pool of 1,764 subjects and there were numerous statistical checks to test the influence of population characteristics. The tool has been independently judged to have construct validity – that is, it acceptably measures what it is intended to measure.

#### **4. Instrument Strengths and Weaknesses**

The ICAP has the following strengths and weaknesses:

##### *Strengths*

- The instrument is a reliable tool for measuring adaptive and problem behavior.
- The instrument acceptably differentiates among individuals with respect to extent of their adaptive and maladaptive behaviors.
- The tool may be applied to both children and adults.
- The tool exhibits acceptable psychometric properties.
- The tool supports compiling robust information concerning people receiving services.
- The tool is relatively compact, given its intended purpose.
- Instrument scoring is relatively straightforward.
- As will be discussed below, the instrument is in relatively wide-use among the states in various applications.

##### *Weaknesses*

- The tool collects relatively minimal information about individual health status and health status is not considered in calculating the Service Level Index score.
- The tool is not widely employed to support the development of individual service plans. While on face the instrument speaks to services needed, this part of the instrument is underdeveloped and especially subject to administrator judgment.
- Adaptive behavior scoring does not directly measure the frequency or intensity of the support necessary to assist a person. The tool does not directly assess “support need” – instead, inferences must be made about support needs based on the extent of assessed adaptive and maladaptive behaviors.
- The tool does not take collect information about the extent to which non-paid caregivers are available to meet the needs of an individual.
- The tool does not contain sufficient elements related to vocational/employment supports.
- The tool is sometimes characterized as a “deficit-based” rather than a “strengths-based” instrument.
- There is anecdotal evidence that ICAP scoring is influenced by the type of individual (e.g., case managers, service provider, and third-party) who administers the tool.
- The most common error in ICAP administration is the multiple rating of the same behavior in several of the ICAP maladaptive categories, resulting in an over scoring of a person’s problem behaviors. This as well as other inter-rater

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<sup>5</sup> Wikoff, Richard (1989). *Inventory for Client and Agency Planning*. From J. C. Conoley & J. J. Kramer (Eds.), *The tenth mental measurements yearbook* [Electronic version]. Retrieved May 15, 2006, from the Buros Institute's *Test Reviews Online* website: <http://www.unl.edu/buros>.

challenges make the routine training on administering and scoring the ICAP essential to a state's testing regime.

## **5. Time/Level of Effort to Administer the ICAP**

Provided that the ICAP is administered by someone who knows the person (see below), the instrument takes about 30 minutes to administer. When other types of personnel (e.g., case managers) administer the tool, the time required to complete increases since consultation with other informants often is necessary. Time to administer also scales upward whenever multiple informants are consulted to complete the instrument.

## **6. Training/Skill Set Necessary to Properly Administer the Tool**

The ICAP is designed to be administered by a professional who has known the person for at least three-months and sees the person on a day-to-day basis. As a consequence, the ICAP often is frequently administered by service providers. However, in some states, case managers are tasked with administering the ICAP or reviewing provider-administered ICAPs. Alternative approaches to administration include contracting with third-parties to administer the tool with the third party examiner consulting with up to three key-informants who know the individual.

Tool administrators (examiners) must be trained. There is a complete, well-designed examiner manual that supports training. It is sufficient that instrument administrators possess a relatively basic QMRP-type skill set. Specialized clinical skills are not required to administer the ICAP. Scoring the results is straightforward and is built into the instrument. Training to administer the tool should require no more than one-day.

## **7. Initial Acquisition and On-going Costs**

The ICAP must be purchased from the publisher (Riverside Press). It is a proprietary, copy-right protected instrument.<sup>6</sup> The publisher does not offer licensing arrangements wherein a state may purchase the right to reproduce booklets or incorporate the instrument into the state's data system. ICAP pricing is "booklet-based." A booklet must be purchased for each instance that the tool is administered. The booklet and the supporting examiner manual may not be reproduced locally. A "complete package" (examiner's manual plus 25 booklets) costs \$167.50. Additional booklets can be purchased in lots of 25 for \$65.00. Spanish-language versions of the booklet and examiner's manual are available. A Windows-PC based "Compuscore" software package is available for \$285.00/package (see discussion below).

The estimated costs for acquiring the ICAP for administration to the HCB-DD population are displayed in the table on the following page. The first set of cost figures is premised on administering the ICAP to a test sample of 500 HCB-DD waiver participants scattered across 15 CCBs. There also is provision for DDD to acquire two complete ICAP-paper and Compuscore software packages. Extra booklets are included for training purposes. The second estimate is based on full-

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<sup>6</sup> Purchase information is available at: [riverpub.com/products/icap/index.html](http://riverpub.com/products/icap/index.html)

scale implementation of the ICAP based on a total HCB-DD waiver population of 4,250.

Scope	Requirements	Estimated Total Cost
Sample: 500 HCB-DD Waiver participants	17 "complete packages;" 200 additional booklets; 17 Compuscore packages	\$8,213
Entire HCB-DD Waiver participant population	42 "complete packages"; 3,250 additional booklets; 22 "Compuscore" packages	\$21,755

Recurring product acquisition costs would depend on: (a) the frequency of re-administration of the tool and (b) the inflow of new individuals into the HCB-DD waiver. Typically, the ICAP is administered on a periodic two or three-year cycle although states usually provide for re-administration when there is a material change in the person's condition. Given what the ICAP measures, annual administration usually is not appropriate since adaptive and maladaptive behaviors usually do not change significantly in short periods of time. With a three-year cycle, it would be necessary to purchase approximately 1,500 booklets each year at a cost of \$3,900 per year. Costs would scale upward if the ICAP also were administered to the SLS Waiver population and/or extended to include individuals waiting for waiver services.<sup>7</sup> The purchase of the Compuscore and examiner manuals are one-time expenses.

### 8. Training/Administration Costs

The cost of training community personnel in ICAP administration hinges on the administration strategy that is selected. For example, if the tool were to be administered by service providers, a sufficient number of provider agency personnel would have to be trained. If the tool is administered by case managers, a decision must be made whether all case managers would be trained to administer the tool or whether only a select number of case managers at each CCB who would administer the tool. If all case managers are to be trained, provision would have to be made for conducting initial training periodically to train new case managers due to turnover. Initial training in ICAP administration likely could be obtained from the Wyoming Institute on Disabilities (WIND) (the state's UCEDD) which administers the ICAP on behalf of Wyoming. A one-day training session at a central site would likely cost in the range of about \$3,000 - \$5,000. If multiple training opportunities were provided, costs would scale upwards. A train the trainer approach could be employed so that each CCB would have a training capability as an alternative to periodic statewide training.

Administration costs are the costs of the salaries of the personnel who administer the tool. A rough estimate of these costs is \$60/waiver participant, assuming 30

<sup>7</sup> Wyoming, for example, administers the ICAP to wait-listed individuals to confirm the eligibility of such persons for services as well as to estimate the costs of supporting such persons once they enter the waiver program.

minutes to administer the tool plus time to record the results and travel. Three states (Alaska, Delaware and Wyoming) contract out ICAP administration to private independent organizations. When private organizations administer the ICAP, costs range from \$300 to \$535 per ICAP administered due to personnel time, travel costs and administration strategy (for example, Wyoming mandates that three informants be interviewed). States contract out ICAP administration to ensure the integrity and consistent administration of the tool.

## **9. I/T System Considerations**

The ICAP "Compuscore" package is supports entering the results recorded in the ICAP booklet into a Windows-based PC software program. The software package performs scoring. The entire ICAP results for a person, along with associated scores, may be exported to an ASC-II file that can be uploaded to a central data base. The package supports local printing of individual and agency-level reports. Consumer I/D numbers may be employed to link ICAP results to other data files in order to perform analyses, using the SPSS statistical package or Microsoft Excel.

The Compuscore package is serviceable. It supports data analyses and reporting functions. However, it has proven less satisfactory for "live applications" that link ICAP data to other applications (e.g., service payment functions) due to challenges in keeping the data bases in synchronization. Since licensing arrangements are not available, it is not possible to integrate ICAP data entry and scoring into other I/T applications (e.g., as a module in a consumer data base). Instead, ICAP results must be imported into other applications.

## **10. Ongoing Technical Support**

The primary managing author of the ICAP passed away last year. It is unclear what, if any, ongoing expert support will be available to users going forward.

## **11. Applications of the Tool**

About 17 states have used the ICAP in one fashion or another in one or more dimensions of system management. In some states, the use of the tool is very limited (e.g., Washington only employs the ICAP as part of determining the eligibility of individuals with developmental disabilities who do not have mental retardation – i.e., persons with related conditions).

### **a. Non-Funding Related ICAP Applications** include:

- **Eligibility.** In combination with other diagnostic information, the ICAP is employed by Montana, Utah, and Wyoming to determine eligibility for services. The ICAP also can function as an element in the determination of level of care for entry into Medicaid developmental disabilities long-term services, especially with respect to measuring active treatment needs and functional limitations. Texas has long defined multiple levels of care for ICF/MR services (and thereby HCBS waiver services) based on ICAP Service Level Index scores.
- **Service Recipient Profiling.** A relatively common application of the ICAP has been to profile a state's service population as to the nature and extent of disability and other characteristics.

**b. Funding-Related Applications**

Several states employ the ICAP in determining service payment rates and/or establishing overall resource allocations. In general, states typically have selected the ICAP for such applications because the state already used the instrument for other purposes or, at the time the application was developed, the ICAP was judged as the best available tool. Some examples are:

**Tennessee: Levels of Payment**

In 2004, the Tennessee Division of Mental Retardation Services (DMRS) revamped its payments for HCBS waiver services by tying payment levels to ICAP Service Level Need Index scores and other information about consumers.<sup>8</sup> The new payment system replaced an especially complex payment structure that contained 243 distinct residential habilitation rates and 240 distinct supported living rates that were based on combinations and permutations of service type, size of living arrangement, and staffing patterns. The complexity of the predecessor rate structure posed serious system management problems.

The revised Tennessee rate structure is keyed to six ICAP-derived levels as shown in the following table:

<b>Level</b>	<b>Consumer Characteristics</b>
Level One	ICAP Service Level Profile Score: 7-9 Maladaptive Behavior Index Profile: Normal to Moderately Serious Health: No limitation in daily activities or few or slight limitations in daily activities.
Level Two	ICAP Service Level Profile Score: 4-6 Maladaptive Behavior Index Profile: Normal to Moderately Serious Health: No limitation in daily activities or few or slight limitations in daily activities.
Level Three	Service Level Profile Score: 1-3 Maladaptive Behavior Index Profile: Normal to Moderately Serious Health: No limitation in daily activities or Few or slight limitations in daily activities.
Level Four	Service Level Profile Score: 1-9 Maladaptive Behavior Index Profile: Serious to Very Serious General Behavior Health: No limitation in daily activities or few or slight limitations in daily activities. <b>Or</b> Service Level Profile 1-2 Maladaptive Behavior: Normal to Very Serious Health: No limitation in daily activities or many or significant limitations in daily activities Required Care by Nurse or Physician: Less than monthly, Monthly, Weekly or Daily (if not to criteria for Medical Residential Services.)

<sup>8</sup> Description based on: Tennessee Division of Mental Retardation Services (2004): *PROPOSED RATE STRUCTURE FOR SERVICES IN THE STATEWIDE AND ARLINGTON WAIVERS* [Transmitted separately to DDD.

Level	Consumer Characteristics
	Mobility: Does not walk, limited to bed most of the day, confined to bed for entire day. Mobility Assistance Needed: Always needs help of another person.
Level Five (Medical Residential)	Service Level Profile Score: 1-9 Maladaptive Behavior Index Profile: Normal to Moderately Serious Health: Many or significant limitations in daily activities PSR Score: Levels 5 or 6 Required Care by Nurse or Physician: Daily (check to be sure needs more than twice daily) or 24-hour immediate access
Level Six	Individuals who have behavioral problems that are so significant that the person requires extremely close, continuous supervision requiring 2 staff at all times during the day and including awake overnight staff so that he is not a danger to himself or someone else. Level 6 rates may also be used for individuals who require that level of staffing for preventive purposes for an individual with a low frequency behavior that was life threatening to others in the past (e.g. murder, pedophilia).  Rate designation for Level 6 rates will be compared to ICAP results as follows:  Service Level Profile 1-9 Maladaptive Behavior Index Profile: Very Serious (or past history of unpredictable and extremely dangerous behavior) Health: No limitations to Many or significant limitations in daily activities

The rate matrix for residential habilitation services (group homes) establishes fixed, uniform rates based on the assessed consumer level and facility size. There is a second rate matrix for supported living services that also establishes fixed, uniform rates based on: (a) consumer level; (b) whether shift staffing is employed, and, (c) the number of people supported (up to three) in a living arrangement. The system provides for time-limited "special needs" adjustments to the base rates in specified circumstances. The rates were built by specifying staffing requirements, wage costs, and percentage-based allowances for other direct and administrative expenses. Day services rates follow a similar structure. Rates by level have been established for facility-based and community-based day services and supported employment services.

The new rate structure took two years to develop and was hammered out in negotiations with providers. The new rate structure was implemented during 2005 when it was incorporated into Tennessee's two HCBS waivers for people with developmental disabilities. Tennessee officials report that the amount of the rates was influenced by the necessity to accommodate previous payments and avoid disruptions in payments to certain community agencies. This caused the final rates to be inflated.

Since implementation, Tennessee has encountered two problems. The first is "ICAP-creep" – namely, ICAP re-administration has led to the reclassification of individuals into the upper payment tiers. ICAP creep has affected payments for about 20% of

consumers. In Tennessee, provider agencies administer the ICAP to most individuals. The state has pinpointed several community agencies where ICAP creep has been most noticeable and plans to take corrective measures. The second problem lies in the authorization of special needs payments. The amount of these payments has ratcheted upward and this is prompting state officials to consider instituting new controls on the authorization of these payments.

The ICAP-based levels devised by Tennessee parallel how similar levels have been constructed in other states. There are problems in how the rates were built for each level. Payments for other direct and administrative costs are figured on a fixed percentage basis of direct costs. This practice results in inflated rates since these types of costs usually do not scale upward in exact parallel with direct service costs. Tennessee performed limited rate shadowing (e.g., simulating results prior to implementation of the new rates). Nonetheless, the Tennessee approach provides a potential template for a tiered-rate structure for residential and daytime services in Colorado, if the state were to select the ICAP or another similar tool.

The post-implementation problems identified by state officials are not surprising. Absent a state strategy to independently validate ICAP results, ICAP-creep can be expected when the tool is administered by providers who have a financial stake in the results of the assessment. While there are valid reasons for providing for special needs add-ons, such add-ons are notoriously difficult to manage.

### **Texas/Louisiana/Illinois**

In 2005, Louisiana revamped its ICF/MR payment system for private ICFs/MR to key payments to ICAP Service Level Index scores. Private ICFs/MR in Louisiana range in size from six to more than 100 beds, although predominately facilities serve between 6-8 individuals. The state defined four groupings of ICF/MR residents based on the index score: Pervasive (Score: 1-19); Extensive (Score 20-39); Limited (Score 40-69); and, Intermittent (Score: 70-99). Rates were constructed by keying direct service costs to index scores and standardizing payments for other facility expenses. Rates also take into account facility size. There is a four-by-four rate matrix (four ICAP service levels and four facility size classifications). Louisiana patterned its system after a similar system that Texas implemented several years ago. Texas also regulates the amount of HCBS waiver services that a person may receive by limiting the total amount of service plan funding to 125% of the maximum ICF/MR payment amount linked to the person's ICF/MR level of care. Illinois also employs ICAP results as a factor in determining ICF/MR payments.

### **Wyoming**

In the late 1990s, Wyoming developed and implemented a prospective, individual budgeting process (labeled DOORS) that employs ICAP data as a primary input to determine the total amount of HCBS waiver funding that is authorized for each person. DOORS employs relatively sophisticated statistical methods to select specific ICAP (and other) items that appear to be the best predictors of total individual expenditures. DOORS is designed to standardize overall funding authorizations based on consumer characteristics and selected other factors. Distinct DOORS

models have been developed and implemented for the adult waiver, the child waiver, and the adult brain injury waiver. We do not elaborate further on DOORS because it is an individual budget allocation tool, not a provider rate determination tool. However, the DOORS technology may prove to be relevant for the SLS waiver and developing individual budgets for self-directed services. In Wyoming, person-specific rates for major waiver services (e.g., residential habilitation) are established during the development of the individual plan. Rates for other waiver services (e.g., respite) are subject to a uniform state rate schedule.

### **South Dakota**

South Dakota has designed and implemented an especially elaborate payment determination method (Service-Based Rates (SBR)) that combines ICAP results and other information about individuals, provider cost data, service utilization patterns, time-study and other information to generate 40 payment categories for HCBS waiver services. These payment categories are rolled up into nine wrap-around payment rates to which an individual is assigned. The SBR has been in operation since the late 1990s. One of purposes of the SBR was to standardize payments to community agencies based on consumer characteristics and other factors that affect the costs of services. SBR replaced the state's prior practice of negotiating payments provider-by-provider, a practice that led to substantial inequities and disparities in payments. We do not elaborate further on SBR due to its underlying complexity and intricacy. It is not an approach that Colorado could readily adopt in the near-term and has high ongoing maintenance costs.

### **Utah**

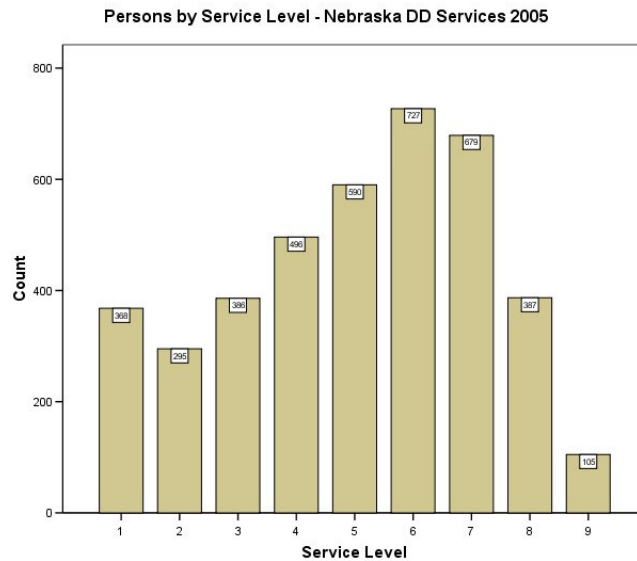
In the 1990s, the Utah Division of Services for People with Disabilities developed an ICAP-based matrix that established residential and daytime service dollar authorization maximums. This matrix is based on five ICAP Service Level Index score ranges and provides for overrides in the case of outliers, most typically people with co-occurring mental illnesses: Provider rates are keyed to the matrix. Over the years, the matrix has morphed to include children and family-based services. In Utah, the matrix principally guides state decision making concerning service plan approval.

In 2006, Utah decided to adopt the Supports Intensity Scale (SIS) as its principal assessment tool. The state may scrap the current ICAP funding matrix at some point once it accumulates sufficient experience with the SIS to develop SIS-driven funding algorithms.

### **Nebraska**

Nebraska uses the ICAP to determine the number of service units that each waiver participant can use during the month through a system labeled "Objective Assessment Process." In Nebraska, the ICAP is administered by state employee case managers. Authorized units are combined with fixed service rates to determine funding authorizations. The underlying service authorization algorithms were developed employing statistical methods similar to those used to develop the Wyoming DOORS model. Each person has a unique service authorization level.

Service authorizations are generated for both day and residential services for each adult HCBS waiver participant. Nebraska operates three HCBS waivers for about 4,000 adults with developmental disabilities. The Objective Assessment Process replaced a tier-based funding system that was somewhat akin to the present Tennessee system. The Objective Assessment Process methodology is being challenged in court as part of the *Bill M* federal lawsuit.



The plaintiffs contend that Objective Assessment results in the under-authorization of services relative to consumer support need. Nebraska is currently performing a side-by-side evaluation of the ICAP with the Supports Intensity Scale (SIS).

The chart shows the distribution of Nebraska consumers by ICAP Service Level Index category. The chart illustrates that, with respect to these scores, the ICAP generates a relatively normal distribution with a slight J shape.

### Additional Observations About the ICAP Based on State Experiences

It is useful to keep in mind that the selection by states of the ICAP as a tool in rate setting or funding applications was significantly influenced by the fact that the tool already was in use (e.g., Wyoming and South Dakota) or was judged as the best available at the time by a state (e.g., Tennessee). States have varied in how they have adapted the ICAP for funding applications, especially in the level of sophistication that underlies the application. It is important to keep in mind that the ICAP does not directly measure “support need;” instead, when it is used in funding-related applications, the underlying assumption is that the extent of the adaptive and problem behaviors that are measured by the tool are predictive of service intensity requirements.

Additionally, we offer the following observations:

- **Administration:** When funding is linked to assessment results, the question of who administers the tool is very important. The Tennessee experience with “ICAP creep” illustrates some of the problems that can be encountered along these lines. In addition, there is little doubt that linking assessment results to funding places a premium on skilled, uniform administration of the assessment tool. To overcome these problems, some states have outsourced administration to third-parties or instituted “ICAP police” schemes to look behind the administration of the tool. These issues, of course, are not unique to the ICAP.
- **Application of ICAP Results.** Nominally, the ICAP Service Level Index score appears to provide a straightforward means of converting ICAP results into a tiered payment scheme. Several states have done just that. However, in

general, this score has not been demonstrated to be an especially powerful predictor of resource consumption, probably due to how the score is constructed by its 70/30 weighting of adaptive and problem behaviors. Research has revealed that the more powerful ICAP-derived predictors are the ICAP broad independence and ICAP general maladaptive index scores and consumer characteristics such as diagnosis, level of mental retardation, age, and the use of psychotropic medications. This research strongly suggests that it is more appropriate to adopt a selective approach to translating ICAP results into funding-related applications such as rate setting or resource allocation.

- **Design Considerations.** Especially with respect to rate setting applications, it is important to recognize that consumer assessment information is usually employed to establish the “direct services” component of rates and that this component also is the by-product of building underlying service delivery models. In other words, assessment results are used to sort individuals into categories and the amount of staffing (or dollars) needed to address the needs of an individual in a setting are specified. The Tennessee approach illustrates how assessment results are properly linked to payment rates.
- **Application.** Tools such as the ICAP are more readily applied to “traditional” residential and day time services. They are less readily applied to other types of services (e.g., personal assistance, supported employment, respite) where funding considerations revolve around the volume of services authorized (i.e., number of units) rather than the unit payment rate. In part, this is due to the fact that the development of the ICAP occurred when the framework for service delivery was dominated by the provision of such traditional services.

## **12. Utility of the Tool for Meeting Colorado’s Needs**

While by no means a perfect tool, the ICAP can be adapted to meet Colorado’s needs in linking assessment results to tiered community payments for the major types of “traditional” HCB-DD waiver services. However, Colorado should resist the temptation to define funding tiers by solely employing the Service Level Index Score. The tool has reasonably good psychometric properties. It is not a difficult tool to administer. Like any other tool, strategies would need to be developed to ensure the integrity of its administration.

The ICAP is showing its age. Developed 20 years ago, some dimensions of adaptive behavior appear to be especially dated. Moreover, the tool at best produces proxy measures of likely support needs rather than measuring support needs directly.

In our view, the tool has questionable utility for services such as supported employment and would not be a useful tool in determining funding authorization levels for the SLS waiver unless coupled with additional information about the extent and availability of caregiver and other supports available to a person.

A drawback of the tool is that it has proven not to be especially useful in supporting individual service planning. Another potential drawback is the problems associated with integrating the tool into a state’s I/T architecture. Integrating the ICAP directly into Colorado’s data systems is not possible. Instead, ICAP data must be separately maintained and synchronized with other data.

## **B. Developmental Disabilities Profile (DDP)**

### **1. Scope and Intended Primary Use**

The Developmental Disabilities Profile (DDP) was developed by the New York State Office of Mental Retardation and Developmental Disabilities (OMRDD) in the late 1980s and finalized in 1990 as a device designed principally to gather standardized information about individuals receiving and waiting for services in order to inform strategic planning decisions. In New York, the tool plays a limited role with respect to payments. However, some other states have applied the tool to payments.

### **2. Description of the Instrument**

The NYS DDP is a four-page instrument that compiles information about disability, "intellectual challenges," medical condition, seizures, medications, mobility, behavioral challenges and conditions, self-care and daily living (e.g., ADLs and IADLs that are assessed along similar lines as the ICAP). As such it has a "deficits" rather than "strengths" orientation. The instrument yields three index scores: adaptive functioning, maladaptive behavior, and health needs. Since the indices are not equivalent numerically (unequal number of questions in each index), the index scores are converted; the maximum possible converted score is 300. The higher the score, the greater (more intensive) the potential needs of the individual are assessed to be.<sup>9</sup>

The DDP differs from the ICAP principally in its scoring algorithms and treatment of various types of items that factor into scoring. The ICAP only scores adaptive and maladaptive behaviors. The DDP generates a separate health needs index score and factors functional limitations into the adaptive behavior score.

### **3. Psychometric Properties**

The psychometric properties of the tool are not well documented but by report the tool has reasonably high reliability and validity, in part because it concentrates on items that are subject to straight-forward independent verification. The tool was developed by well-respected OMRDD researchers. So far as HSRI has been able to determine, the tool has not been the subject of independent third-party peer review nor has the tool been evaluated by comparing it to other tools.

### **4. Strengths and Weaknesses of the Instrument**

#### *Strengths*

- The tool is relatively compact and assesses factors that are amenable to objective assessment/measurement rather than subjective examiner judgment.
- The tool may be applied to both children and adults.
- The tool is more robust than many other tools in its assessment of health needs.
- The tool has face validity – it measures consumer dimensions that affect both service delivery and costs.
- Administration of the tool is relatively straightforward.

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<sup>9</sup> New York State DDP User's Guide is located at: [omr.state.ny.us/wt/manuals/wt\\_ddp2toc.jsp](http://omr.state.ny.us/wt/manuals/wt_ddp2toc.jsp)  
The Ohio adaptation of the DDP is located at:  
[odmrdd.state.oh.us/CountyBoardsDoc/ODDP/DDP\\_all2.pdf](http://odmrdd.state.oh.us/CountyBoardsDoc/ODDP/DDP_all2.pdf) . The Indiana adaptation is located at: [in.gov/fssa/servicedisabl/ddpform.pdf](http://in.gov/fssa/servicedisabl/ddpform.pdf) .

## *Weaknesses*

- The DDP – like the ICAP – does not appear to have utility in supporting the development of individual service plans.
- Like other tools that focus on the person receiving services, the tool insufficiently accounts for environmental and care-giver related factors that might be important in determining resource needs.
- The tool's scales (including the overall DDP score) may or may not be especially suitable for direct application to funding.

### **5. Time/Level of Effort to Administer the Instrument**

The time/level of effort to administer the DDP probably is no different than the ICAP. Time/level of effort likely hinges on who administers the instrument (e.g., service provider or case manager). When administered by a case manager (as in the cases of Indiana and Ohio), time/level of effort increases since information must be obtained from one or more informants.

### **6. Training/Skill Set Necessary**

The instrument can be administered by individuals with QMRP-like skills. No special clinical training is necessary.

### **7. Initial Acquisition and Ongoing Costs**

In the past, New York OMRDD has been willing to license the instrument to other states for a nominal fee (e.g., \$1). The baseline instrument must be customized by each state to capture appropriate additional information. The extent of such customization is not great. Once the instrument is customized, ongoing costs amount to printing/reproduction costs.

### **8. Training/Administration Costs**

Because the instrument is relatively straightforward to administer, training requirements are not especially extensive. Materials developed in other states that use the DDP probably could be readily adapted for use in Colorado. The costs of administration probably are about \$60/individual.

### **9. I/T Considerations**

There is no accompanying software package to support the DDP. Consequently, compiling DDP results and automated scoring would require the development of local software applications. However, such applications probably would not be costly to develop and implement and there is the potential that one of the states that presently uses the DDP would be willing to share information about their software applications. The DDP can be integrated into other data systems (as a module, for example, of a consumer data base). Kansas has integrated the DDP into its Basis 6.0 HCBS waiver data system.

### **10. Availability of Ongoing Technical Support for the Instrument**

New York State does not provide user support for the instrument.

### **11. Uses of the DDP**

The DDP is in very limited use in states other than New York.

### **a. Non-Funding Related Applications**

DDP scores (along with additional information about individuals) are used in Indiana and Kansas as part of the process in determining whether individuals require ICF/MR level of care and thereby qualify for the HCBS waiver program.

### **b. Funding Related Applications**

In New York State, the DDP is employed to perform case-mix rate calculations for some types of community residential services. Only two other states have applied the DDP to community services funding:

- In 1990, Kansas selected the DDP to establish tiered funding levels for ICF/MR services. The state then created a parallel set of five funding tiers for its HCBS waiver based on DDP scores and Kansas' own weighting of DDP results. These tiers are expressed as funding limits for residential services, day services, and in-home services (furnished instead of residential services). The basic tier structure has remained essentially unchanged since it was originally designed and implemented. From time-to-time, Kansas has experienced problems in managing the amount and volume of individual add-on adjustments to the funding tiers. There also are issues in Kansas concerning the adequacy of community funding. As noted previously, DDP results are uploaded to the state through the Kansas Basis 6.0 system, a system that also captures and integrates additional information about individuals and service plan authorizations.<sup>10</sup>
- Most recently, the Ohio Department of Mental Retardation and Developmental Disabilities (OMRDD) selected the DDP to serve as the basis for establishing *funding ranges* for its HCBS waiver programs for people with developmental disabilities. Ohio's main aim was to standardize waiver funding across the state's 88 counties, employing consumer characteristics to connect funding and service needs. The development and implementation of this system has taken several years and was quite costly. Ohio has developed a web-based application that permits county MR/DD boards to enter in DDP assessment results into a data base that in turn is linked to service plan authorization information. Counties also may upload DDP information to the state via batch processing. Ohio started its roll-out of the DDP-based funding ranges in 2005.<sup>11</sup>

Ohio and Kansas selected the DDP because it is briefer than the ICAP (and thus less time-consuming to administer) and is not proprietary (New York State licenses the DDP to other states for a nominal charge). Both states judged that the DDP would provide information that is comparable to the ICAP.

## **12. Suitability for Colorado**

The DDP is a serviceable instrument. It can reliably distinguish among individuals as to the intensity of their likely service needs. Like the ICAP, it likely is most amenable to application to "traditional" residential and daytime programs and less for application to services such as supported employment or in the SLS waiver. Applications elsewhere have taken the form of establishing funding limits rather than

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<sup>10</sup> Additional information about the Kansas tier-system has been transmitted to DDD separately.

<sup>11</sup> Additional information about Ohio's use of the DDP to establish funding ranges has been transmitted to DDD separately.

in setting service rates but there is not inherent reason why the DDP could not be used in rate setting.

The challenge in employing the DDP is that it would take considerable effort to determine how to appropriately interface DDP results with funding/rate setting. DDP scoring does not readily translate into tiers or levels such as the ICAP Service Level Index scoring. In Kansas, the tiers were statistically derived, albeit using not especially sophisticated techniques. Another concern about the DDP is that only a few states use the tool and, hence, there is not a large body of experience from which to draw concerning its properties and potential applications.

Finally, the overall structure and scope of the DDP is somewhat similar to the present Colorado C-SAT instrument. Hence, we are not certain that there would be much to be gained by selecting the DDP over the C-SAT or the successor CAT.

## **C. Supports Intensity Scale (SIS)**

### **1. Scope and Intended Primary Use of the Instrument**

The development of the Supports Intensity Scale (SIS) was sponsored by the American Association on Mental Retardation (AAMR).<sup>12</sup> The tool was five years in the making and continues to be refined. The tool first became available in 2004. The tool for adults (persons age 16 and older) is final. A SIS for children is under development. The SIS is principally designed to directly feed into and support the development of person-centered plans by measuring the frequency, intensity and volume of support that individuals need in various dimensions of everyday community functioning and living. Administration of the SIS informs the planning team about life areas where supports are needed. The SIS was designed to be congruent with and support a person-centered approach to service delivery and to change the focus of assessment from measuring deficit to directly measuring support needs. The SIS does not measure adaptive or maladaptive behavior *per se*, although there is research that suggests that SIS results are reasonably predictive of measured adaptive and maladaptive behaviors. By its design and nature, the SIS is not directly comparable to tools such as the ICAP or the DDP.

### **2. Description of the Instrument**

The scope of activities addressed in the SIS is broad and range from ability to perform a host of every day activities to the ability to advocate and protect one's self-interests.<sup>13</sup> SIS support needs subscales include: Home Living, Community Living, Lifelong Learning, Employment, Health and Safety, and Social. The SIS measures a person's support requirements in 57 life activities and across 28 behavioral and medical areas. The need for support in life activities is measured according to *frequency* (e.g., none, at least once a month), *amount* (e.g., none, less than 30 minutes), and *type* of support (e.g., monitoring, verbal gesturing). In addition to subscale scores, a Total Support Needs Index score is generated, which is

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<sup>12</sup> There is extensive information about the SIS on the AAMR website at: [siswebsite.org/page.wv?section=root&name=Home](http://siswebsite.org/page.wv?section=root&name=Home)

<sup>13</sup> The SIS Supplemental Protection and Advocacy Scale does not factor into the Total Support Needs Index score.

a composite score generated from the scores across all SIS items. In addition, the SIS provides broad medical and behavioral support scores. These scores are intended to prompt additional exploration of the supports necessary to address medical and behavioral issues.

The baseline SIS instrument does not capture certain types of information about the individual (e.g., type(s) of disability, presence of certain conditions, and other demographic/situational information). This information must be captured from other data sets and/or the baseline instrument must be supplemented by adding items in order to obtain a full picture of a person. As a consequence, some states (e.g., Louisiana, Utah, and Washington) have developed what have come to be termed SIS "Plus" instruments. For example, The Utah add-on to SIS adds 18 eighteen items intended to assess three types of consumer risk: (a) caretaker and environmental risks; (b) individual behavioral risks; and, (c) health risks. The Louisiana add-on captures a wide-range of additional information.

### **3. Psychometric Properties**

The SIS was developed by a panel of expert authors. It benefited from extensive literature research. Solid psychometric techniques were used to develop the tool and iteratively refine it. Items were selected and weighted using the Q-sort method of test construction. The instrument was normed on a sample of 1,306 adults with intellectual disability from 33 states and 2 Canadian provinces. The SIS has acceptable reliability/validity, although test/retest and inter-rater reliability were initially less strong than other tools. In part, inter-rater reliability problems stem from issues in interpretation and consistency in administration that are now being addressed by AAMR. Follow-up reliability studies have revealed that exceptionally good inter-rater reliability can be achieved through intensive training and by employing experienced examiners. Higher scores validly measure the need for more support and the tool has been independently judged to have construct validity.<sup>14</sup>

### **4. Strengths and Weaknesses**

#### *Strengths*

- The instrument is designed to "understand the support needs of people with intellectual disabilities (i.e., mental retardation) and closely related developmental disabilities." It seems to provide useful information about the supports needed and the intensity of those supports taking into account the frequency or intensity of the support required.
- There has been positive feedback that instrument contributes to effective individual service plan development.
- The tool directly assesses support need. Tools such as the ICAP or the DDP provide information from which the level and intensity of support needs must be deduced.
- The employment part of the tool is especially strong. The SIS is the only tool that includes a focus on employment-related supports.
- The tool exhibits acceptable psychometric properties.

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<sup>14</sup> Pittenger, D. J. [in press] Test review of Supports Intensity Scale. From B. S. Plake & J. C. Impara (Eds.), *The sixteenth mental measurements yearbook* [Electronic version]. Retrieved, May 3, 2006 from the Buros Institute's *Test Reviews Online* website: [unl.edu/buros](http://unl.edu/buros)

- By securing information from multiple informants (see discussion below), the tool potentially yields a more informed assessment of the person.

#### *Weaknesses*

- As will be discussed more below, the tool is best administered by individuals who are skilled interviewers. This places a high premium on training personnel in the administration of the tool.
- The baseline SIS instrument must be supplemented to secure additional pertinent information about the person.
- Inter-rater reliability is less strong than other tools. This stems in part from the nature of the tool and how it is administered. Inter-rater reliability is improved when personnel receive extensive and thorough training and when the tool is administered by a small number of individuals. It also is expected to improve through further refinement by AAMR of training materials.
- The child version is not yet available. Some states (e.g., Utah) have modified the tool and applied it to children by removing items (e.g., employment items) that clearly pertain only to adults. This is a make-do approach. It is uncertain when the child version will be finalized.

### **5. Time/Level of Effort to Administer the SIS**

There is no doubt that the SIS takes longer to administer than the other tools profiled here. The main reason for this is that the SIS is properly administered by interviewing multiple informants who know the individual and reconciling the interview results. AAMR encourages interviewing the person receiving services and family members. SIS administration requires 45-60 minutes per informant, although average administration times of upwards of two hours have been reported. With two or three informants, Nebraska (which is conducting a feasibility study of adopting the SIS) reports that the SIS takes twice as long to administer as the ICAP. When administration of the SIS is tightly linked to the development of individual support plans, additional time can be required since administration of the tool prompts active discussion of how the support plan should be constructed to address the person's support needs. More typically, the SIS is administered in advance of the planning meeting rather than as part of the meeting. Louisiana administered the SIS to about 1,700 people from February to May 2006. Louisiana officials report that each SIS took about 45-60 minutes to complete when two informants were concurrently interviewed. Louisiana used a limited number of private-sector case managers to conduct the SIS interviews.

### **6. Training/Skill Set Necessary to Properly Administer the Tool**

The SIS is designed to be administered by a trained interviewer who has extensive experience in supporting people with disabilities and/or a bachelor's degree in an appropriate human service field. It is especially important to follow the published techniques for conducting the SIS interview. One of the main purposes in doing the SIS is the formulation a good individual service plan. The ability to listen to and respectfully check the answers of respondents to what is know about the person being assessed is very important. The ability to interview well and thoroughly is central to the examiner's skill set for successful administration of the tool. So far, states are electing to use case managers to administer the SIS.

## 7. Initial Acquisition and On-going Costs

The SIS is a proprietary instrument. It must be purchased from AAMR in paper booklet form (the cost is about \$1.50 per booklet). As in the case of the ICAP, there is a CD-ROM version that permits capturing assessments results and supports scoring and exporting the data to other applications. The CD-ROM version permits the addition of up to eight additional user-defined data fields to the tool. There is a supporting manual that may be purchased separately. AAMR also makes available a web-based system (SIS Online) that supports entering completed assessments into a central data base. Whether the CD-ROM or the SIS Online alternative is selected, assessments are conducted using the paper booklet and the results are entered into the electronic version.

The estimated costs for acquiring the SIS for administration to the HCB-DD population are displayed in the following table. The first set of cost figures is premised on administering the SIS to a sample of 500 HCB-DD waiver participants scattered across 15 CCBs. Costs are based on acquiring 17 manuals plus 700 booklets. See below for a discussion of the pros and cons of acquiring the CD-ROM version. The second estimate is based on full-scale implementation of the ICAP based on a total HCB-DD waiver population of 4,250.

<b>Scope</b>	<b>Requirements</b>	<b>Estimated Total Cost</b>
Sample: 500 HCB-DD Waiver participants	17 "complete packages" (manual plus 25 booklets) plus 400 additional booklets.	\$2,714
Entire HCB-DD Waiver participant population	42 "complete packages" plus 3,400 additional booklets	\$10,557

Recurring product acquisition costs would depend on: (a) the frequency of re-administration of the tool and (b) the inflow of new individuals into the HCB-DD waiver. If the SIS were administered on a two-year cycle, it would be necessary to purchase approximately 2,200 booklets each year at a cost of \$3,239 per year. Linking SIS to the individual service plan development process implies an annual administration cycle. Costs would scale upward if the SIS also were administered to the SLS Waiver population and/or extended to include individuals waiting for waiver services (for strategic planning purposes).

As noted above, AAMR offers two options for capturing SIS assessment results electronically. The CD-ROM based SIS electronic scoring program is a stand-alone application that can be installed on any Windows-based PC computer. This software has roughly the same functionality as the ICAP Compuscore software except that it supports more up-to-date methods of distributing results (e.g., production of Adobe PDF reports that can be e-mailed to providers and consumers/families in advance of planning meetings). The cost of this software is \$325/installation.

AAMR also has created "SIS Online." SIS Online permits the entire SIS tool to be entered on the web and supports nightly downloading of the information to a local server. SIS Online permits a state to add up to 25-user defined data fields to the

baseline SIS instrument. There is no equivalent to SIS Online available for the ICAP. AAMR pricing of SIS Online is based in part on the number of sites where SIS results will be entered/uploaded information and in part of the volume of assessments that are entered. According to AAMR, based on operating 22 entry/user sites, annual SIS online costs would total approximately \$21,000 if the use of the SIS is limited to the HCB-DD waiver and \$33,000 if the SIS also were administered to SLS waiver participants.<sup>15</sup> Costs would be lower if use of the tool is piloted. As a general matter, one would select the SIS CD-ROM version or SIS Online, but not both.

SIS Online has screens that look much like the paper version, with drop down menus and mouse-overs of item descriptions of all 85 SIS items. The SIS Online system can generate an individual report in Adobe PDF or HTML format with information on raw scores, standard scores, a percentile ranking, and a graphic plot of the areas assessed by the Scale. Results are accessible online for ready reference and an unlimited number of users can access the database at the same time. With respect to data analysis, SIS Online supports exporting SIS results to other user applications. Because SIS Online supports unlimited users, provides for a larger number of user-defined data fields, and does not require batch uploading of results, it is superior to the CD-ROM version, especially in large scale applications. Georgia and Utah subscribe to SIS Online.

A SIS pilot in Colorado could purchase a limited number of the CD-ROM version or make use of SIS Online. The best course would hinge on the pilot strategy.

## **8. Training/Administration Costs**

Relatively intensive training is required for individuals who administer the SIS. Training is available through AAMR and costs \$2,000 per day plus trainer expenses and material costs. Reasonably intensive, customized training for a pilot test of the SIS would likely cost about \$12,000 for two two-day training opportunities. Costs of training also would be affected by how many individuals must be trained (i.e., all case managers or just selected case managers). AAMR will provide a customized estimate of the costs of conducting training upon request. Training includes practicums where individuals perform SIS work ups.

Utah elected to employ a "train-the-trainer" approach, sending two state staff to AAMR-sponsored intensive training. These staff then provided training to Utah case managers. Utah also is furnishing training to service providers in the SIS, since service providers function as one type of key informant. If Colorado were to adopt the SIS, it would have to plan on establishing a local training capability, either through DDD or another party.

SIS administration costs should be figured at twice those for the ICAP – or about \$100 - \$120 per consumer.

## **9. I/T System Considerations**

While SIS Online has attractive capabilities, it poses all the challenges associated with synchronizing an externally maintained data base with other data systems that

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<sup>15</sup> Additional users may be added at a cost of \$150.00 per user.

a state may operate. Louisiana and Washington have elected to develop SIS modules within their own data systems to avoid some of these problems. Both states were able to negotiate licensing arrangements with AAMR that permit integrating SIS into their I/T architectures in this fashion. Otherwise, either SIS Online or the CD-ROM version of SIS supports maintaining a state and/or local data base of SIS results.

## **10. Ongoing Support**

AAMR actively supports the SIS in a variety of ways, including sponsoring the active ongoing involvement of the original authors group. AAMR operates a user bulletin board and provides a steady stream of information about the adoption of SIS by states and other organizations.

## **11. Applications of the Tool**

Even though the SIS has only been available for two years, it has stirred considerable interest among states and other organizations. So far Louisiana, Georgia, Pennsylvania, Utah and Washington have selected the SIS as their baseline assessment tool. Alta Regional Center in California (Sacramento) also has adopted the SIS. Alta serves 13,000 children and adults with developmental disabilities. In North Carolina, Piedmont Behavioral Healthcare employs the SIS as its baseline assessment tool and to support person-centered planning in its HCBS waiver for people with developmental disabilities. The Resource Exchange in Colorado Springs was one of the first organizations nationwide to adopt the SIS. In Oregon, Good Shepherd Homes is employing the SIS at the provider agency level. As previously noted, Nebraska is assessing the utility of employing the SIS.

Utah<sup>16</sup> and Louisiana have designed supplements to the SIS to capture additional information. Washington also has added a limited number of additional items to the SIS. By report, Pennsylvania also intends to supplement 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.

By and large, the early 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. For example, Washington State intends to employ SIS results as part of the determination of level of care for HCBS waiver 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.

### **Funding-Related Applications of the SIS**

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

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<sup>16</sup> Information about the Utah supplement and the state's implementation of SIS is available at: [hdsdpd.state.ut.us/sis.htm](https://hdsdpd.state.ut.us/sis.htm)

- **Georgia.** The state is redesigning its two HCBS waivers for persons with mental retardation and expects to submit revised waivers to CMS in June. 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, age and living situation data 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.
- **Washington.** 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 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 is expected to be implemented statewide in 2007. 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 started 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.

Louisiana will examine the potential for employing SIS data either to establish individual resource allocations and/or service unit authorization levels in its principal HCBS waiver for individuals with developmental disabilities. Work along these lines will start in earnest over the next several months once the state has completed sufficient "Louisiana Plus" assessments. Utah officials report that they also may employ the SIS to revamp the state's present resource allocation scheme. 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. The Macomb-Oakland Regional Center in Michigan is considering developing an individual resource allocation system based on the SIS. Other states also have expressed interest in using the SIS along these lines. By report, The Resource Exchange already employs the SIS in making resource authorization decisions based on support needs.

## **12. Utility of the SIS for Meeting Colorado's Needs**

The SIS is an especially attractive tool because of its contemporary construct and relevancy to service plan development. These features explain why the tool has

sparked so much interest in both the United States and elsewhere. Moreover, the SIS provides an independent, reliable measure of support needs. As a general matter, such independent measures are more desirable and credible than measures that are based on presumptions about which consumer-related characteristics drive costs.

The SIS appears to be adaptable to funding applications, although experience with using the tool in this fashion is obviously limited at this stage. At least in theory, the tool might prove to be more powerful than the ICAP or DDP in this regard because of its direct focus on support needs rather than behavior measurement. That said, the use of the tool in any of several potential funding applications will present any state with multiple challenges, including administering a sufficient number of assessments to develop a working consumer data base, deciding whether and how to supplement the tool, and figuring out how to employ assessment results in specific applications. However, these issues are not substantially different than the issues associated with using any other tool.

The SIS poses additional challenges in administration. It is by no means an easy tool to administer properly or consistently. These challenges can be overcome (as illustrated by Louisiana's experience in administering a high volume of SIS assessments in a relatively short time frame) but there is no doubt that installing the SIS as a baseline assessment tool can prove to be complex and resource intensive.

## **D. North Carolina Support Needs Assessment Profile (NC-SNAP)**

### **1. Scope and Intended Primary Use of the Instrument**

The North Carolina Support Needs Assessment Profile (NC-SNAP) was developed by researchers at the state's Murdoch Developmental Center as part of a two and a half year research project. The goal was to develop a compressed assessment tool that could be quickly administered yet yield results that were broadly equivalent to the administration of more extensive tools, principally the ICAP. The stated purpose of the tool was to compile information about consumer service needs for use in system planning. The instrument can be employed for both children and adults. There has been relatively limited application of the NC-SNAP to funding. For this reason, our discussion of this tool is more abbreviated.

### **2. Description of Instrument**

The NC-SNAP compiles compressed information about a person's needs for daily living supports, health care supports and behavioral supports and rates intensity using a straightforward five-point rating system. This information is converted to a composite score that differentiates the relative support needs of individuals among five support need levels.

### **3. Psychometric Properties**

The tool was developed by experts and field tested against a sample of 553 individuals. Over the next two years, it was refined to improve predictive validity and retested. During field-testing the inter-rater reliability of the NC-SNAP was

about 70%, which is comparable to other standardized assessment instruments. Inter-rater reliability is enhanced by the compressed nature of the tool. North Carolina researchers have been able to demonstrate that NC-SNAP results are comparable to the ICAP at the Service Level Index score level. However, the NC-SNAP has not been peer-reviewed with the same intensity as other instruments.

#### **4. Strengths and Weaknesses**

##### *Strengths*

- The most attractive feature of the NC-SNAP is its brevity.
- The NC-SNAP can be administered quickly.
- The NC-SNAP is quick way to rank people as to their relative needs.

##### *Weaknesses*

- The brevity of the NC-SNAP also is its Achilles Heel. It provides relatively little information about a person and, for technical reasons, this circumscribes its utility in funding applications.
- The NC-SNAP has no utility in supporting individual service plan development.

#### **5. Time to Administer**

The NC-SNAP can be completed in a very brief amount of time, usually 15 minutes. Resolving conflicts in information may require up to 30 minutes. Like other similar tools, the expectation is that the examiner will be familiar with the person or consult other individuals who have knowledge of the person.

#### **6. Training/Skill Set to Administer**

In North Carolina, the NC-SNAP must be completed by a certified examiner (generally, a case manager or Qualified Developmental Disability Professional (QDDP)). The examiner's guide is straightforward and easy to understand.

#### **7. Acquisition and Ongoing Costs**

The NC-SNAP is owned by the Murdoch Center Foundation.<sup>17</sup> Copies of the instrument are purchased through the Foundation at \$1.00 per copy. An examiner's guide is available for \$2.00. There is no software package offered that is equivalent to the ICAP Compuscore Package.

#### **8. Training and Ongoing Administration Costs**

The Murdoch Foundation offers an NC-SNAP training video (cost unknown). Examiner training costs are minimal. Costs of administration probably are about 50-75% of the costs of administering the ICAP and comparable to the costs of administering the C-SAT.

#### **9. I/T Considerations**

In order to capture NC-SNAP information, a state would have to develop its own data base and a method for uploading data to the central data base. Given the brevity of the instrument, this should not prove challenging.

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<sup>17</sup> Information is available at: [murdochfoundation.org/DDSAP.htm](http://murdochfoundation.org/DDSAP.htm)

## **10. Ongoing Support**

The NC-SNAP author group offers limited technical support for the instrument; however, they would have to be approached to see if the degree they would be able and willing to support the instrument outside of North Carolina.

## **11. Applications of the Tool**

The tool is little used outside North Carolina (principally in Kentucky (see below) and Louisiana). In Louisiana, the tool is used in a limited fashion in performing assessments for some types of children's services. Colorado Regional Centers employ the tool. When the NC-SNAP was first developed, several states expressed interest in using the tool because of its brevity but interest quickly waned. Tennessee planned to restructure its rates using the NC-SNAP. This effort was abandoned due to stakeholder opposition. As previously noted, Tennessee ultimately decided to tie payments to the ICAP.

In North Carolina, the NC-SNAP is used principally to authorize differential funding levels (tiered payment amounts) for certain residential services provided through the state's HCBS waiver for people with developmental disabilities and/or as a basis for the authorization of certain services. In Kentucky, the NC-SNAP is employed to authorize supplementary residential services payments for a class of high need individuals. It is worth pointing out that the authors of the NC-SNAP have never endorsed its use as a tool for funding applications.

## **12. Utility for Colorado**

The brevity and ease of administration of the NC-SNAP is enticing. However, the tool is insufficiently robust to be employed for all but the most simplistic of funding applications. The decision to apply the tool for funding purposes in North Carolina was based more on expediency than suitability. HSRI does not believe that the NC-SNAP is suitable for the applications that Colorado has in mind.

## **E. Montana Resource Allocation Protocol (MONA)**

Briefly, the MONA is a tool developed by private consultants that is intended to be employed in conjunction with a new community services funding system that is being implemented in Montana.<sup>18</sup> The MONA is a clone of a tool that was developed by the same consultants in Florida for use in a funding system that is roughly similar to the system that they are installing in Montana.<sup>19</sup> We provide only limited profile information concerning the tool.

The MONA was not designed to function as a stand-alone assessment instrument and is not intended for clinical use or as a service planning tool. Instead, the MONA generates a benchmark funding amount based on "usual and typical" spending on behalf of persons who have similar characteristics and circumstances. As people complete their person-centered plans, the MONA generates funding guidelines to

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<sup>18</sup> Go to: [davisdeshaies.com/page2.html](http://davisdeshaies.com/page2.html) for additional information.

<sup>19</sup> In Florida, the tool takes the form of "Individual Cost Guidelines." Application of the tool results in the assignment of a person to a group for the purpose of authorizing personal assistance hours. However, the range of hours that may be authorized is quite wide.

assist people with their purchasing decisions. The MONA generates a resource allocation guideline. It is not a service authorization instrument nor is it a rate-determination tool.

The MONA is designed around pre-specified “cost drivers” that affect the overall costs of supporting a person in the community. The “cost-drivers” are:

- Age of the individual
- Living situation (e.g., with family, own home, supported living, group home)
- Geographic location of providers
- Key support needs (community inclusion, behavioral support needs, health support needs, and current abilities).

While the pre-specified cost-drivers clearly have a bearing on the costs of supporting an individual, they have not been statistically validated. As used in Montana, the MONA tool solely serves the purpose of attempting to link historical utilization patterns with information about individuals to generate waiver service plan cost boundaries. Because the MONA is embedded within the overall Florida and Montana funding schemes, it cannot be used as a standalone tool and, consequently, has no utility for Colorado.

## **F. Maryland Individual Indicator Rating Scale**

The Maryland Individual Indicator Rating Scale was developed in 1997 by the state’s Developmental Disabilities Administration for the express purpose of measuring individual need in order to determine the appropriate level of provider reimbursement. This very brief six-page tool focuses on health/medical and supervision/assistance needs. These needs are measured using a five-point rating scale. The rating scale includes elements that are specific to residential, day program and/or supported employment services. In Maryland, residential services are delivered in three-person settings.

Assessment results are tied to a five-by-five grid that contains payment rates for residential and day/supported employment services. The rate grid contains rate cells that combine the rating of a person’s health/medical needs and the rating of supervision/assistance needs. For example, if a person has a high supervision/assistance rating but a low health/medical need, the rate is lower than in the case of a person who has high needs along both dimensions. Maryland has further refined the rates by establishing area-specific rates for six geographic areas (e.g., rates are higher in areas near the DC metro area than for the Baltimore area or more rural areas of Maryland). The original rate grids were developed through detailed examination of provider costs and have been periodically updated. Maryland’s objective was to standardize payments across providers. Maryland does not represent that the tool was constructed to meet strict psychometric principles.

The Maryland tool has the advantage of brevity and simplicity. The tool has withstood the test of time. The rate grid concept is an interesting method of setting up rates to factor in assessment results along two dimensions rather than relying on a single measure (e.g., ICAP Service Level Index score). Maryland’s method of establishing distinct rates by geographic region also has potential application in

Colorado. The Maryland tool is one of the few tools that specifically addresses day program/supported employment services. However, our judgment is that the Maryland tool could not be readily adopted for use in Colorado and the tool itself is insufficiently robust and has unknown psychometric properties, although the day program/supported employment elements of the tool may warrant additional examination.

## **G. Connecticut Level of Need Assessment Tool**

The Connecticut Department of Mental Retardation has recently developed a comprehensive level of need assessment tool. This tool replaces a briefer tool that had been used in Connecticut to assess consumer needs for services and supports. The new Connecticut tool is a fourteen-page instrument that compiles in-depth information in the following domains: (a) health and medical; (b) personal care activities; (c) daily living activities; (d) behavior; (e) safety; (f) levels of residential and day supports; (g) communication; (h) transportation; (i) social life, recreation and community activities; (j) primary unpaid caregiver characteristics; and, (k) other personal dimensions. This tool is designed to compile a wide range of information about individuals and support multiple uses. The tool employs assorted rating methods, including some that are akin to the SIS.

One use that the tool is intended to serve as the basis for determining individual budget amounts for people who participate in Connecticut's two HCBS waivers for people with developmental disabilities. Connecticut has conducted in-depth statistical analyses of the information generated by the tool to pinpoint factors that affect the costs of supporting individuals. Under both of Connecticut's HCBS waivers, individuals are assigned individual budget amounts. These amounts regulate the amount of services and supports that can be authorized for an individual. Additionally, Connecticut provides that individuals may elect to self-direct some or all of their waiver services utilizing the individual budget amount. Connecticut will be rolling out an individual budget determination methodology based on the new tool shortly. This new methodology will replace a much less sophisticated "high, medium and low" method of setting individual budget limits. The new methodology will assign individuals to budget levels by type of living arrangement. The budget levels are based on a limited number of items contained in the LON tool. Concurrently, Connecticut is engaged in a multi-year effort to standardize services payment rates across provider agencies. Heretofore, Connecticut determined rates through negotiation with individual service providers and employed traditional provider-based contracting practices.

The Connecticut tool is very robust. In part, its length stems from the state's effort to compile a very wide range of information that is employed for multiple uses. In its use as an individual budgeting tool, only some parts of the tool factor in to determining the individual budget amount. We cite the tool principally because it captures certain types of information that are not typically addressed in other tools, principally in the arena of unpaid caregiver status. We do not believe that the tool would be appropriate for Colorado's intended near-term uses. However, parts of the tool could be useful in some Colorado applications (e.g., the SLS waiver).

## H. Oregon Basic Supplement Criteria Inventory

The Oregon Basic Supplement Criteria Inventory (BCSI) is a tool that is used in conjunction with Oregon’s adult Support Services HCBS waiver. The waiver provides limited funding to support individuals with developmental disabilities who principally live with their families. The waiver is similar in its scope and purpose to the Colorado SLS waiver.

In Oregon, each Support Services waiver participant is entitled to receive up to \$9,600 in waiver goods and services. Additional funding may be authorized based on the score generated from the administration of the BCSI. The ten-page BCSI includes the following domains:

- Assistance with daily living
- Physical mobility
- Daytime supervision
- Medical supports
- Night-time monitoring and care
- Behaviors that harm self or others
- Destruction of structures
- Destruction of furnishings
- Complex adaptation of routines in response to behaviors
- Adaptation of the home
- Community-limiting actions
- History of public endangerment by intentional actions
- Single (non-paid) caregiver
- Limited caregiver capacity
- Caregiver’s age
- Caregiver responsibility

Each domain is scored. Persons who have a BCSI score of 60 or less are eligible for the basic \$9,600 entitlement. A score between 61 and 80 permits the authorization of up to \$14,400 in waiver goods and services. A score of 81 or above permits the authorization of up to \$20,000 in waiver goods and services, the maximum that may be authorized through the Support Services waiver.<sup>20</sup> The tool may not be used solely for the purpose of authorizing increased funding for day services. Supplemental funding is provided only to complement the other supports that a person might have.

This tool was not designed for application to “comprehensive” waiver services in Oregon.<sup>21</sup> The tool is not represented as having been developed using strict psychometric properties. We include the tool because it suggests a workable concept to how tiered funding allocations might be structured for the Colorado SLS waiver. The tool includes “difficulty of care” factors as well as others that pertain to an individual’s unpaid caregivers.

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<sup>20</sup> In some cases, individuals may receive additional “crisis funding.”

<sup>21</sup> Through a CMS System Transformation grant, Oregon will be revamping its payments for comprehensive waiver services to standardize rates and implement an individual budgeting system.

## **I. Comprehensive Services Assessment Tool (C-SAT)/Colorado Assessment Tool (CAT)**

We discuss the C-SAT and the CAT together because the CAT is based on and is derivative of the C-SAT. We especially appreciate the willingness of Imagine! officials and its consultant to share extensive materials concerning both tools and to candidly respond to our numerous questions about these tools.

### **1. Scope and Intended Primary Use of the Instruments**

The C-SAT was developed by Imagine! in 2001. The tool has been refined somewhat since it was originally designed. The tool's stated purpose was to account for support needs that drive the cost of service provision for individuals who participate in the HCB-DD waiver. By design, the tool focused on factors that reasonably can be expected to affect the costs of furnishing 24/7 residential and other comprehensive services. The tool was designed to rank individuals with respect to their relative support needs against other waiver participants and thereby support decision making in allocating dollars among HCB-DD waiver participants from a CCB's fixed pool of resources. Another purpose of the C-SAT was to simplify the management of HCB-DD waiver funding. The tool was not designed to support individual service plan development. The tool is not a rate-determination tool *per se*.

The development of the CAT was spurred by recommendations of the assessment sub-committee of the Self-Determination Advisory Committee. The CAT builds on but modifies the C-SAT. A design objective of the CAT is to create a tool that also may be applied to individuals who participate in the SLS Waiver program as well as HCB-DD participants and thereby guide resource allocation for those individuals. Previous studies had revealed that administration of the C-SAT to SLS waiver participants was problematic.

### **2. Description of the Instruments**

The C-SAT is a compact, three-page instrument. It is designed to support the allocation of resources in a consistent, objective and equitable manner. The instrument is divided into five major sections/domains: Health & Medical, Psychological & Behavioral, Safety & Supervision, Daily Living Supports, and Day Program & Transportation. Some areas (e.g., Health/Medical) are further fleshed out into additional sub-areas. The C-SAT looks backward at a person's experiences/services over the past 12 months. Information about the person is recorded in various ways (e.g., degree of independence in performing daily activities, presence/absence of a medical condition). The tool is administered by the person's primary service provider and the case manager. Differences in ratings are conciliated. The underlying scoring algorithm was purposefully designed to yield a normalized distribution of individuals receiving HCB-DD waiver services. Scoring results in the assignment of individuals to one of five "clusters."

The CAT also is a compact three page long instrument. It is divided into four major sections/domains. The C-SAT day program and transportation section was deleted in favor of adding day-services related items elsewhere in the instrument. Modifications have been made in language and to reflect the fact that SLS waiver

participants obtain their primary support from family caregivers. The Daily Living Supports section has been modified to include additional items, including an “extenuating circumstances” section and a “one-time needs” section. In the Health & Medical area, items have been added concerning expressive and receptive communication. This section also has been modified to reflect changes in the provision of therapeutic services under the HCB-DD waiver stemming from the 2004 CMS waiver review. The CAT also has benefited from factor analysis of the C-SAT to remove some overlapping items. The CAT authors stress that the tool has been designed as a general instrument rather than one that is tied to a specific type of residential or day setting. Administration of the tool differs somewhat from the C-SAT. In the case of SLS waiver participants, the Supported Living Counselor (Consultant) takes the place of the service provider in rating the person along with the case manager. At this writing, the CAT scoring algorithm has not been finalized. It is expected that the algorithm will differ substantially from that associated with the present C-SAT tool because it will not be designed to force the outcome of a normalized distribution of individuals.

The “construct” of both the C-SAT and the CAT is broadly similar to the Montana MONA and the Maryland Individual Indicator Rating Scale. Namely, the tools are constructed based on presumed “cost drivers” – i.e., those consumer-related and other factors that are likely to trigger the outlay of funds. This construct is different from that employed to develop tools like the ICAP which are designed to assess adaptive or problem behaviors in their own right.

### **3. Psychometric Properties**

The C-SAT was developed and has been evaluated with greater attention to the tool’s psychometric properties than often attends the development of similar “local” tools. Testing was performed on a relatively large number of consumers and feedback was solicited from case managers and service providers. The tool has acceptable inter-rater reliability, although there have been long-standing differences in the ratings performed by service providers and case managers (service provider ratings tend to be higher than case manager ratings). Over time, there has been a noticeable upward trend in C-SAT scores. However, the relative ranking of individuals has remained about the same. Studies of the C-SAT have confirmed that the tool has relatively good *internal* construct validity. A comparative study of the C-SAT and the NC-SNAP determined that both tools yield similar results but the C-SAT is more informative.

At this stage, it is obviously difficult to evaluate the psychometric properties of the CAT. However, since the CAT carries over many of the C-SAT items and is a brief instrument, it likely will exhibit acceptable psychometric properties that are similar to the C-SAT. In the view of HSRI, the planned approach to scoring the CAT is superior to the C-SAT methodology. We note that neither the C-SAT nor the CAT have been validated directly against tools such as the ICAP.

#### **4. Instrument Strengths and Weaknesses**

##### *Strengths*

- Because both the C-SAT and CAT are compact tools, they can be administered quickly.
- Both tools have face-validity since they address topics that can be expected to have a material effect on resource consumption.
- The majority of the items in both tools are subject to independent verification. While some items arguably require rater judgment, most items can be objectively assessed. This characteristic is important for any tool that might dictate funding/service authorization levels.

##### *Weaknesses*

- Both the C-SAT and the CAT are geared toward adults but not children with developmental disabilities.
- Neither tool is designed nor intended to support individual service plan development.
- The C-SAT scoring algorithm is unsatisfactory. This problem has been acknowledged by the authors and potentially will be corrected in the CAT.
- These tools are designed to predict the relative amount of resources necessary to support an individual. No representation is made that the tools predict or describe the “true cost” of supporting an individual. The tools are designed to distribute resources from a fixed pool. They were not constructed to determine rates. This, however, does not necessarily mean that the tools could not be applied differently to support alternative funding applications.
- A potential area of concern is that the administration of the tools does not engage the person with the disability and/or the family.
- With respect to the CAT, potentially important factors are not included that may have a bearing on the amount of support required for a SLS participant. The CAT does not contain items that sufficiently describe the family home situation (e.g., how many caregivers are available to support the person?) The CAT includes an item about “aging caregivers” but the item is insufficiently defined. Also with respect to SLS, the CAT potentially does not sufficiently account for other sources of support for the person. In our view, the CAT does not sufficiently account for the inherent differences in the provision of 24/7 services versus the provision of complementary supports through the SLS waiver.
- However, preliminary results indicate that the CAT distinguishes between Comprehensive and SLS waiver participants. SLS waiver participants as a group have lower scores than HCB-DD Comprehensive Waiver participants. However, in our view, the difference in scores is an artifact of the instrument itself. Since SLS waiver participants receive less supports than Comp waiver participants, a backward looking tool such as the CAT will reflect differences in services received rather than supports needed.

#### **5. Time/Level of Effort to Administer the C-SAT/CAT**

By report, each tool takes about 20 minutes to complete. Because both tools are intended to be administered by two examiners, total time to administer is 40 minutes.

## **6. Training/Skill Set Necessary to Properly Administer the Tool**

These tools do not require specialized clinical expertise to administer but training is still necessary. Because both tools are relatively straightforward, extensive or elaborate training is not needed. C-SAT training includes face-to-face review of each topic area and how responses are to be made. Training also includes Q&A to review scenarios to ensure consistency in implementation. An instruction manual has been prepared for the CAT. This manual is well-done and can serve as the basis of a training curriculum. Typical training takes about 3 hours. Retraining occurs annually.

## **7. Initial Acquisition and On-going Costs**

Since the CAT was developed with state dollars, there should be no acquisition costs. However, we did not delve into the topic of whether the tool is owned by the state or by Imagine!. Materials costs would include printing/copying.

## **8. Training Costs and Costs to Administer**

Training costs should be significantly less than the training costs associated with "national" tools. However, because the CAT also would be administered to SLS participants, more personnel (i.e., supported living counselors) would have to undergo training.

## **9. I/T System Considerations**

The C-SAT uses Microsoft Access software that to collect and score the results and provide summary information. It has been tied into the Colorado DD I/T system for five years. Costs of modifying this software for the CAT should be minimal.

## **10. Ongoing Support**

If the CAT were adopted for funding applications statewide, DDD would have to provide or underwrite ongoing technical support for the tool.

## **11. Applications of the Tool**

By report, the C-SAT is used routinely currently by only two CCBS for determining funding using the method suggested by the instrument; two other CCBS use it to make dollar adjustments. Each of the 20 CCBS has used the tool for assessment and limited research. The tool has been applied only to consumers receiving comprehensive services in Colorado. At this stage, obviously, there is no experience with using the CAT.

## **12. Utility of the C-SAT/CAT Needs for Meeting Colorado's Needs**

Neither the C-SAT nor the CAT was designed to directly support the funding applications that have emerged in the wake of the CMS review in Colorado. Both tools were designed to support CCB decision-making concerning the distribution of dollars from the CCB "resource pool" to the waiver participants supported by each CCB. Rate setting is a fundamentally different task than distributing dollars from a resource pool. As a consequence, applying either tool revolves around the question of its adaptability to a different application; however, when national tools are used, the same question of adaptation to funding applications also must be addressed.

The questions surrounding using the C-SAT/CAT are by-and-large technical, although they also may involve issues of instrument construction and scoring. The C-SAT/CAT has some properties that are attractive (brevity and face validity) and there are some advantages by continuing to employ a tool with which there is some familiarity. The main shortcoming of the CAT is that it looks backward at services received rather than providing an objective, independent assessment of a person's support needs. In our view, the CAT potentially can meet Colorado's needs, although the tool could benefit from additional modifications, especially with respect to its potential application to the SLS waiver and some reconsideration of its construction. In the final section of this report, we return to the question of whether the C-SAT/CAT could meet Colorado's needs.

### **Conclusion**

In our view, the ICAP, the DDP, and the NC-SNAP are the least suitable of the currently available "national" tools for application to rate setting/funding. The ICAP is showing its age and the DDP, while serviceable, enjoys only limited use. As a baseline assessment tool, the SIS is a much more attractive choice than the older national tools due to its contemporary construct, direct measurement of support needs, and utility in individual service planning. We also believe that the SIS employment section provides valuable information that is sorely lacking in other tools. We believe that the SIS can be successfully used to support funding applications, including rate setting and resource allocation.

In HSRI's view, none of the tools developed by other states are apt candidates for adoption by Colorado, although elements/facets of such tools are of interest. If Colorado wishes to adopt a "home-grown" tool, it is better advised to select the CAT. In the final section, we discuss the implications and pros/cons of selecting the SIS or the CAT.

# Stakeholder Views

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In this section, we summarize what we learned from our meetings with Colorado stakeholders concerning the selection/use of an assessment tool to base payment rates. To recap, we met with the following stakeholder groups:

- Self-advocates
- CCB representatives
- Provider agency representatives [N.B., some CCB representatives also participated in this meeting]
- DDD officials
- The Arc of Colorado and directors of local Arc chapters
- The DDD Policy Advisory Committee

Each of these sessions lasted about two-hours and was reasonably well attended.

As a general matter, it was evident that most stakeholders were not intimately familiar with the types of assessment tools that are used in conjunction with funding or how the results of assessment can be used to establish rates. This is not surprising since such tools have not been in wide use in Colorado and rate-setting has been conducted locally for many years. Some stakeholders expressed the concern that they were being asked to comment on tools with which they were not familiar. In addition, stakeholders by and large appeared to be less interested in the particular tool that might be selected than how rates actually would be constructed using assessment results. During each session, the HSRI team attempted to provide background information about some of the national tools and how various states link rates/funding to assessment results.

At this stage, it is fair to say that most stakeholders have not yet had the opportunity to consider the pros and cons associated with the various tools or how assessment results might be translated into payment rates/funding levels. Additionally, the meetings with many stakeholders were conducted when many stakeholders were understandably focused on the impending release of the interim payment rates that will go into effect in July 2006.

## What We Learned

The purpose of our meetings was not to secure consensus about which tool Colorado should select or how such a tool would be applied to rate setting. Hence, we seek to avoid portraying the views of any particular stakeholder or stakeholders as representative of all stakeholders in a constituency.

We learned the following as a result of our meetings with stakeholders:

- Some CCB representatives stressed the importance of transparency: namely, the link between assessment results and rates should be clear and explicit. Other stakeholders stressed the importance of accountability in the implementation of an assessment process.
- Some CCB representatives also stressed the importance of a tool's credibility in the eyes of people with disabilities, families, and advocates.

- Some self-advocates expressed strong concerns about whether the use of assessment results might lead to the loss of their hard-won supports;
- Some CCB representatives stressed the importance of designing an assessment/rate structure that would withstand appeals.
- Some CCB representatives stressed that the tool itself should not dictate consumer choice of services. Self-advocates also stressed that they wanted to be able to choose their services.
- Reservations were expressed about the backward looking orientation of the C-SAT/CAT rather than focusing on an individual's current and future needs.
- Across the stakeholder groups, there was generally no strong preference that Colorado adopt one tool or the other. A few CCB stakeholders expressed strong support for the selection of the SIS. Somewhat surprisingly, there did not appear to be especially wide-spread support for selection of the CAT. At the same time, it was evident that not all stakeholders were familiar with the CAT and it must be kept in mind that the CAT was still being finalized during our visit.
- A few CCB and service provider representatives saw value in selecting a tool that also could support service plan development.
- Self-advocates stressed the importance of looking at the "whole person" rather than only at limited dimensions of a person's life. They also felt that they know a lot more about themselves than others give them credit for.
- Several stakeholders expressed concerns about the extent to which assessment tools/funding could appropriately and accurately reflect the demands posed by individuals with very challenging medical and/or behavioral conditions.
- Some CCB and service provider representatives pointed out that Colorado's present payments for comprehensive services are not cost-based and, in their view, are insufficient. Instead, rates have been based on the dollars available and divorced from costs/individual needs. This has affected the selection of services (e.g., prompting the expansion of host home services to the potential detriment of personal care alternative services). Concerns were expressed that the effect restructuring payments around assessment results would be solely to redistribute dollars rather than develop appropriate and adequate payment rates.
- Some advocates expressed concerns about ensuring the quality of assessments. Some expressed the view that the assessment should be performed by the individual's planning team rather than as a disconnected, separate activity. Other stakeholders also expressed the importance of engaging families, guardians and people with disabilities in the assessment process.
- Some service providers expressed concerns about whether case managers would possess the necessary skills and experience to administer an assessment tool and/or had sufficient knowledge of consumers. This concern also was expressed by other stakeholders. Self-advocates also pointed out that some case managers were not doing a good job supporting them and some of their case managers do not know them very well.

- A few stakeholders expressed reservations about the SIS and the CAT because the tools did not identify some specific conditions that they believe deserve special attention.
- Most stakeholders expected that the tool would be administered by case managers. Several stakeholders expressed the importance of furnishing solid training in the administration of the tool.
- Some DDD representatives expressed concerns about the design of the SIS, including whether the SIS might identify needs that Colorado cannot afford to address.
- A few stakeholders expressed concerns about how objective assessments would be when a CCB itself also is a service provider.
- Some CCB representatives stressed the importance of selecting a tool that appropriately measures and assesses behavioral challenges.
- A few CCB representatives emphasized the importance of selecting a tool that properly and adequately addresses day, vocational and supported employment support needs.
- Some self-advocates expressed dissatisfaction with the lack of opportunities and support for them to work or to engage in other learning.
- Both CCB and service provider representatives expressed concerns about the potential administrative burdens associated with some assessment tools and the skills/experience necessary to administer the tool properly. They – along with some DDD officials – expressed a strong preference that Colorado select a tool that is simple to use and could be administered quickly.
- Some DDD officials pointed out that the Division has limited staff resources and, thereby, would be challenged to provide extensive support for or oversight of the administration of a tool.

## **Conclusion**

Stakeholders offered many views that merit attention and consideration going forward. The absence of a strong preference for one tool or another is not surprising but suggests the potential value of providing additional information about the various tools to stakeholders. However, it also was evident that stakeholders are much more concerned about how assessment results will be translated into payment rates than the specific tool that might be selected.

# Selecting a Tool

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Implementing a new assessment tool is a major undertaking for any state. It is important to pick the right tool for the intended applications. Based on our review and analysis, the SIS and the CAT emerged as the most apt candidates to serve as the assessment tool to support rate determination and funding allocations (in the case of the SLS waiver) in Colorado. There are pros and cons associated with each tool, some of which are technical while others are practical. In the next section, we compare these tools along several dimensions. In the following section, we discuss various topics that pertain to tool administration.

## Which Tool?

### Tool Properties

As a general matter, the SIS is a stronger, better developed tool for the measurement of support needs than the CAT. The SIS has three important strengths:

- The first is that the SIS *directly* measures support need across common dimensions of community living. Direct rather than inferential measurement of support needs lends greater confidence about the results derived by administering the SIS than tools (such as the ICAP) offer.
- The second strength of the SIS lies in how the tool measures support needs. The tool's three-dimensional raw scoring method takes into account the frequency, type and amount of the supports that a person needs. In our view, this is a superior approach to measuring the intensity of support needs.
- The third strength of the SIS is that its items and domains have been carefully constructed and clearly benefited from the multi-year effort to develop the tool. The SIS employs a uniform, consistent approach to item rating across all domains. The CAT uses various ways of rating different sets of items. Some CAT items are not especially well constructed and potentially are open to interpretation issues. Many CAT items are structured along "yes/no" response lines rather than rated according to a scale. The use of "yes/no" items tends to weaken a tool's power in some funding applications. In contrast, the SIS consistently employs the same type of rating scale across all items.

The SIS also gains additional advantage over the CAT because it is a longer and thereby an inherently more robust instrument. The CAT was designed with brevity in mind. While brevity can be a virtue, in general, the briefer the tool, the less its descriptive power.

The CAT is constructed as a "look-back" instrument (e.g., examiners are instructed to complete the tool based on the person's history and services over the previous 12-months). This approach is somewhat at odds with the essential purpose of an assessment tool: namely, to obtain a current appraisal of consumer support needs. A person's recent history and experiences obviously are important elements in any assessment. However, in our view, there are problems with using a look-back construct for many of the CAT items, principally because the underlying assumption is that, if a service or support was not used in the past, it must not have been

needed and, thereby, probably does not pose a concern going forward. In some cases, a person may have needed a service but simply was unable to obtain it. Hence, the CAT is akin to driving by looking through the rear-view mirror. The SIS employment section is much stronger than the limited exploration of day supports and employment services that is contained in the CAT.

The SIS has some of its own shortcomings. States have identified gaps in the SIS with respect to certain types of information that they believe have a material bearing on services (and thereby costs). Consequently, so far, three states have developed supplements to capture additional information. Some of the information captured in these supplements is broadly similar to some information captured in the CAT. The Utah and Washington State SIS supplements appear to be well-designed and on-target. We do not believe that the need to supplement the SIS undermines the tool's essential utility or value.

In our view, both the SIS and the CAT would have to be modified in order to be used to determine SLS waiver funding authorizations. The SIS focuses solely on the individual who receives services and does not include items about a person's non-paid caregivers (e.g., family members). This prompted Utah to add items about non-paid caregivers to its SIS supplement. The CAT includes a few items that are SLS-waiver related. However, these items are not particularly robust or informative and almost appear to be an afterthought rather than the product of careful instrument design. The purpose of the SLS program is not only to provide funding to meet the needs of the individual but also to complement the unpaid supports that family caregivers provide. Hence, while the person's own support needs must be taken into account, it also is necessary to assess caregiver status and availability.

In this vein, the Oregon BCSI tool offers a useful template for how either the SIS or the CAT might be modified to blend individual needs assessment information with caregiver status information. If the plan is for Colorado to employ a single tool in both waivers, we believe it would be necessary to supplement SIS to capture caregiver information along the lines of the Oregon BCSI or items drawn from the recently released Connecticut Level of Need tool or consider adding similar information to the CAT.

To summarize, we believe that the SIS is the better constructed tool for the measurement of the support needs of Comprehensive Waiver participants. SIS results likely will provide more robust information to support the assignment of individuals to rate tiers. Moreover, we believe that stakeholders will regard the results of the SIS assessment to be a more trustworthy and credible basis for determining payment rates and funding allocations because the tool provides an objective assessment of support needs. The SIS would have to be supplemented to capture additional information that has a bearing on funding. SIS supplementation also is necessary for using it in conjunction with the SLS waiver. We believe that the Utah SIS supplement can fill in the gaps.

While we believe that the SIS is the better tool, the CAT generally contains sufficient information to support Colorado's intended near-term uses. However, if the CAT were to be selected, stakeholders should keep in mind its "rear-view mirror" design.

We acknowledge that considerable effort went into the development of the underlying C-SAT and the CAT is a further refinement. We were impressed with the evident care and attention to proper tool construction that has been exercised in developing the CAT. If Colorado were to select the CAT, we believe that the tool could and should be further improved over time.

## **Reliability**

It is important that a tool exhibit inter-rater and test/re-test reliability. If there are underlying reliability problems with a tool, then the credibility of assessment results is undermined. When there is not confidence about the reliability of assessment results, then decisions about funding that are based on assessment results will be questioned. Both the CAT and the SIS exhibit acceptable reliability levels. However, achieving high reliability levels with the SIS is more heavily dependent on the quality and extent of examiner training and experience. This strongly suggests that, if the SIS is selected, a state should consider designating a limited cadre of well-trained examiners rather than attempting to train a large number of examiners. In our view, achieving reasonably high reliability with the CAT is less contingent on examiner background and experience.

## **Tier Assignment**

Neither the SIS nor the CAT comes with an algorithm that translates scores/results into predefined categories of individuals. As previously discussed, the ICAP includes such predefined categories (based on the Service Level Index score) but the use of the ICAP Service Levels to establish rate/funding categories is problematic for several reasons, not the least of which is the lack of close correspondence between Service Level Index scores and resource consumption patterns.

Regardless of whether the SIS or the CAT is selected, Colorado will face the problem of how to translate assessment results into rate tiers. Both instruments will rank individuals relative to their service/support needs; however, the rankings by their very nature are continuous and do not in and of themselves provide sufficient information to define boundaries for each tier.

In order to appropriately define the tiers, one strategy that Colorado can employ is to apply the selected tool to a sufficiently large sample of individuals and apply statistical methods to identify statistically compact and meaningful groupings of consumers. For this purpose, a credible sample size would be 500 persons, although somewhat smaller samples could be used without sacrificing statistical significance. How many “naturally occurring” groupings would be identified is uncertain until the analysis is performed. In theory, these groupings could be tested for relevance/appropriateness by determining the extent of correlation between group assignment and present funding levels. In Colorado, such testing will prove difficult unless controls are built in to account for the historical disparities across CCBs in the amount of HCB-DD waiver funding.<sup>22</sup>

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<sup>22</sup> HCB-DD waiver funding differs from CCB-to-CCB for historical reasons and because some CCBs have supplemented state funding with local mill levy dollars. As a consequence, while

Factor analysis also can be employed to determine whether the overall instrument score is the best variable for establishing these groupings or whether selected assessment instrument items or subscales would be better variables. Typically, the experience has been that total scores are less powerful predictors than sub-elements of tools in explaining variance in consumer resource consumption. In addition, an expert panel can be used to validate the statistically-derived tiers (by confirming that there are material differences in the support needs/resource requirements of individuals who would be assigned to each statistically-derived tier).

In developing residential and day services rate tiers, Colorado will need to address the following topics:

- Consideration must be given to reserving a tier for “outliers” and excluding known outliers from the statistical analyses that are performed to establish the tiers. Excluding outliers will make it easier to identify/develop the tiers.
- With respect to day services, Colorado should consider whether an alternative tier structure is appropriate. In general, day services costs tend to exhibit less dispersion than residential services costs. For example, there might be six residential tiers but only four day services tiers. Especially with respect to employing the CAT (but also to some extent with respect to using the SIS) to establish tiers for day services, Colorado may wish to consider excluding some items that are closely identified with the provision of residential services.

Once sufficient assessments have been performed and linked to current expenditures, Colorado should be able to perform varied statistical analyses to define tiers using standard statistical software packages.

Either the CAT or the SIS will support the creation of tier levels for rate determination purposes.<sup>23</sup> The construction of the tiers will dictate drawing a sample of individuals, administering the tool, and employing statistical methods to identify the proper tiers. At the end of this process, Colorado likely will find that the assignment of individuals to tiers will entail the construction of an algorithm that draws on selected elements of the assessment tool rather than total tool scores.

## **Relevancy to Service Planning**

The construct and design of the SIS is clearly superior to the CAT with respect to supporting individual service planning. Evidence from the field is that the SIS contributes important information to the service planning process by pinpointing where supports may be most necessary. The SIS is designed to support a person-centered approach to individual service planning. Utah has added another dimension

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residential costs might scale with support needs within each CCB, it can be expected that these costs will be imperfectly related to support needs across CCBs due to inter-CCB funding differences. It may be possible to use a proxy variable to control for this underlying variation.

<sup>23</sup> We note that Imagine! has performed an analysis of CAT results that indicates the feasibility of identifying seven groupings of individuals. However, this result is not especially remarkable since statistical methods usually can be applied to define groupings in any reasonably large data set. We note in passing that Georgia found that the SIS yielded a reasonably normal distribution of individuals with respect to their overall SIS scores, suggesting that the SIS also will support grouping individuals. What is important is less the capacity of a tool to produce groupings than whether the groupings are meaningful and reasonably compact.

to the SIS by including check-offs about whether supports in a particular area are “important to/important for” the individual. This information is used to organize the service planning process. The strength of the SIS in supporting individual planning means that, were the SIS to be selected, it could serve two roles in Colorado. However, exploiting the capacity of the SIS to support service planning would require retooling service planning in Colorado and a considerable commitment to and investment in training for case managers, individuals and families, and service providers. In the near-term, Colorado may not be able to make these necessary investments. However, selection the SIS could provide a platform for better linking assessment and service planning down the road.

We note that, in the new waiver application and instructions, CMS has expressed more concrete expectations the linkage between assessment and individual service plan development, including risk assessment. CMS has not dictated that a state necessarily select a standardized assessment tool to support service plan development. However, CMS has expressed the expectation that the service plan be based on assessment results (including risk assessment). Moreover, there is an expectation that individuals be assessed in a reasonably uniform manner. In this vein, Colorado should give serious consideration to adopting a single baseline assessment tool. The SIS can play this role. However, it is important to point out that CMS does not endorse the use of any particular assessment tool.

We also point out that the use of a standardized assessment tool can contribute to the design of effective quality management strategies because of the potential for identifying consumer-related factors that may affect outcomes.

### **Individual Budgets**

We believe that the SIS can provide a solid foundation for the design and implementation of an individual budgeting tool in Colorado. Georgia was able to develop such a tool employing the SIS. We believe that the CAT is less suitable in this regard because of its basic design. We note that the SIS may be amendable to translating assessment results in personal assistance authorizations since the SIS incorporates both ADL and IADL-type elements and SIS scoring takes into account both the frequency and amount of assistance that is necessary.

### **Administrative Burden**

Of the two tools, the CAT by design can be administered more quickly than the SIS. The overall administrative burden associated with administering the SIS is about twice that of the CAT (taking into account the dual-examiner model used to administer the CAT). The SIS takes longer to administer than the CAT due to its reliance on interviewing key informants. The CAT relies on the knowledge that service providers and case managers have about a person and, hence, does not require interviewing, although it can be necessary to secure additional information about a person in order to complete the CAT.

Administrative burden cannot be discounted, especially in the near-term. To successfully transition to tier-based rates, it will be necessary to administer the selected tool to the entire HCB-DD waiver population in advance of the transition to

the new assessment-based tier rates that are presently scheduled to take effect in July 2007. Colorado will only have a limited period of time (potentially only six-to-eight months) to accomplish waiver-wide administration of the tool that it selects.

At the same time, concerns about administrative burden can be overdone. An overarching goal is securing useful, robust assessment information. In our view, the additional administrative burdens associated with the SIS are not so great as to dismiss the tool out-of-hand solely on these grounds. The more pertinent question is whether the quality and extent of the information gained through the administration of the SIS justifies the additional time necessary to administer the tool.

### **Out-of-Pocket Costs**

Colorado will incur greater out-of-pocket tool acquisition costs if it selects the SIS rather than the CAT. The total first year cost of implementing the SIS for HCB-DD waiver participants would be about \$40,000 (including acquiring booklets, examiner manuals and signing up for SIS-Online). Costs would be higher if the tool also were used in conjunction with the SLS waiver. In contrast, the CAT probably would cost little in the way of out-of-pocket materials costs. We have not attempted to estimate the costs associated with the necessary I/T systems that may need to be established to support the CAT. However, such costs likely would not be great.

### **Training**

The SIS clearly requires more intensive and extensive examiner training than the CAT. SIS training costs are not insignificant. The SIS places a premium on examiners receiving a solid grounding in the tool and its method of administration. If the SIS were selected, Colorado should consider contracting with AAMR to conduct initial training and then build the capacity either at DDD or through a third party to provide ongoing training to examiners. CAT also has training costs; however, we estimate that such costs would be substantially less than the SIS.

### **Adoption Considerations**

Since neither the CAT nor the SIS currently are in widespread use in Colorado. Hence, neither tool has a particular special advantage in terms of ease of adoption across the 20 CCBs.

### **Summary**

**All other things being equal, we believe that Colorado would be best served by selecting the Supports Intensity Scale.** The SIS is a solid, contemporary assessment tool that can play a variety of roles in Colorado, including meeting the state's near-term need to restructure HCB-DD rates. We believe that stakeholders will have confidence that the tool appropriately measures supports needs. We also believe that the SIS can serve as platform for implementing effective person-centered planning processes and centering attention on the individual and his/her needs.

That said, selecting the SIS also would bring with it greater implementation challenges, higher out of pocket expenses, and a greater administrative burden than

the CAT. We believe that the CAT can meet Colorado's short-term needs, although we believe that the tool can stand improvement.

## **Additional Considerations**

We offer some brief additional observations with respect to assessment and the use of assessment results in establishing payment rates.

### **Who Administers the Tool?**

As a general matter, states have elected to have case managers administer the assessment tool. When assessment results are tied to funding, problems can arise when service providers administer the tool (as witness the Tennessee experience). The decision by some states to contract with third-parties to administer the tool recognizes the importance of consistent administration of the tool as well as the potential advantages of employing a disinterested third-party to perform assessments. However, third-party administration is costly.

In Colorado, some CCBs also function as service providers and this may pose problems with respect to disinterested administration of any assessment tool where assessment results directly affect the amount of funding that the CCB receives as a service provider. Regardless of the tool selected, Colorado will have to make policy decisions to address this situation. A possible strategy is that case managers from other CCBs perform assessments of individuals to whom a CCB furnishes direct services. The dual examiner model used with the C-SAT/CAT provides some checks and balances. However, we do not believe that this model is necessarily the most appropriate going forward.

### **Quality Control**

Regardless of who administers the tool, Colorado must design and implement strategies to ensure the accuracy of assessment tool administration. This is especially the case when a tool drives funding. Consequently, regardless of the tool selected, Colorado should plan on implementing a quality control program that includes the review of a sample of assessments to ensure that the tool has been properly administered and that the support needs of individuals have been assessed accurately.

### **Appeals/Reconsideration**

Colorado should anticipate that disputes will arise regarding assessments (e.g., a party believes that the assessment understates a person's supports needs). We believe that Colorado should address such disputes by providing that a new assessment be performed by a disinterested party to evaluate the accuracy of the original assessment.

### **Rates**

The tentative plan in Colorado is to establish the assessment-based tier classification and then engage an actuary to determine the rates for each tier, presumably based on historical cost/expenditure data. This approach likely will prove be problematic given the historical disparities in the distribution of HCB-DD funding across CCBs.

Colorado should standardize payments with respect to assessed support needs. However, unless great care is exercised, the result of standardization could be a substantial redistribution of dollars across CCBs and service providers. There is no evidence to support the proposition that the presence variance in costs is the byproduct of anything other than historical and/or local factors. Therefore, shifting dollars among CCBs and service providers could prove to be very problematic.

We believe that the better approach is to develop service rate models along the lines discussed earlier in this report. We believe that the development of such models would put the funding of community services in Colorado on a more solid footing going forward by more clearly establishing the basis of uniform statewide rates. It is important to anchor rates in an assessment of the actual costs that service providers incur or would reasonably be expected to incur in order to achieve a specified level of staffing intensity. At the same time, we acknowledge that considerable time and effort would be necessary to properly develop such rates.