

RUSH Research Utilization Award Application

**Dissemination of a mixed-utilization model for promoting
substance use disorder screening in vocational rehabilitation**

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1. Relation between Proposed Utilization Activity and Short-term and Intermediate Outcomes

Routine assessment of substance use disorders (SUD) in vocational rehabilitation (VR) is imperative to assure that consumers who are in need of substance abuse-related services are identified, referred, and receive such services. Moreover, recent research substantiates a higher prevalence rate of SUD among persons with disabilities when compared to the expected rates. In the validation phase of the current research described in this application, in a sample of nearly 1,000 VR applicants, 22% met DSM-IV R criteria for either substance dependence (19%) or abuse (3%). This is nearly triple the rate published for the general population (Heinemann, Miller, McAweeney, Lazowski, & Moore, 2006), and it is especially noteworthy because only 13% of VR consumers are coded with SUD as either a primary or secondary disability in the 2005 RSA911 Case Service database (McAweeney & Moore, 2006).

The consequences of substance abuse include lack of job retention, lack of achieving self-sufficiency, low employment rates, and barriers to community integration (Moore & Li, 1994). Moore and colleagues (2002) demonstrated that employment outcomes are severely limited among VR consumers with substance abuse problems. Fortunately, consumers with substance issues who receive appropriate services often achieve successful outcomes. Schwab and DiNitto (1993) found in a sample of more than 26,000 VR consumers, those with SUD who received appropriate services were nearly as likely to be successfully rehabilitated as consumers with other disabilities, and those with a SUD diagnosis were less costly to rehabilitate and they received services for shorter periods than consumers without SUD. However, consumers first need to be identified as having the potential for substance problems in order to receive appropriate services.

In order to address the above issue, the Rehabilitation Research and Training Center (RRTC) on Substance Abuse, Employment and Disability designed a study to develop, validate, and implement a substance abuse screener specifically for persons with disabilities who are seeking employment through VR. The study is entitled ***R1: Promoting Substance Use Assessment by Vocational Rehabilitation Agencies***. The study is concluding its second of five years, and at this time a validated screening tool is being implemented on an evaluation basis in IL, OH, and WV.

Following extensive discussions with research partners, as well as use of technical assistance from NCDDR, we are proposing the following RUA project to increase and enhance the planned dissemination and utilization outcomes for the above-listed RRTC research project:

Specific Objectives of the RUA:

1. Develop a trainer of trainer system utilizing consultants with VR backgrounds in order to increase training capacity and further disseminate SUD screening practices in other VR systems.
2. Increase media representation of VR staff and consumer attitudes, beliefs, and practices in the training materials
3. At the suggestion of the Council of State Administrators of Vocational Rehabilitation (CSAVR), double the number of VR state systems currently employing systematized SUD screening for all applicants (from three to six states), thereby increasing the sample of state VR systems in the evaluation while also increasing knowledge transfer.
4. Expand the evaluation measures of the training impact on VR counselor knowledge, attitudes, and behavior, as well as further examine the impact of a state-wide SUD screening policy on VR systems.

All of these objectives are detailed below, and the activities associated with each are explained.

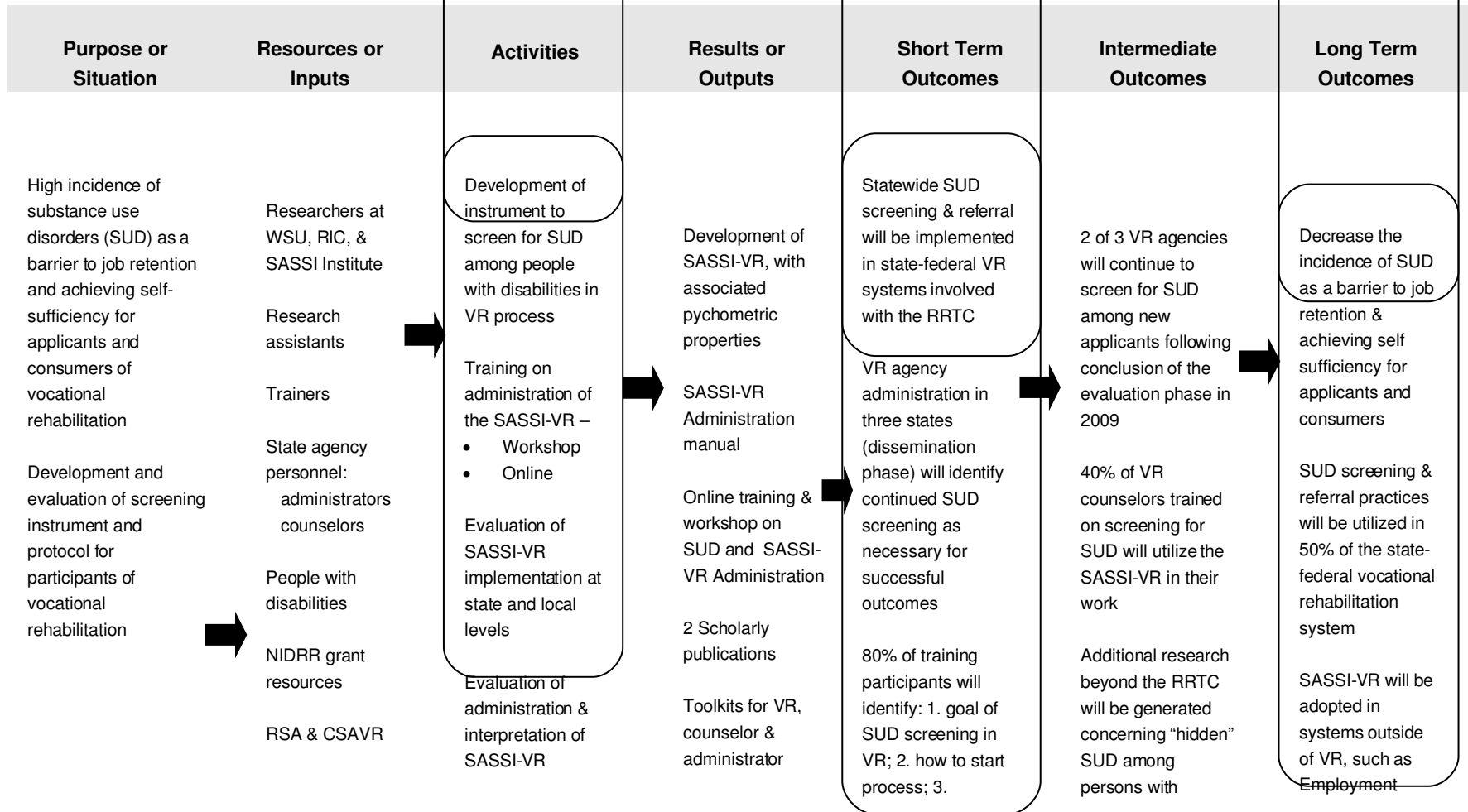
Background. The National Institute on Disability and Rehabilitation Research (NIDRR)-funded RRTC was awarded to Wright State University (WSU) and is currently ending its second of five years of funding. The substance abuse screening project discussed above is one of the most exciting and ambitious projects undertaken by WSU's RRTC. It has the potential to make a substantial contribution to the SUD field, aiding VR counselors and directly serving those with SUD. In collaboration with the Rehabilitation Institute of Chicago (RIC) and the SASSI Institute, the screening tool was validated over the last 18 months on nearly 1,000 applicants to VR. Concurrently, a training program was developed and counselors from one half of the field offices in IL, OH, and WV will be trained by the beginning of 2007. The other half of the field offices and counselors will receive training in 2008, thereby creating a delayed-start control group for each of the states. Each VR program will utilize the SASSI-VR in all their field offices by 2008. Extensive online training materials are being developed and deployed at this time. Modules for a total of eight, free CEU's are available now, and two more hours of modules will be added within three months.

The development of training materials for this project has entailed much effort. In preparation for developing the training materials, the RRTC collected over 12 hours of video interviews with VR personnel discussing issues related to VR and identification of or planning for rehabilitation services for persons with SUD. We do not have the resources at this time to identify and field test additional

vignettes from the video that can be incorporated into the training, although this material is particularly relevant to the training objectives. For example, videotaped segments that could be utilized include comments on SUD prevalence among VR consumers, how and why to screen for SUD, how to address resistance and consumer denial, how to develop rehabilitation plans that include SUD issues, and how to link with community resources that can assist with SUD rehabilitation. This RUA application would specifically address that need as one of the project objectives by using the VR training consultants as experts in reviewing this video material.

In the RRTC R1 study, we hypothesized that 1.) The SASSI-VR would demonstrate adequate psychometric properties with a heterogeneous sample of persons with disabilities who also have SUD; 2.) Counselors would find the SASSI-VR to be a useful method for quickly screening for SUD among applicants to their programs; 3.) A higher proportion of SUD-related disabilities would be coded in offices using the SASSI-VR than in offices not using the screening; and, 4.) Proportionately, more cases would be successfully closed in offices using the SASSI-VR than in offices not using this screening tool. Figure 1 below illustrates the R1 logic model that was developed following training by NCDDR staff. The R1 logic model lists the activities; the target

Figure 1: Logic Model for R1: Promoting Substance Use Assessment by Vocational Rehabilitation Agencies





**Immediate
Target Audience**
-state-federal VR
systems in Ohio,
Illinois & West
Virginia

Mixed-utilization model for promoting SUD screening

procedural or other
barriers to
screening; &
4.resources
available to assist
consumers with
SUD

disabilities and/or
VR

Increase office
identification of SUD
and demonstrate
measurable gains
on selected indices
of success as
compared with
controls

Centers and
community based
rehabilitation

systems that will be influenced by our project activities; and the *specific short, intermediate and long-term outcomes* that will result from the RRTC study. As can be seen in this model, the proposed RUA is consistent with these goals, and completion of the RUA would particularly assist with achieving the intermediate and long term goals of this project.

To date, the R1 RRTC study described in the above logic model has developed a SUD screener for persons with disabilities (SASSI-VR), validated the psychometric properties of the SASSI-VR on persons with disabilities, and the study is now in the process of implementing use of the instrument in three state-wide VR programs. The SASSI-VR can be rapidly administered in several accessible formats, and it results in an automated report that addresses the work-related issues that may face an individual based on their responses. This study is now entering the “evaluation” phase, where three state VR programs will use the screener with new applicants to their systems. The RRTC will collect data on utilization and case services outcomes, and comparisons will be made between offices that use and those that do not use the screener in each of the states.

R1 Study outcomes from logic model that are addressed or enhanced by RUA proposal:

Intermediate Outcomes

1. A total of 2/3 of VR agencies implementing SASSI-VR will continue use following conclusion of the evaluation phase in 2009.
2. At least 40% of VR counselors trained on screening for SUD will utilize the SASSI-VR routinely (defined as 3 or more uses within a 3 month period).
3. VR offices using SASSI-VR will increase identification of SUD and demonstrate measurable gains on selected indices of success as compared with controls (e.g., status 26 vs 28 case closure; case services provided, supported for persons with SUD).

Long Term Outcomes

1. Improve VR services and employment outcomes for persons with SUD.
2. SUD screening protocols will be systematized in 50% of all state-based VR.

In addition to the above, the proposed RUA will further enhance outcomes through the creation of a core of VR-based trainer consultants. The three consultants identified in this proposal will assist with system-wide training in the use of SUD screening and specifically the SASSI-VR in three new VR programs (KY, UT, & VA - see letters of agreement in Appendices). They also will assist in increasing the trainer pool by training other consultants as needed. The R1 RRTC study also will be enhanced by the creation of additional evaluation instruments and measures that focus on counselor knowledge, attitudes

and behaviors concerning rehabilitation and SUD, as well as instruments to measure VR administrative acceptance of screening practices.

2. Clarity and Quality of Proposed Utilization Activity

In response to the Research Utilization Support and Help (RUSH) *Research Utilization Award* (RUA) for NIDRR’s grantees’, we are proposing a mixed utilization model that combines elements from the four Research Utilization Support and Help (RUSH) models: Best Practice Knowledge Transfer, Collaborative Support, Knowledge Synthesis, and Technology Transfer. The model emphasizes how the *specific activities* we will implement are linked to our expected outcomes.

In accordance with a mixed model approach, we are proposing activities to take place in the same types of settings as the initial RRTC study (Best Practice Knowledge Transfer Model), we will collaborate with partners (SASSI Institute, CSAVR, VR consultants, and VR state systems) we either already work with or with persons with extensive VR knowledge (Collaborative Support Model), we will produce new evaluation instruments and enhanced training materials (Knowledge Synthesis Model), and finally we provide a substance abuse screening protocol, including the SASSI-VR for additional state-based VR programs (Technology Transfer Model). The overall aim of this mixed model is to facilitate wider utilization of the SASSI-VR and promote greater awareness about the value in this screening application. Table 1 identifies the RUA project objectives, rationales, and approaches that define this project.

Table 1 – RUA Objectives, Rationales, and Approaches

Objective	Rationale	Approach
1. Development and training of a cadre of VR-based trainers to implement SASSI-VR screenings in state-based VR systems	A cadre of trainers is necessary in order to provide training and technical assistance to programs implementing screening for SUD	Recruit 3 VR personnel familiar with SUD and training to serve as a core group
2. Increase media representation of VR staff and consumer attitudes, beliefs, and practices in the training materials	Over 12 hours of video is archived on VR personnel and consumers commenting on SUD and the need for identification these conditions. Approaches for addressing SUD and developing SUD-related IPE’s are addressed in interviews	As part of training, VR consultants will identify media segments to include in live and web-based training materials
3. Double the number of state-based VR programs pilot testing a state-wide screening for SUD using the SASSI-VR (from	Six states implementing state-wide use of the SASSI-VR will increase the likelihood that other states will initiate the procedure	Offer free on-site and online training, supplies of SASSI-VR, and evaluation assistance in determining the efficacy of this approach on

three to six states)		state-wide basis. State systems to be involved already recruited
4. Expand evaluation of training effectiveness, knowledge transfer, and efficacy of the state-wide screening systems	Improve content of training and state wide implementation protocols by more extensive evaluation of new state systems and their personnel	Create and pilot test additional paper/pencil and online instruments for evaluation of training for VR personnel, VR administration, and consultant trainers

Implementation plan for each of the RUA objectives

Objective 1. VR based training consultants

The RRTC staff experiences with the SASSI-VR training project to date have established that in order to effect changes in VR systems regarding substance abuse screening 1.) live trainings with all counselors and supervisors are necessary to address some initial attitude and knowledge transfer issues, and 2.) trainers need to have a strong working knowledge of how VR is provided within these systems. The best method for addressing both of these needs is to develop and support a cadre of trainers who are willing to work as consultants on a part-time basis. Ideally, these consultants should have a VR background and have prior histories of providing training in these settings. Three such individuals have been identified as the initial group of trainers, and all three have years of experience in VR as well as strong training skills. These individuals also have served as both counselors and administrators in VR.

Following funding of the project, a two day period in February, 2007, will be chosen when all three persons can convene at WSU for their initial training in substance abuse screening and the SASSI-VR. The training will be conducted by Mary McAweeney, Ph.D., with input from Margaret Glenn, Ed.D., RRTC Training Director and the SASSI Institute. One day will be devoted to reviewing the live training curriculum and supporting materials, and the second day will be to review policy issues, counselor concerns, and technical assistance options that impact training and project outcomes. All three individuals chosen as VR training consultants have had prior experience with the RRTC R1 project. Carl Marshall was involved in arranging for video taping of VR personal for the training vignettes, and he also was videotaped talking about the advantages of substance abuse screening in VR. Alfreda Bell participated in four meetings and a focus group that reviewed the R1 plans, and she had direct input into the protocols recommended for SASSI-VR administration. Barb Schiedermayer traveled to WSU in early 2006 for two days to assist in the design of the R1 training materials. (see training consultant resumes in Appendices.) The first state trainings involving the consultants will include an RRTC staff member who has already conducted such a training (Moore, Glenn, or Keferl), and the costs for these secondary trainers will be underwritten by the RRTC as part of the training budget.

During the final three months of the RUA project, the VR training consultants will assist with identifying, recruiting, and training additional personnel to be utilized in this role in the future. A second training session will be held at WSU to prepare these personnel for the role of SASSI-VR trainers.

Objective 2. Increase video media utilized in training materials

Prior to the February meeting at WSU, the VR training consultants will receive selected copies of the video shot using VR staff. They will review this material and select segments to be included in the training modules and live training sessions. These segments will be reviewed during the WSU visit, and the video will then be transferred to Flash format for inclusion in the training materials (see budget detail). It is anticipated that an additional 10-20 minutes of video will be identified for inclusion in the training materials.

Objective 3. Double VR state systems employing SASSI-VR

Three state VR programs have volunteered to participate in state-wide implementation of the SASSI-VR, and these include KY, UT, and VA (see letters of support). Dennis Moore will visit each state administration in Jan-Mar, 2007, in order to plan for the implementation of the screening instrument. Regionally-based live trainings will be scheduled, protocols for implementation and evaluation will be reviewed and discussed, and a policy-related document will be disseminated and discussed to review likely questions or issues that might arise from implementing this procedure. It is anticipated that approximately 600 VR staff will receive live training beginning in Mar, 2007 across the three states. Unlike the procedure in the current R1 study, all field offices will implement the screening at the same time, following the live trainings. Online materials provide an overview of SUD, the goals of rehabilitation for employment of persons with SUD, an overview of screening for SUD and use of the SASSI-VR, and approaches for developing and evaluating IPE's that address SUD.

VR counselors represent a variety of backgrounds, experience, and attitudes toward addressing SUD screening in VR settings, and consequently the training materials and approaches were created to be sensitive to this issue. For example, multiple approaches for addressing positive SUD findings are discussed and provided. Counselors therefore will have the option to be either the primary contact with VR consumers about this issue, or they can elect to utilize other professionals in the community who have additional expertise in this area. Due to differences in SUD expertise available to communities based on how rural-urban issues, alternatives for locating expertise are provided in the training materials. This includes web-based search engines that locate SUD providers and self-help support meetings for SUD.

Beginning in the second month of screening implementation, VR administrators will receive utilization statistics on the SASSI-VR that specify the number of screenings conducted, the percent that are SUD positive, and the percentage of consumers who refuse to take the voluntary screening (refusals tend to go down over time as staff become more familiar with the process and how to introduce the concept to consumers). These statistics are provided to administrators at a field office level. All TA requests to the RRTC or the SASSI Institute are logged by the nature of the request and

the specific response. These are evaluated in monthly team meetings to analyze patterns of utilization and identify specific problems or barriers that may emerge.

Objective 4. Expand evaluation of training effectiveness and state-wide impacts

The RUA project will allow for development of sensitive and specific evaluation measures. These are detailed in Table 2 in Section 5 of this application. Additional information will be solicited from counselors, administrators, and VR training consultants to accurately determine the impact of the RUA activity on the specified outcomes. The existing counselor training evaluation forms were designed as post-test only, and these will be modified to include a pre-test. Training consultants will be rated on their training effectiveness and fidelity to the training objectives, and these instruments will be completed by the RRTC staff accompanying the trainers during their first live trainings. Online surveys for VR administrators and counselors will evaluate their reactions to the ease of use of the screeners, as well as their perceptions of the procedure's utility. Statistics will be collected and analyzed regarding the online training materials, including the total number of users, the percent completing the modules for CEU's, and the content of the comment sections built into each module.

3. Quality of Research Findings

It has been found that "hidden" substance abuse most often occurs among VR applicants with co-existing disabilities, and they are not asked about their substance use or their conditions are otherwise not discovered. Physical, sensory, or other "traditional" disabilities are most likely to be the focus of rehabilitation, often to the exclusion of an active SUD (Moore & Li, 1994). It is highly likely that hidden substance contributes to higher unsuccessful closure rates in VR (Moore & Weber, 2002). Corrigan and colleagues (1995) noted that up to two-thirds of persons admitted to brain injury rehabilitation programs have a history of SUD that can be described as abusive. Research findings suggest that persons with other disabilities such as those who are blind (Koch, Nelipovich, & Sneed, 2002), have developmental disabilities (Degenhardt, 2000), multiple sclerosis (MS) (Bombardier, Blake, Ehde, Gibbons, Moore, & Kraft, 2004) or have a traumatic spinal cord injury (Heinemann, 1994) are at particular risk for SUD.

The Substance Abuse Subtle Screening Inventory-3 (SASSI-3; Miller, Roberts, Brooks & Lazowski, 1997) reflects more than a decade of instrument development and refinement. It has been used with a wide range of populations, including college students (Myerholtz & Rosenberg, 1998), prenatal patients (Horrigan & Piazza, 1999), persons with head injuries (Arenth, Bogner, Corrigan, & Schmidt, 2001; Whiteneck, Schraa, & Gerber, 2001), chronic mental illness (Pearson, 2000), psychiatric inpatients (Teslak, 2000), persons in VR, (Schwab & DiNitto, 1993); and minorities (Nevarez, 2000).

This instrument is an empirically derived screening tool designed to identify individuals with SUD (Miller, et al., 1997). It consists of 67 true false items, 12 items that ask clients to report the frequency of specific manifestations of alcohol abuse and 14 frequency items pertaining to abuse of illicit drugs. It requires approximately fifteen minutes to complete. It is comprised of seven scales: Face Valid Alcohol (FVA), Face Valid Other Drug (FVOD), Symptoms (SYM), Obvious Attributes (OAT), Subtle Attributes (SAT) Defensiveness (DEF), and the Supplementary Addiction Measure (SAM). Reliability analyses of the SASSI-3 yielded test-retest stability coefficients for the SASSI-3 scales ranging from .92 to 1.00, and an overall alpha coefficient for the instrument of .93 (Miller, et al., 1997). Cross validation research on the SASSI-3 decision rule indicated overall accuracy of 94% in distinguishing substance abusing and substance dependent respondents from those without a SUD; sensitivity of 93% and specificity of 95%.

Several advantages in utilizing the SASSI-3 as a brief screening instrument for VR and related settings include: an extensive database of previous SASSI administrations; a previous history of use with persons with disabilities or in VR settings; inclusion of subtle items and readability subscales that may enhance utility of instrument for this intended application; availability of multiple test application modalities with immediate individualized printout of screening findings; and an established infrastructure for distribution of instruments, training, immediate scoring availability, and data archiving.

In spite of the advantages in using the SASSI-3 as a universal screening tool in VR, it also has disadvantages. The disadvantages included 1.) administration time – the total number of items make this instrument too long for routine use in VR offices, given scheduling requirements and available consumer time; 2.) no prescribed medication abuse items – VR personnel identified detection of medication abuse as an important feature for VR populations; 3.) somewhat confusing for persons with cognitive limitations – some items needed to be rephrased or eliminated; 4.) alternative formats not available – VR settings call for a variety of screening test formats to be fully accessible for consumers; 5.) SASSI-3 contains historical questions, making current DSM IV R diagnosis less stringent – VR primarily needs to know about *current* SUD and consequences of use to consumers; 6.) automated scoring of SASSI-3 less sensitive to vocational issues – the automated report algorithms required development to consider employment related consequences and concerns. Analysis of the strengths and weaknesses of the SASSI-3 by the RRTC staff and SASSI Institute personnel led to the conclusion that a separate and unique instrument for applications with persons with disabilities related to employment goals was desirable, and therefore the decision was made to develop such an instrument.

We modified this tool by completing a rating scale analysis to reduce the item set and we added a few items to assess the misuse of prescription medication. The initial version of the SASSI-VR used in the “*Promoting Substance Use Assessment by Vocational Rehabilitation Agencies*” study included 12 items that assessed the frequency of alcohol misuse, 17 that assessed the frequency of

misuse of illicit and prescription drugs, and 40 subtle items that identified people with SUD (Heinemann et al., 2006). Based on initial results of field testing with the SASSI-VR, some items were re-phrased to increase comprehension and decrease the reading level. Questions also were modified following field testing in order to better guarantee that respondents were answering questions based on their last 12 months of substance use behavior only, consistent with DSM IV R criteria for active SUD.

The SASSI-VR and a limited number of demographic questions were administered to 995 consumers with diverse characteristics at five VR offices, including a Bureau of Vocational Rehabilitation (BVR) or Bureau of Services for the Visually Impaired (BSVI) offices in southern Ohio and Chicago, a community rehabilitation agency in West Virginia, and a one-stop job center. Data collection occurred at the time of initial intake or during a group orientation session. In addition, we administered the *Diagnostic Interview Schedule* (DIS) alcohol and drug sections to use as the criterion variable. The DIS (Roberts & Rhodes, 1990; Helzer, 1992) has been in widespread use as a method of obtaining DSM IV R diagnoses in multiple drug or alcohol studies for 15 years. It is relatively quick to administer, can make use of trained but non-clinical interviewers, and has norms for both alcohol and drug-related DSMIV R diagnoses. It has been used repeatedly to norm cutoff scores for other instruments measuring substance abuse (Helzer, 1992; Svanum & McGrew, 1995; Chantarujikapong, Smith, & Fox, 1997). It was used as the “gold standard” instrument to validate the SASSI-VR. Trained research assistants conducted the assessments, and each consumer was given \$20 as an incentive to participate.

The SASSI-VR demonstrated sound psychometric properties with a heterogeneous sample of VR persons with SUD. The correspondence between SASSI-VR classifications and the DIS diagnosis of either substance abuse or dependence demonstrated 87% sensitivity, and 84% specificity. Use of the subtle items eliminated 76% of the misclassified cases and decreased the error rate from 17% to 4% when only the face-valid items were used. The SASSI-VR consists of 46 items. It identifies consumers with a high probability of having a SUD with a high degree of accuracy.

Automated scoring of the SASSI-VR yields a report that allows VR counselors to use the results to facilitate successful screening for needed services. The SASSI-VR report includes a printout of key items, and it provides practical suggestions for helping consumers recognize the impact of substance misuse on their lives. The report addresses eight possible consequences of substance misuse: loss of control in usage, negative consequences, neglect of obligations due to use, substance use to manage emotions and cope with negative feelings, misuse of medications, physical tolerance and/or withdrawal, belief that substance use has had an adverse impact, and prior treatment for SUD. Conceptualization, development, and validation testing of the SASSI-VR represents the culmination of several years of work in researching the needs of VR programs in serving persons with co-existing SUD.

At the present time, one-half of all VR counselors in Illinois have been trained in the administration and use of the tool. Counselors in West Virginia were trained in November 2006, and Ohio will be trained in January 2007. The other one-half of counselors are being used as the delayed-start control group and will be compared to those trained in using the SASSI-VR.

The SASSI-VR has many advantages for use within VR: it is self-administered in a short time, a report on the results is rapidly available, it does not require the VR counselor to be a substance abuse expert, and the instrument has demonstrated high sensitivity for detecting active SUD. VR counselors also face the reality of having to allocate limited resources to help as many people as possible, often with increasing caseloads and mandates to serve the “most severely disabled” first. The SASSI-VR report can better assist VR staff with decisions about functional impairments, the need for professional SUD assessment, content of Individualized Programs for Employment, resource allocation, counseling, case management and post-employment resources that may be necessary.

4. Anticipated Outcomes of Proposed RUA Activity

This RUA activity was designed in concert with multiple stakeholders, including the Rehabilitation Services Administration (RSA), the Council for State Administrators of Vocational Rehabilitation (CSAVR), multiple VR personnel, and consumers of VR services. A joint monograph on the topic of state-wide SUD screening in VR is planned with CSAVR, and doubling the number of state VR systems that implement screening procedures will further inform the monograph. Specifically, the additional evaluation measures outlined in this proposal will provide important data on training efficacy, implementation issues, and administrative policy issues that impact outcomes with this intervention. For that reason, the RUA proposal included all primary R1 research team members in this proposal, and this includes WSU core staff, Allen Heinemann, Ph.D., at the Rehabilitation Institute of Chicago, and two Ph.D. level researchers at the SASSI Institute (Miller & Lazowski).

CSAVR has expressed the concern that systematic substance abuse screening is more likely to be adopted nationwide if more states have the opportunity to serve as test sites on a first-hand basis. In effect, this would increase the pool of potential endorsers for this approach. Using a mixed theoretical model, this proposal will allow the RRTC to proceed with the CSAVR suggestion by doubling the number of states implementing the screening, while simultaneously creating a trainer of trainer system for perpetuating knowledge transfer.

The specific states that have volunteered to test the SASSI-VR also will provide unique information about its applicability in varied settings. Virginia has a history of pro-actively addressing SUD in their VR system, and therefore information will be available on how compatible the SASSI-VR is with preexisting procedures and policies. Kentucky will test the system in a state that is experiencing high rates of “cottage industry marijuana production”, as well as an alarming prevalence of methamphetamine

and Oxy-contin use. Utah will test the system in a largely rural population with higher percentages of persons who are minority and/or Spanish-speaking. (The SASSI-VR is being developed and cross-validated in Spanish at this time.)

Completion of the objectives and associated activities developed for this RUA application would result in the following outcomes:

1. Greater use of the SASSI-VR by VR counselors in states that implement this screening design.
2. An increase in VR counselor knowledge about SUD.
3. An increase in positive attitudes of VR counselors about providing rehabilitation services for persons where SUD is a consideration.
4. A referral practice to SUD assessment and treatment that will be more universally utilized in the selected states, as evidenced by case records of program and treatment referrals.
5. Training materials that are more “user friendly” by the incorporation of more media segments showing how actual VR personnel address SUD in their work.
6. Wider dissemination of SUD screening in VR via RRTC, CSAVR, and the National Center for the Dissemination of Disability Research (NCDDR).

Of equal importance to the above, this RUA project will allow the RRTC to establish a highly-qualified and well-trained cadre of VR training consultants who can assist other state systems in adopting SUD screening procedures. Moreover, rigorous evaluation of the trainers, and the impacts of their training interventions, will provide solid data upon which to modify the consultant trainer design as well as the actual content of the training. By using these VR consultant trainers to select other media segments for inclusion in the training, the training materials will be more grounded in the issues and realities that face VR staff in the field.

5. Clarity and Appropriateness of Utilization Data Collection Plan

VR agencies will maintain an administration log that will document consumer completion rate of the SASSI-VR, time to complete the instrument, refusal rate, and nature of any assistance that is provided. In addition, we will ask VR agency staff to complete a survey that describes any barriers and benefits to SASSI use. The MIS departments at each of the three participating states will match RSA-911 data with the SASSI-VR records and provide the RRTC investigators with a de-identified data set. Each consumers' record will contain the RSA-911 data elements plus and their score(s) on the SASSI-VR. VR counselors will fax into the SASSI Institute completed surveys and will receive a faxed return results with recommendations. Identifiers such as name, Social Security number, birth

date, address and zip code will be removed, while individual characteristics such as age, gender, and field office will be retained. This process will measure counselor's behavior change using the SASSI-VR.

Our evaluation measures will be developed and will contain multiple-choice items or Likert scaled questions. Table 2 states the evaluation measures, constructs to measure, and the associated analysis. The specific constructs measured in the counselor evaluations which the interventions are designed to address include: knowledge about SUD and providing VR services to persons with SUD; knowledge about existing policies, statutes, and applicable laws; willingness to address SUD as a component of rehabilitation planning; knowledge of resources available to assist consumers with SUD issues; utilization of SUD screening procedures with consumers; importance of SUD as a VR rehabilitation issue; and, perceived barriers to addressing SUD in VR settings.

Table 2
Evaluation of Utilization Measures and Associated Analyses

Evaluation Measure	Construct	Measure	Analysis
Pre/Post Counselor Training Test*	Counselor knowledge, attitudes and behavior	Multiple choice items (pre-test to be developed under RUA)	Paired <i>t</i> -tests
Counselor Online Training	Counselor knowledge, attitudes and behavior	Counselor registrations, successful completion of quizzes. CEU's granted	Descriptives on registrations, successful completions of each of five associated modules
VR Consumer Satisfaction*	Opinions of screening procedure and the way it was introduced by VR staff	Follow up questionnaire of consumers following 2 nd office visit – sample of field offices – 15 items, yes-no, or likert (n=150) (to be developed under RUA)	Cumulative descriptive statistics; comparison between offices/states (Chi square)
Trainer/Consultant Evaluation Test*	Trainer effectiveness	Likert scale and yes-no items	Descriptive statistics
Online Modules CEU Test	Counselor knowledge	Multiple choice items	Descriptives on the total number of persons completing CEU's, total CEU's completed and the scores on CEU tests
SASSI-VR	SASSI-VR utilization and findings	Count of SASSI-VR forms within each category -number of administrations by state, office, counselor by time period, the percentage of SASSI-VR reports with positive SUD findings and the percentage of SASSI-VR submissions with “refusal” to complete screener	Descriptives on all categories, shared with state VR administrations beginning month 4 of SASSI-VR administration
Counselor Satisfaction Survey	Counselor satisfaction	Likert scale items some open-ended questions – web based application	Descriptives on counselor satisfaction with ease of use and clinical value of SASSI-VR
Administrator Satisfaction Survey*	Administrator satisfaction	Likert scale items some open-ended questions	Descriptives on administrator satisfaction with overall screening activities and identification of policy and procedural barriers
Primary and	Consumer SUD status and	SUD diagnoses data from Case	Chi square,

Mixed-utilization model for promoting SUD screening

Secondary Disability Codes	changes	Services dbase (911) (using latest '4 code' system, with cross-walk tables)	contingency tables
Successful VR Outcomes (status 26)	Closure status	Closure data from Case Services dbase (911)	Descriptives on closure status, t-tests between status 26 vs. 28/30 closure rates

* - indicates new or modified measure as a result of RUA project

6. Management of the Activity

The director of SARDI and the PI of the NIDRR RRTC, Dennis Moore, Ed.D., will have overall responsibility for managing the project. He will assume these responsibilities as a no-cost contribution to the project, due to the likelihood that it will greatly assist in achieving the overall goals for the RRTC. The specific RRTC staff members included in the RUA budget are Research Director, Mary McAweeney, Ph.D., and Research Associate, Joseph Wagner, M.P.H. In addition to the WSU RRTC staff, the SASSI Institute will provide technical support, data management, and ancillary training of VR consultants (see letter of support). Allen Heinemann, Ph.D., and the Rehabilitation Institute of Chicago will provide additional assistance with data analysis (see letter of support). The budget is detailed in Appendix A.

Three functions will be undertaken by the WSU RRTC in relation to this RUA project:

1. Interface and MOUs with state-based VR Programs. Moore will have primary responsibility for this area, and he will visit each of the three state VR programs twice. Once to finalize plans for implementing the state wide substance abuse screening, and a second time at the conclusion of the project to review evaluation findings and plans for continuation of the screening activity beyond the funded period. Since Dr. Moore also maintains the most contact with VR systems, he also will share responsibility with the VR training consultants for identifying additional training consultants for the continuation of this activity beyond the project period. It is the intent of this application to establish a cadre of trainers who are specifically trained to assist in bringing other state systems online with state-wide substance abuse screening.
2. Training and coordination of consultants. Mary McAweeney, Ph.D., will oversee training of the VR consultants. The training will consist of a two day, intensive course at WSU where consultants will review the training materials that already exist. It will include tutorials, on-site practice in delivering training, and review of an established Q&A on the training, purpose of the screening, and overall goals of the screening project. She also will oversee the review of archived video by training consultants to identify additional segments that will be integrated into the live and web-based trainings. This activity will be accomplished while the consultants are on-site for their training activity. WSU staff, Jeremy Trim, in his role as the project IT will integrate the identified video segments into the materials following formatting of the materials by the WSU Center for Teaching and Learning (CTL). Mr. Trim has created all websites and web layouts for the RRTC materials that have been generated to date. The CTL has provided video conversion services in previous training projects for the RRTC (see budget detail). At the conclusion of the 17 month project, the VR training consultants may join the SASSI Institute list of qualified trainers, with their specialization being the SASSI-VR. It is anticipated that the additional duties for Dr. McAweeney will require an offset of approximately 0.10 FTE.

3. Data collection and evaluation. Joseph Wagner, M.P.H., will coordinate data collection activities as defined in this application in Table 2. This will include pilot testing of instruments that are to be developed specifically for the RUA project. He also will coordinate with the SASSI Institute and RIC to obtain data and related analyses so that reports can be generated for participating states, NCDDR, and NIDRR. It is anticipated that these responsibilities will add an additional 4-8 hours per month to Mr. Wagner’s workload, as the majority of activities are already routine relative to the management of the R1 RRTC project. This is the equivalent of 0.04 FTE for this position.

7. Appropriate Time frame for Activity

This 17-month activity includes a 2-month planning phase, a 12-month data collection phase, and a 3-month analysis and dissemination phase. The activity period of 17 months allows for a full year of evaluation in the participating state VR programs, yet provides a start up period for training consultants and finalizing all state participation agreements. The exact activity period was chosen following conversations with NCDDR indicating that the funding for the RUA could be guaranteed for this period of time. The primary activities for the RUA are presented in Table 3 below.

Table 3 - Activity timeline

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Planning	X	X															
State Recruitment and Logistics	X	X															
Consultant Training	X	X														X	
Activity Management meetings	X	X	X		X		X		X		X		X		X		X
Modify Human Ss approvals	X																
Enter into Subcontracts/MOUs	X	X															
Screen Consumers			X	X	X	X	X	X	X	X	X	X	X	X			
Data Management					X	X	X	X	X	X	X	X	X	X			
Preliminary Data Analysis					X		X			X		X		X	X		
Writing Results																X	X
Present at VR Forums				X					X		X			X			X
Present at Profess. Conference								X			X						X
Publish Journal Article								X								X	X

8. Target Audience Participation in Activity Development

As listed in Section 4 of this application, the RUA was designed in concert with multiple stakeholders, including the Council for State Administrators of Vocational Rehabilitation (CSAVR) and

multiple VR personnel. In addition, we have conducted a focus group among consumers with disabilities who may or may not have had SUD in order to gauge their reactions to a substance abuse screener. Consumers of VR services by and large understand the need for and purpose behind screening for substance abuse at the time of application, because among other things it mimics trends in the employment sector regarding the popularity of drug testing. Two sub-groups that appear to have some reservations with the practice are individuals with a suspected SUD, and persons who are abstinent. In the former case, the reasons are obvious, but for persons who are abstinent, they sometimes find these types of questions to be intrusive. For this reason, the SASSI-VR is recommended only as a voluntary procedure where the consumer is informed about their option to refuse prior to administration. However, less than 15% of all applicants in IL have refused since initiating systemic screening there, and this percentage has reduced every month so far. Other stakeholders include a focus group of VR counselors to appraise various formats of instrument administration methods and their feasibility across sites with varying characteristics and workload. A joint monograph on the topic of state-wide SUD screening in VR is planned with CSAVR. Investigators in the project include WSU core staff, Allen Heinemann, Ph.D., at the Rehabilitation Institute of Chicago, and two Ph.D.-level researchers at the SASSI Institute (Miller and Lazowski).

9. Contribution to Other NIDRR Utilization Activity

Two other RRTC projects related to the use of the SASSI-VR are entitled ***R3: State Level Policy and Procedures Analyses Dealing with the Provision of Rehabilitation Services to Consumers with Substance Use Disorders*** and ***R4: An Investigation of Factors that Contribute to Unsuccessful Case Closure Among Consumers of Vocational Rehabilitation Services***. The proposed RUA project also has implications for these two parallel studies is the potential use of the SASSI in the VR system. Specifically, doubling the number of state systems utilizing universal SUD screening will assist in identifying other policy issues that impact a screening protocol. One of the anticipated outcomes of the proposed project is to demonstrate a measurable difference in state-wide successful rehabilitation closures, as well as impact the total percentage of persons identified with a SUD. Evaluation of these intended outcomes will further inform the R4 unsuccessful closure study.

The R3 study surveyed VR directors on such policies as order of selection, sobriety waiting periods, existence of written department policies regarding consumers with SUD, funding issues, Medicaid policies/coverage, cooperative agreements or shared funding with alcohol/drug departments, SUD specialized case loads for selected offices or regions, and VR supported programs addressing SUD. The second part of that study involves extensive interviews with VR personnel which will shed light on the potential use of a SUD screening instrument. Thus, this study could lead to an increase in the use of the SASSI-VR.

The R4 study is examining reasons why some individuals with disabilities in VR are unable to successfully complete rehabilitation services and become employed. Too little is known about why consumers are unsuccessful in VR, especially from the perspective of the consumer. Specifically, consumers and counselors will be interviewed to determine the processes and experiences that each had during the course of active enrollment in the system and why the process of closure occurred from the perspective of each party. This study has the potential impact to identify the "hidden" substance abuse in VR. The use of the SASSI-VR could be a useful screening tool following the completion of the R4 study.

Both of these studies were designed in concert with multiple stakeholders, including the Rehabilitation Services Administration (RSA), the Council for State Administrators of Vocational Rehabilitation (CSAVR), multiple VR personnel, and consumers of VR services. Finally, the use of the SASSI-VR could be adopted in systems outside of VR, such as Employment Centers, community-based rehabilitation centers, the Development and Technical Assistance Centers (D.T.A.C.), and other RRTCs.

Completion of this proposed RUA is very consistent with the new Long Range Plan developed by NIDRR. Addressing SUD proactively in VR settings not only impacts employment outcomes, but it also has ramifications for “*participation and community living*”, “*health and function*”, and “*disability demographics*”. In addition, the proposed project will further inform the area of the NIDRR plan that focuses on “*defining, measuring, counting and categorizing disability*”.

Appendix A. 17-Month Budget Justification

[WSU RUA Project Budget Deleted]

References

- Arenth, P.M., Bogner, J.A., Corrigan J.D., & Schmidt, L. (2001). The utility of the substance abuse subtle screening inventory-3 for use with individuals with brain injury. *Brain Injury, 15*(6), 499-510.
- Bombardier, C.H., Blake, K.D., Ehde, D.M., Gibbons, L.E., Moore, D., & Kraft, G.H. (2004). Alcohol and drug abuse among persons with multiple sclerosis. *Multiple Sclerosis, 10*, 35-40.
- Chantarujikapong, S.I., Smith, E.M., & Fox, L.W. (1997). Comparison of the alcohol dependence scale and diagnostic interview schedule in homeless women. *Alcoholism: Clinical and Experimental Research, 21*(4), 586-595.
- Corrigan, J.D., Rust, E., & Lamb-Hart, G.L. (1995). The nature and extent of substance abuse problems in persons with traumatic brain injury. *Journal of Head Trauma Rehabilitation, 10*(3), 29-46.
- Degenhardt, L. (2000). Interventions for people with alcohol use disorders and an intellectual disability: A review of the literature. *Journal of Intellectual & Developmental Disability, 25*(2), 135-146.
- Heinemann, A. W. (1994). An introduction to substance abuse and physical disability. In A. W. Heinemann (Ed.), *Substance abuse & physical disability* (pp. 3-9). New York: The Haworth Press Inc.
- Heinemann, A. W., Miller, F., McAweeney, M. J., Lazowski, L., & Moore, D. (2006). Development of a Substance Abuse Screening Instrument for use in vocational rehabilitation settings: The SASSI-VR. Unpublished manuscript.
- Helzer, J.E. (1992). Development of the diagnostic interview schedule. In J.E. Helzer & G.J. Canino (Eds.), *Alcoholism in north America, Europe, and Asia* (pp. 13-20). London: Oxford University Press.
- Horrigan T.J., & Piazza, N. (1999). The substance abuse subtle screening inventory minimizes the need for toxicology screening of prenatal patients. *Journal of Substance Abuse Treatment, 17*(3), 243-247.
- Koch, S.D., Nelipovich, M., & Sneed, Z. (2002). Alcohol and other drug abuse as coexisting disabilities: Considerations for counselors serving persons who are blind or visually impaired. *Review, 33*(4), 151-159.
- McAweeney, M.J., & Moore, D. (2006). Preliminary report. Rehabilitation Research and Training Center (RRTC) Substance Abuse, Employment and Disability sponsored by the National Institute on Disability and Rehabilitation Research (NIDRR).
- Miller, F.G., Roberts, J., Brooks, M.K., & Lazowski, L.E. (1997). *SASSI-3 user's guide*. Bloomington, IN: Baugh Enterprises, Inc.
- Moore, D., Ford, J.A., & Hollar, D. (2002). Barriers to employment for individuals with HIV/AIDS: Alcohol and drug use. *Drug and Alcohol Dependence, 66*(Suppl. 1), S123-S124.
- Moore, D. & Li, L. (1994). Alcohol use and drinking-related consequences among consumers of disability services. *Rehabilitation Counseling Bulletin, 38*(2), 124-133.
- Moore, D., & Weber, J. (2000). *An analysis of statewide substance use treatment episode data and persons with coexisting disabilities*. American Public Health Association Conference, Boston, MA.
- Myerholtz, L., & Rosenberg, H. (1998). Screening college students for alcohol problems: Psychometric assessment of the SASSI-2. *Journal of Studies on Alcohol, 59*(4), 439-446.

- National Institute on Disability and Rehabilitation Research (NIDRR). (2004). Rehabilitation Research and Training Center (RRTC). Washington, DC: U.S. Department of Education.
- Nevarez, E. (2000). A normative study of the substance abuse subtle screening inventory-3. (Doctoral dissertation, California School of Professional Psychology-Berkeley/Alameda, 2000). *Dissertation Abstracts International*, 61(5-B).
- Roberts, R.E., & Rhoades, H.M. (1990). Using the DIS to diagnose drug and alcohol abuse. The effects of language and ethnic status. In R.R. Watson (Ed.), *Drug and alcohol abuse prevention*. Totowa, NJ: Humana Press, Inc.
- Schwab, A. & DiNitto, D. (1993). Factors related to the successful vocational rehabilitation of substance abusers. *Journal of Applied Rehabilitation Counseling*, 24(3), 11-20.
- Svanum, S., & McGrew, J. (1995). Prospective screening of substance dependence: The advantages of directness. *Addictive Behaviors*, 20(2), 205-213.
- Teslak, A.G. (2000, December). The utility of the CAGE, MAST, DAST and SASSI-3 in assessing substance use/misuse in a psychiatric population. (Doctoral dissertation, Adler School of Professional Psychology, 2000). *Dissertation Abstracts International*, 61(5-B).
- Whiteneck, G.G., Schraa, J., & Gerber, D.J. (2001). Utilization of the substance abuse subtle screening inventory (SASSI) in determining the presence of SA among individuals with acute TBI. Abstract retrieved March 17, 2004, from The Traumatic Brain Injury Model Systems National Data Center Web site, <http://www.tbinc.org>