

FINAL REPORT
for
RRTC ON DRUGS AND DISABILITY (Award No. H133B970018)

Rehabilitation Research and training Center
On
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EXECUTIVE SUMMARY

The efforts of the RRTC on Drugs and Disability from 1997 through 2002 were focused on improving vocational rehabilitation outcomes for individuals with substance abuse problems. In accordance with NIDRR's directive in its program announcement, the research, training and dissemination activities of the RRTC chiefly addressed the needs of individuals with substance use problems as they co-exist with other disabilities. During the indicated grant cycle the Center undertook epidemiological and evaluative research studies of substance abuse and substance abuse services for consumers of the State-Federal Program of Vocational Rehabilitation (VR) and other persons with disabilities. Recent legislative changes in benefits, HIV-specific VR services, and the needs of youth with disabilities who are transitioning into work were also studied. The RRTC's efforts also included extensive initiatives in the areas of training, dissemination, and technical assistance. Stakeholder concerns and interests related to the Center's research, training, and dissemination related pursuits, were addressed on an ongoing basis via several mechanisms, including a formal subcontract with a national consumer group, the National Association on Alcohol, Drugs, and Disability (NAADD). Multiple, work-based collaborations were also established with several major Federal agencies, including the Substance Abuse and Mental Health Services Administration (SAMHSA), the U.S. Department of Labor, the National Addiction Technology Transfer Centers (ATTCs) funded by the Center for Substance Abuse Treatment (CSAT), and the Regional Rehabilitation Continuing Education Programs (RRCEPs) as well as other professional and consumer organizations, national clearinghouses, other RRTCs, and institutions of higher education.

This document provides a brief background summary of the RRTC and its priorities, a description of its major research initiatives and related findings, an overview of the array of training activities undertaken under its sponsorship, and a synthesis of its rather extensive dissemination efforts and accomplishments targeted toward helping improve the vocational rehabilitation outcomes realized by persons with disabilities who also have substance abuse problems.

INTRODUCTION

RRTC Overview

Early in 1993, the National Institute on Disability and Rehabilitation Research (NIDRR) announced the need for a Rehabilitation Research and Training Center (RRTC) on the topic of illicit drug use among consumers of vocational rehabilitation services. That year, the RRTC was awarded to the Substance Abuse Resources and Disability Issues (SARDI) Program, which is housed within the Department of Community Health in the Wright State University School of Medicine. The RRTC on Drugs and Disability was refunded in 1997 for an additional 5 years. The conceptual models that drive the Center's research, interventions, and training are delineated throughout this document, particularly as they relate to the specific projects being described.

Experience operating the initial RRTC guided development of the research, training, and dissemination plans originally proposed in our continuation application. Because of the scope of research problems and VR issues emphasized in the NIDRR's written priorities and the financial resources available, the following general principles were considered when developing the 1997-2001 RRTC continuation proposal:

- A centralized project can better address the priorities than one with numerous small research studies, multiple PI's, or extensive sub-contracts. Thus the Center was designed as a single administrative and research unit where all functions involve Center staff, even when Co-PIs from other institutions are included.
- Substance abuse issues which impact VR services implicate other community programs and clinical specialties. Consequently, the proposed RRTC was philosophically and functionally oriented toward collaboration with a number of entities, both public and private.
- In keeping with mandates in the Rehabilitation Act focused upon serving the most severely disabled, the RRTC has endeavored to pay particular attention to rehabilitation needs of persons with the most severe and co-existing disabilities.
- In order to be effective, services and research must be sensitive to consumer perspectives and needs. As a result, the RRTC has routinely allocated fiscal and staff resources throughout the duration of its attendant grant cycle to a contract with the National Association for Alcohol, Drugs, and Disability (NAADD), a national consumer-run

organization, to provide technical assistance. In addition, local consumers participate in an Advisory Board and the Center staff also includes persons with disabilities.

Given the NIDRR emphases listed in its 1997 program announcement and the general principles outlined above, the 1997-2001 Rehabilitation Research and Training Center (RRTC) on Drugs and Disability was specifically targeted toward helping to improve vocational rehabilitation outcomes (e.g., employment and associated community integration) for individuals confronted by substance abuse problems. With this goal in mind, the RRTC undertook epidemiological and evaluative research studies of substance abuse and substance abuse services for consumers of the Federal-State Vocational Rehabilitation (VR) Program and other people with disabilities. Furthermore, given recent legislative changes in benefits and benefit structures, HIV-specific VR services, and the needs of youth who are transitioning into the world of work, research was undertaken to address these issues as well. In accordance with NIDRR's directive, the research and development activities of the RRTC chiefly focused upon substance abuse disorders as they co-exist with other disabilities. The RRTC also included an extensive program of training and dissemination. Stakeholder concerns and interests were considered a fundamental aspect of all the Center's efforts. This ongoing consumer commitment was reflected in the formal subcontract with the National Association on Alcohol, Drugs, and Disability (NAAADD) alluded to earlier. Multiple collaborative arrangements were also delineated with Federal agencies, including the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Addiction Technology Transfer Centers (ATTC's) funded by the Center for Substance Abuse Treatment (CSAT), the Regional Rehabilitation Continuing Education Program (RRCEP's), as well as other professional and consumer organizations, national clearinghouses, other RRTC's, and institutions of higher education.

Center Priorities

In keeping with the directives posited in the NIDRR Program Announcement that led to the funding of the RRTC on Drugs and Disability in 1997, the Center staff focused their efforts upon the following major priorities¹:

¹ The bolded lettering following each stated priority refers to a Center initiative or project listed in the Table of Contents. Hence, the Table of Contents can be used to locate the related descriptions for those referents.

- Conduct epidemiological studies to advance understanding of the relationship between substance abuse and disability among individuals who are eligible for services under the Federal-State Vocational Rehabilitation Program, including determining the relative prevalence of substance abuse among persons with more severe disabilities **(R1)**
- Develop, identify, and evaluate information about effective methods for providing vocational rehabilitation services to individuals who are substance abusers **(R2, R3)**
- Investigate the impact of recent legislative changes (including welfare reform and SSA eligibility) and changes in health care management and financing of substance abuse treatment on the provision of vocational rehabilitation services to individuals who are substance abusers **(R2)**
- Disseminate informational materials and provide assistance and training to Federal-State VR eligible individuals whose substance abuse has resulted in a work disability, or who have some other disability that results in a substantial impediment to employment but whose substance abuse interferes with their ability to benefit from vocational rehabilitation services, vocational rehabilitation personnel, and related rehabilitation disciplines concerning effective strategies for providing vocational rehabilitation services **(R2, Training & Dissemination)**
- The RRTC is directed to give special emphasis to substance abuse and co-existing disabilities **(All)**
- To address VR needs of persons who have HIV/AIDS with co-existing substance abuse-related functional limitations **(R3, Training & Dissemination)**
- To address the needs of transitioning special education students **(R2, R4, Training & Dissemination)**

OVERVIEW OF RESEARCH PROJECTS

R1: Continuing Investigation of Substance Abuse, Disability, and Vocational Rehabilitation

Statement of Problem/Background. Between 1993 and 1996, the RRTC on Drugs & Disability conducted an initial multi-state epidemiological study on VR, substance abuse, and disability. That study included individuals who were active consumers of state VR services in Ohio, Michigan, and Illinois. Questionnaires, informed consents, and postpaid return envelopes were mailed to 4,600 individuals randomly selected from the three states' VR client databases. Additional respondents were recruited from twelve state rehabilitation offices and five other VR agencies. Personal interviews were conducted with individuals whose disabilities prevented them from completing a paper/pencil survey. The total number of individuals participating in the study was 1,876, which accounted for approximately 35% of the individuals recruited.

Approximately 18 months after the initial data collection was completed, a follow-up survey was conducted. That follow-up involved subjects from Ohio and Michigan. A total of 790 individuals who had been recruited by mail and returned their original surveys were eligible for this follow-up. The return rate for the follow-up survey was 58%, resulting in a total of 425 completed questionnaires.

The major findings of this initial, three-year epidemiology study (RRTC, 1996a) can be summarized in terms of the following four areas:

1. **Prevalence and patterns of illicit drug use.** Compared to the National Household Survey, illicit drug use was much higher in every drug use category for consumers of VR services than the general population. For example, reported marijuana use rates and cocaine use rates in the past year and past month were almost double the rates for the general population. This finding is of particular concern because the individuals reporting this level of use did not have a primary disability of chemical dependency. (Subjects with chemical dependency as a primary disability were excluded from this analysis.) Marijuana was by far the most prevalent illicit drug used by people with disabilities, with about 9% of the sample reporting some use in the past month and 16.2% using it in the past year.
2. **Illicit drug use and disability.** Incidence and prevalence of illicit drug use varied among different disability groups. Not surprisingly, individuals with chemical dependency as primary disability (44.2%) and HIV/AIDS (50%) reported the highest incidence of illicit drug use in the past 12 months, while respondents with blindness (10.8%), mental retardation (12.8%), deafness (14.3%), and visual impairment (14.8%) reported the lowest rates of illicit drug use in the sample. Drug use was also examined between

congenital (19.5%) and acquired disability groups (21.7%) and between those who reported multiple disabilities (21.9%) and those who did not (20.0%).

3. Illicit drug use and demographic characteristics. As in the general population, men in the study reported a higher drug use rate than their female counterparts, with 23.8% of males and 18.5% of females reporting illicit drug use in the past 12 months. The highest drug use rates (25.3%) were reported by those who were 25 to 34 years old. In general, younger respondents were more likely to use illicit drugs than older ones, and the lowest use rates were for subjects 45 years of age or older. Among ethnic groups, African Americans reported the highest rate of illicit drug use in the past year (25%) followed by 21.3% of Native Americans, 20.6% of Caucasians, and 11.8% of Hispanic Americans.
4. Consumers with substance abuse problems during rehabilitation services. Approximately 21% of the survey respondents reported receiving treatment or other services for alcohol or other drug problems, with 22.5% of the same sample considering themselves an alcoholic or drug addict in recovery. Some 21.7% of respondents self-identifying as substance abusers reported being in drug treatment while enrolled in a state VR system.

Research Questions or Hypotheses. While the epidemiology study described above provided fundamental and important information regarding disability, substance abuse, and VR, more information is needed. The major goal of the related 1997-2001 RRTC study was to expand upon the previous epidemiological study in an effort to further advance understanding and build upon the relationships identified. Based on this goal, along with the results of previous studies and NIDRR's priorities, the following three major hypotheses and related sets of sub-hypotheses were generated:

1. The prevalence, patterns, and risk factors for alcohol and other drug (AOD) abuse found in other regions of the country will be comparable to those found in the three Midwest states studied earlier, specifically:
 - 1.1. VR Consumers have higher percentages of AOD abuse than the general population.
 - 1.2. AOD use patterns vary among people with disabilities by nature and severity of disability.
 - 1.3. AOD abuse related risk factors such as acceptance of disability, attitude of entitlement, self-esteem, risk-taking, and age will be significantly associated with illicit drug use.
 - 1.4. African Americans utilizing state VR services will demonstrate higher AOD usage patterns than consumers of other racial backgrounds.
 - 1.5. Women who utilize state VR services will be more likely to report substance abuse related violence and will be less likely to receive treatment for substance abuse problems than their male counterparts.
 - 1.6. For VR consumers heavy AOD use will be positively correlated with HIV risk behavior.
2. Utilization and outcomes of state VR services are different between clients with AOD related disabilities and those without such disabilities.

- 2.1. Consumers with co-existing AOD disabilities are less likely, compared to those without AOD disabilities, to show positive employment outcomes.
 - 2.2. Consumers with AOD related disabilities will benefit more from VR services if their substance abuse problems are identified and addressed by their counselors.
 - 2.3. Employment outcomes for consumers with chemical dependency as a primary disability will be positively correlated with number and specific nature of VR services received.
 - 2.4. State VR consumers with AOD related disabilities are more likely to be beneficiaries of public welfare including SSI and SSDI.
3. Successful VR outcomes for consumers with AOD abuse as a co-existing disability will be positively correlated with substance abuse identification and treatment.
- 3.1. VR consumers with active AOD use problems will be less likely to have successful case closures.
 - 3.2. Repeated and less favorable utilization of services will be more likely to occur for consumers who have substance abuse as a co-existing disability.
 - 3.3. Consumers with active or recent AOD problems and a co-existing disability will be more likely to have either no or unsuccessful work histories.
 - 3.4. Chemical Dependency assessment and related treatment contacts are most highly correlated with successful VR outcomes than other types of services provided.

Methods. The basic underlying research design for this epidemiology study was a comprehensive, longitudinal/natural history survey of VR consumers from six additional state vocational rehabilitation systems (Phase I), as well as a follow-up of selected consumers from two of the state systems involved in the earlier study (Phase II).

Sampling and Subjects. As indicated above, this study involved two phases of data collection. Phase I was an extension of the previous epidemiological survey to six new states: Maryland, Massachusetts, Montana, North Carolina, South Dakota, and West Virginia. These state VR agencies were chosen based on their previous collaboration with the RRTC, their willingness to participate in the proposed project, and their geographic representation. Each state assisted with the study by providing a random sample of consumers from their existing client databases. Previous RRTC procedures for sampling proved to be feasible both for random selection purposes and for accommodating the agencies' concerns regarding minimum involvement and confidentiality protections. Phase I also included both an initial survey and a follow-up mail survey 18 months after the initial data collection for all individuals who completed the initial survey. Based on previous experience, it was estimated that about 60% of the respondents in the initial survey would participate in the follow-up study.

All subjects in Phase I were at least 18 years of age and active consumers of state VR services at the time of the initial survey or interview. The goal was to have, within 18 months of project startup, a total of 2,000 individuals complete the initial survey and then have related follow-up contacts with these respondents completed by the beginning of Year Four. While the timelines for data collection in Phase I were met, the associated response rates were not as good as projected. The initial survey yielded a total of only 1,297 useable returns, while the 18-month follow-up yielded 724 returns. These were the samples for used for the Phase I analyses.

Phase II was a longitudinal (long term follow-up) study involving 425 individuals from Ohio and Michigan who had participated in the previous RRTC follow-up surveys as subjects. They were contacted again and asked to be interviewed either by telephone or in person. The specific follow-up protocol was developed with the goal of obtaining consent from at least 70% of the eligible individuals for interviews, i.e., it was estimated that 300 respondents from Ohio and Michigan would be interviewed by the beginning of Year Four. Since the RRTC had already established connections with these potential subjects, the required involvement of the cooperating state agencies was minimal. The actual number of respondents to Phase II was 148, which is the sample size for the Phase II analyses.

Data Collection Strategy. Previous experience has shown, the way data are collected would be a critical issue for this study, particularly due to the fact that various communication requirements made data collection difficult. The study attempted to circumvent potential problems by combining several survey formats. Information was obtained in one or a combination of the following ways: paper/pencil mail questionnaire, telephone interview, and/or personal interview.

- *Self-report mail questionnaire.* The self-report mailed questionnaire represents the most widely used method for conducting substance use epidemiology studies, and Phase I data collection relied on this approach.
- *Personal interview.* Phase II data collection involved primarily face-to-face interviews. A number of studies in the treatment outcome literature have found that substance use self-reports are reliable and valid when obtained via structured interviews (Sobell & Sobell, 1981; Maisto et al, 1982; Maisto et al, 2000). Additionally, the personal interview is particularly relevant for surveying people with disabilities for a number of reasons: it allows for use of visual aids; survey questions can be answered by people with lower literacy rates; and interviewers will more accurately categorize variables such as disability and functional limitations.
- *Telephone interview.* Telephone interviews were an option for participants in both Phase I and Phase II of the study. This type of interview was offered to those individuals whose

disabilities prevented them from completing surveys in a paper-pencil format. Respondents who needed to be interviewed by telephone were asked to provide a phone number on their signed informed consent. Telephone interviews were conducted from the RRTC central office. A similar protocol was used for both Phase I and Phase II data collection.

During Phase I, each subject who completed the mailed questionnaire or a telephone interview was sent a \$5 check once her/his completed questionnaire and informed consent was received by the RRTC. For participants in Phase II, a \$10 check was given immediately after the personal interview or mailed to participants after the telephone interview.

Assurance of Human Subjects Protection. The SARDI project, and its umbrella organization, the Substance Abuse Intervention Programs within the School of Medicine at Wright State University, are firmly committed to addressing human subjects concerns. Our procedures are routinely reviewed by the WSU Human Subjects Committee and all Institutional Review Boards at our research sites. The data collection protocol, including all instruments and informed consents, for this study were approved by the WSU Human Subjects Committee and all I.R.B.'s from participating agencies before any data collection activities began. We currently had Federal Confidentiality Certificates in place to protect research subjects from risks associated with judicial requests for questionnaire data. We amended and/or renewed these certificates as appropriate during the course of the study.

Participants were protected in several ways. Every potential participant was informed that the study was being conducted independently and that refusal to participate would not affect the services provided to them from their state VR agency. All subjects signed a written informed consent and were provided with a copy to keep. Questionnaires contained no personal identifiers, with the exception of a number coding which refers back to the informed consent. The informed consents were maintained in a separate, locked file away from completed survey questionnaires. All results were analyzed and reported only in aggregate form, and participating agencies were not able to access individual data. Consumer requests for results of the study were provided via an abstract describing group results. All respondents have been provided with the names, addresses, and telephone numbers of the Principal Investigators. Finally, all personal interviews have been conducted in a private location.

Data Elements and Variables. The “Medication and Other Drug Use Survey”, which was developed specifically for the previous RRTC epidemiology study was modified slightly and

used for Phase I of the current study. That survey questionnaire contains 102 items regarding alcohol and other drug use, disability, attitudes toward disability and substance use, family background, employment and work-related background, rehabilitation services, psychosocial functioning, and demographic characteristics. The "Follow-up Survey: Medication and Other Drug Use" used in Phase I contains 44 questions. Some items relating to substance use and employment status were taken directly from the original survey, while additional questions about VR services and experiences were added. A number of questions were also included that were targeted toward respondents with a self-reported substance abuse problem. Both instruments have proven to be extensive yet user-friendly. Furthermore, their relatively close correspondence with the instruments used in the earlier epidemiology study has provided the opportunity for data comparison between the six new states and the three original states.

The interview form used for Phase II data collection included items relating to VR services and was structured so as to elicit information about the specific numbers, types, and order of services received from VR by respondents.

The primary dependent variables for both Phases I and II of the study were focused on alcohol and other drug use and rehabilitation services. The key independent variables included social/demographic characteristics, employment or work-related experiences, disability background, rehabilitation history, peer or family influences, and psychosocial factors such as self-esteem, depression and risk-taking.

- Substance use variables. For both Phases of the study, illicit drug use is defined as use of any of the following drugs for *nonmedical* purposes: marijuana/hashish, cocaine, crack cocaine, inhalants, hallucinogens, heroin or other opiates, stimulants, and sedatives/tranquilizers. To parallel the National Household Survey, the patterns of drug use are divided into three categories: "ever used", "used past year", and "used past month" (SAMHSA, 1995). Alcohol use was also measured by the frequency and quantity of use lifetime, as well as in the past 12 months and in the past 30 days. In addition, alcohol use was further assessed through inclusion of the Short Michigan Alcoholism Screening Test (SMAST) (Selzer, et al., 1975).
- Vocational rehabilitation variables. Another major dependent variable for both Phase I and Phase II was VR outcomes. Information about each consumer's employment and service satisfaction, as well as consumers self-evaluation of their progress and outcomes in VR, were obtained from consumer self-report information. Several measures of an individual's work experience and history were also included in the survey instruments. These included the participant's occupation, number of hours worked, length of employment, income, and job satisfaction. Service utilization items include sources of medical care, rehabilitation history, current services received including length and intensity, interactions with rehabilitation counselors, and satisfaction with services.
- Disability variables. Information collected from respondents regarding the nature, onset, and

number of disabilities. Level of disability acceptance was measured via a subset of the items from the Acceptance of Disability scale (Linkowski, 1971). That self-report measure assesses values theorized by Wright (1960) to be associated with disability acceptance. It functions as a measure of self-esteem in people with disabilities. Ten items from the original scale were included in the previous RRTC survey and Cronbach's alpha for the composite scores computed using those ten items was .8, indicating a satisfactory internal consistency reliability (Li & Moore, in press).

- Demographic, psychosocial, and other background variables. Basic demographic information such as age, gender, race, income sources, job seeking skills, marital status, living arrangements, legal history, and education was obtained from each participant. Information about family background, including family history of substance abuse, substance abuse related violence, and family members' attitudes toward substance abuse was also gathered. Psychosocial functioning was measured on three dimensions: self-esteem, hostility, and risk-taking. These multi-item scales were developed at Texas Christian University (TCU) for use during intake assessment in drug abuse treatment programs (Knight, Holcom, & Simpson, 1993; Simpson, Knight & Ray, 1993). In the previous survey, five items from each scale were utilized. Computation of Cronbach's coefficient alpha indicated that the reliability of these scales was acceptable (Moore & Li, 1997). An inventive measurement included in the study was "attitude of entitlement." This measure, is based on the speculation (Moore, 1992) that the general societal belief that people with disabilities are more entitled to use alcohol or other drugs contributes to the enabling of substance abuse. This scale has been shown to exhibit an acceptable reliability level and is determined by the self-rating of agreement with four relevant statements (Li & Moore, in press).
- HIV risk behavior variables. HIV risk behavior is a new area being examined in the current epidemiology study. A brief HIV risk behavior assessment was included in the Phase I instrument. It utilizes selected items from the Risk Behavior Assessment Questionnaire (RBA), developed by the Community Research Branch of NIDA (Siegal, et al., 1995). The items selected from the original 44-page instrument measure sexual practices and drug use, with a focus on needle-use behaviors. Subjects' health beliefs relative to HIV/AIDS are also assessed.

Analysis Plan. A number of techniques were used to analyze the R1 data and test the hypotheses posed for the study. These strategies were applicable to both Phase I and Phase II data. For instance, percentage distributions and zero-order associations were used to provide basic descriptive statistics and population estimates of the prevalence of substance abuse. Chi-Square and Pearson correlation techniques were used to examine zero-order relationships between substance abuse, VR outcomes, and other variables identified. Additionally, analyses of variance (ANOVA) were conducted to compare group means of substance use and VR outcome measures by demographic attributes. Furthermore, specific disability groups, by nature and severity of disability, were contrasted in terms of substance abuse, service utilization, acceptance of disability, and psychosocial characteristics.

Progress-to-Date, Problems Encountered, Changes Made. To date, all aspects of the data collection activities for the study have been completed, along with the associated analyses. Basically, the project was completed on schedule, with a few minor delays from what was originally proposed in the “Research Plan Timelines.” Those delays related primarily to the analyses and dissemination activities.

The delays alluded to above were due primarily to “start-up” and related staffing problems encountered when the RRTC award was initially announced. The timelines proposed for Phase II, in particular, were quite ambitious and based upon the assumption that existing, experienced staff would remain with the Center - an assumption that later proved to be false. As a result, the data collection and entry processes for Phase II were not completed until roughly 9 months after the date originally proposed. The analyses of those data were completed, along with the associated dissemination activities, during the RRTC’s final funding year (2002).

Another, more basic problem that occurred was related to the overall study design and the manner in which the cooperating states were recruited. More specifically, given the political climate and potential groundbreaking nature of this ongoing epidemiology study, the three original and six new states were not selected in a random manner and, therefore, there “representativeness” is a serious concern. At this time there is nothing that can be done to remedy this fundamental limitation in the data, which makes drawing inferences to the entire population of VR consumers somewhat suspect. A closely related concern involves the relatively low response rates obtained for the study. This issue also leads to reduced credibility in trying to generalize any findings to the population of VR consumers across the country. The fundamental nature of these two problem areas suggests where future such efforts need to devote more resources and attention. These problems, however, do not negate the needs of planners and decision makers from both the rehabilitation and substance prevention/treatment fields for firm, defensible estimates of the numbers of persons with “categorically defined” (as contrasted with “functionally defined”) disabilities who have coexisting substance abuse problems. The RRTC appears to be one of only a very few agencies that has actively attempted to address this void.

Key Findings. Several of the more general findings evolving from the project analyses suggest the following:

- The result observed for the original and current (i.e., 1997 – 2002) epidemiology studies regarding (a) the AOD prevalence rates for persons with disabilities, particularly with regard to lifetime use, (b) relationships between illicit drug use and type of disability, (c) the

relationships between drug use and selected demographic characteristics of persons with disabilities, and (d) the prevalence of active VR consumers with substance abuse problems are all quite similar despite the fact that the two study samples differed substantially in their geographic representation and were completed approximately 5 years apart.

- AOD use among persons with disabilities, who are being served by the Federal-State VR System, is a continuing problem and the prevalence rates for illicit drug use, in particular, among his population continues to be substantially higher than the associated prevalence rates for the general population.
- There is considerable variability among state VR systems with regard to such issues as (a) the rates with which they actively identify consumers with a substance abuse problem, (b) the nature and consistency of the interactions among consumers and their VR counselors regarding substance use/abuse issues, and (c) the role taken by the VR agency with regard to addressing consumers' substance use/abuse problems as part of the repertoire of services they "normally" provide for their consumers.
- Overall, it appears there is considerable consistency in the specific types of services provided by state systems. Providing direct, sustained support in getting an actual job, however, does not appear to be something they do consistently or as often as consumers would like.

A copy of the Technical Report upon which these different conclusions are based, along with a more exhaustive description of the results garnered from this particular research project, is provided in Appendix A.

R2: Substance Abuse, Co-existing Disability, and Vocational Rehabilitation: Influences of Specialized Rehabilitation Programs on Employment Outcomes

Statement of Problem/Background. The high prevalence of substance abuse among persons with disabilities has been shown to be a particular problem for vocational rehabilitation services. For example, our own studies have found that 20% or more of all persons qualifying for state vocational rehabilitation services diagnose positive for substance abuse (Moore, Greer, & Li, 1994; Moore & Li, 1994a; Moore & Li, 1997; Schwab & DiNitto, 1993). Furthermore, a regional epidemiology survey revealed that 25% of individuals receiving VR services experienced substance abuse problems, most of which were unknown to the individuals' VR counselors (RRTC, 1996a). A recent study conducted with consumers of the Ohio Rehabilitation Services Commission found that 10.6% of respondents reporting binge drinking within the past year, 12.4% reported illicit drug use in the past 12 months, and 24% scored seven or higher on the Short MAST, strongly indicative of substance dependence or recurring abuse (RRTC, 1996a).

Unaddressed substance abuse may seriously jeopardize the VR process, especially with regard to achieving successful outcomes. Specifically, untreated substance abuse has been shown to be associated with:

- Decreased likelihood of successful completion of VR goals (Corrigan, Lamb-Hart, & Rust, 1995; Moore & Li, 1994a; Worrel & Vandergoot, 1982).
- Increased incidence of work-related problems, including lateness, absenteeism, and working while under the influence of substances (Siegal et al., 1996; Moore & Li, 1994b).
- Decreased likelihood of maintaining a job placement (Moore & Li, 1994a).
- Increased occurrence of legal difficulties and housing instability/homelessness (RRTC, 1996b).
- Liabilities to cognitive deficits which interfere with the VR process (Corrigan, 1995; RRTC, 1996b).

While some service providers will refuse to assist consumers until they have demonstrated a protracted period of sobriety, there is a growing body of research that suggests when substance abuse and VR services are provided in a simultaneous, coordinated, and seamless manner, each supports the other (Corrigan, Lamb-Hart, & Rust, 1995; Corrigan, Rust, & Lamb-Hart, 1995; Drake, Teague, & Warren, 1990; RRTC, 1996b; Siegal et al., 1996). Also, for consumers with substance abuse and TBI, VR outcomes may be improved by the inclusion of within program VR services rather than solely relying on state counselors and systems. Preliminary outcome studies suggest that consumers find work earlier and maintain higher levels of employment or income when VR services are delivered directly at the treatment program site (Mowbray et al., 1994; Dennis et al., 1993; Drake et al., 1993).

Despite the positive outcomes alluded to above, many state VR systems are hesitant to fund case management or other “costly” programs because they are not perceived as cost-beneficial (French et al., 1994). Administrative and legislative mandates to serve the most severely disabled, however, will require that case management services be increasingly available, at least for the most needy populations (Siegal et al., 1996). We suspect that, despite reticence to fund highly specialized programs, positive socioeconomic results will in fact be recoverable when such services are provided to the most severely disabled.

One approach to addressing co-existing chemical dependence and physical disabilities is the specialty program focused solely on a specific population. Examples of substance abuse and mental health programs include club house services, wrap-around services, and intensive case management models. Willenbring (1994) notes their applicability to groups that are less

responsive to conventional treatment, including those with more severe dependence, co-existing health service needs, severe disability in multiple areas of life functioning, greater chronicity, and limited socioeconomic resources. Treatment solutions for such persons are complicated by an evolving health care climate where declining service availability and changes in capitation further attenuate viable treatment options. These health care changes may make cooperative use of centralized case management clinically necessary.

A model of this type for persons with substance abuse and TBI was developed at Ohio State University by Dr. John Corrigan. That model espouses intensive case management, extensive client participation in rehabilitation planning, and integration with existing community services (Corrigan, Lamb-Hart, & Rust, 1995; Corrigan, Rust, & Lamb-Hart, 1995). The program utilizes intensive, specialized case management to coordinate treatment teams that ultimately provide individuals with an array of services that include substance abuse treatment, VR, family education, long-term rehabilitation planning, and other social services. The TBI Network has a strong consumer empowerment orientation and fundamental principles of community integration and involvement that are especially promising. Influenced by the work of Dr. Corrigan, the RRTC on Drugs and Disability established the Consumer Advocacy Model (CAM) Program at Miami Valley Hospital in Dayton, Ohio in 1994. The CAM program serves persons with traumatic brain injuries as well as other, severe disabilities co-existing with substance dependence.

The **R2** research project describe herein was developed out of a recognized need for appropriate and accessible services for individuals with disabilities who also have substance abuse. These individuals typically require multiple, concurrent services including vocational rehabilitation, substance abuse treatment, housing, medical care, mental health services, and so on. Few models exist for providing these services in a seamless manner, and those that do exist must be better evaluated so that nature, kind, amount, and duration of services can be better tailored to consumer profiles. Operationally, this research project was defined by two sub-components: a multi-site comparison study and single-site program evaluation study. Results from both the multi- and single-site components, were seen as shedding light on the nature and extent of the relationship between substance abuse treatment, VR services, and employment, as well as the cost-effectiveness of these services.

During the multi-site study research subjects were recruited from three collaborating sites, the Rehabilitation Institute of Chicago (RIC, which employs an outpatient rehabilitation services model (and served as the “control” site)), the TBI Network at Ohio State University (which employs an intensive, coordinated service delivery model), and the CAM program operated by SARDI at Wright State University (which employs a less intense, but coordinated service delivery model). Subjects involved in this sub-component were all consumers with TBI. They each completed a comprehensive baseline assessment prior to receiving any program services and then participated in follow-up assessments at 9, and 24 months post-baseline. The objectives of this “quasi-experimental non-equivalent control group” study were: (a) to evaluate the effects of vocational rehabilitation services, both alone and as a coordinated package (e.g., CAM), on substance abuse and employment outcomes, to investigate how these outcomes are affected by both treatment-centered (type, number, location, and duration of VR services) and patient-centered variables (type of disability), and (b) to explore the cost-benefits of concurrently providing multiple substance abuse, VR, and other services.

The second component of the R2 Project involved continuation of the development and refinement of the Consumer Advocacy Model (CAM), which is operated and staffed by the WSU SARDI Program. Although models of treatment for persons who are chemically dependent and experience traumatic brain injuries or mental illness have been elaborated in several settings, to date there have been virtually no approaches with proven efficacy for vocational preparation of persons with other, severe cognitive or physical disabilities and accompanying substance dependence. The expansion of CAM services to serve persons with disabilities other than TBI made it possible to study the differential impact of this program on persons with other disabilities. It was postulated that since TBI is considered to be one of the most clinically challenging disabilities, persons with other physical disabilities will experience even greater benefits from participation in CAM. This component served as a next step in refinement and assessment of the CAM Program for the expanded population of persons with disabilities and coexisting substance abuse problem.

Research Questions or Hypotheses. The multi-site component of R2 involved comparing outcomes across RIC, the TBI Network, and CAM. The specific hypotheses addressed as part of this component were as follows:

- 1a. Consumers who receive VR services will achieve more successful substance use reduction and employment outcomes than those who receive no vocational services at all, when severity of disabilities is controlled.
- 2a. Consumers who receive vocational rehabilitation services from on-site VR counselors are more likely to be successful in attaining employment than those who receive traditional VR services provided only through state VR systems.
- 3a. Multiple and concurrent provision of VR and substance abuse services will improve employment and substance use outcomes, and this will be mediated by the degree to which services are integrated within a single service delivery site.
- 4a. The latency to competitive employment will be cost effective for within program VR services compared with state or community-based VR services.

The single-site component of the **R2** Project took advantage of the CAM program evaluation begun in 1994, by continuing to evaluate the efficacy of that model. The hypotheses addressed relative to this component were as follows:

- 1b. CAM consumers who complete Aware I and II, when designated on their treatment plans, will show more favorable outcomes relative to substance use reduction, employment, human community integration, and perceived well-being than non-completers.
- 2b. Consumers with severe disabilities other than TBI will achieve greater outcomes in CAM than consumers with TBI.
- 3b. Multiple services delivered at the same physical site will have greater impact than services delivered at multiple sites.

Methods. As indicated earlier, the basic design underlying the multi-site component of the project was a quasi-experimental, non-equivalent control group design, where the participants served by the Rehabilitation Institute of Chicago were denoted as the control group. The single-site component involving the in-depth evaluation of the CAM Program was based on a single group, longitudinal design.

Sampling and Subjects. Subjects in the multi-site study had to meet these eligibility criteria: 1) aged 18 years or older, 2) current substance abuse, and 3) a documented traumatic brain injury. At the same time, exclusion criteria across all three sites included refusal to participate or active, unmanaged psychosis. Given these various criteria and recent referral rates at each site, it was estimated that during the study period 380 referrals per year would meet the eligibility requirements for the study (80 at CAM [TBI only], 200 at TBI Network, and 100 at RIC). Of these, it was anticipated that 190 would be eligible and willing to participate (refusal rate of approximately 50%; 40 at CAM, 100 at TBI Network, 50 at RIC). In fact, a total of 319

individuals participated in the multi-site study. That total represented 73% of the census of TBI consumers across the cooperating sites during the time period covered by the study.

The criteria for inclusion in the CAM single site study were more expansive. Subjects in the CAM single-site study had to meet the following eligibility criteria: 1) aged 16 years or older, 2) current substance abuse, and 3) disability that constitutes or results in a substantial impediment to employment and/or independent living. CAM receives referrals from both hospital and community sources (e.g., VR- BVR, BSVI, Crisis Care, Goodwill, and the court system). Of these it was estimated that approximately 95 percent would meet study eligibility criteria and agree to participate. In fact, to date a total of 520 consumers have been identified for inclusion in the single-site study.

Data Collection Strategy. All consumers, both those in the multi-site and single-site components, participated in a detailed assessment interview at intake. That interview was used to gather baseline data on demographics, disability characteristics, cognitive functioning, substance use, employment history, health status, quality of life, and services utilization. Follow-up assessment interviews were conducted at 9 and 24 months post-intake. Data gathered via the assessment interviews was supplemented with Activity Logs and information in existing records and client databases. Due to receipt of related CDC funding by RIC, extensive protocols and compatible databases already existed at the three sites, greatly facilitating data collection, staff understanding of research protocols, and data analyses.

Data collection at CAM and TBI Network was completed by Master's level program clinicians. At RIC, research assistants were used to collect the required data. These assistants were selected based on three characteristics: (1) psychology, social science, medical or nursing student with at least one year of post-baccalaureate experience and either (2) experience working with brain injury or cognitively impaired populations, or (3) experience working with clients in alcohol abuse settings. All personnel, whether clinical or research staff, had a minimum of one month of training for interviews, practice interviews, and individual supervision of interviewing techniques. The interview training at all sites consisted of formal protocol training, instrument training, mock interviews, and routine monitoring. In addition, a mid-study reliability check was conducted for all interviewers.

Assurance of Human Subjects Protection. The SARDI Program, as well as the TBI Network and RIC, all have a great deal of experience in addressing human subjects concerns. Related

procedures were standardized for every population and were reviewed by the WSU Human Subjects Committee and all Institutional Review Boards at the collaborating research sites. The data collection protocol, including all instruments and informed consents, for this study was approved by the WSU Human Subjects Committee and all I.R.B.'s from participating agencies before any data collection activities began. Participants were protected in several ways. For example, potential participants were informed that the study was being conducted independently and that refusal to participate would not affect services provided to them. All subjects signed a written informed consent and were provided with a copy. Questionnaires and other instruments contained no personal identifiers, with the exception of a numeric ID code that referred back to the informed consents. The informed consents at each site were maintained in a separate, locked file away from completed study instruments. All results have been analyzed and reported only in aggregate form and participating agencies are not able to access individual data. Consumer requests for results of the study have been provided via an abstract describing group results. All respondents were provided with the names, addresses, and telephone numbers of the Principle Investigators. Finally, all personal interviews were conducted in a private location.

Data Elements and Variables. During the intake interviews for both the multi-site and single-site components, a number of instruments were utilized. Those included the following:

- *Addiction Severity Index* (ASI; McLellan et al., 1980), a comprehensive clinical/research instrument used to assess problems across seven life areas: medical, employment/education, alcohol use, drug use, legal, family/social, and psychiatric. Composite scores in these areas are used as repeated measures to indicate change in problem severity over time (e.g., pre- to post-treatment). Previous research has shown the ASI to be reliable and valid (Kosten, et al., 1983; McDermott, et al., 1996; McLellan, et al., 1980; McLellan, et al., 1985).
- *Michigan Alcoholism Screening Test* (MAST; Selzer 1971) is a 25-item self-report instrument designed as a screen for alcoholism. Several investigations have demonstrated acceptable reliability and validity for the MAST (e.g., Gibbs, 1983; Magruder-Habib, Stevens, & Alling, 1993; Storgaard, Nielsen, & Gluud, 1994).
- *Biographical Questionnaire* (Heinemann, et al., 1991) was developed to assess various demographic and disability factors. Included is a section on brain injury that probes for information on injury severity and substance use at the time of injury. Data on medical problems, vocational status, and disability-related employment barriers are also gathered.
- *Social Position Index* (SPI; Hollingshead & Redlich, 1958) was used to characterize socioeconomic status across eight categories that range from higher executives and major professionals to students, homemakers, and unemployed persons who comprise the eighth category.
- *The Employability Rating Scale* (ERS; Ben-Yishay et al., 1987) is a 10 point scale used to rate level of productivity from "not active in VR services or being evaluated" to "full or part-time competitive," which considers the nature and skill level involved with employment.

- *Community Integration Questionnaire* (CIQ; Willer et al., 1993) is a 15-item self-report questionnaire that measures current level of integration within the community. Three subscales have been derived: Home Integration, Social Integration, and Productivity. Test-retest reliability and concurrent validity are both acceptable (Willer et al., 1993).
- *Satisfaction with Life Scale* (SWLS; Diener et al., 1985) is a five-item self-report scale that has respondents indicate degree of agreement with five statements regarding satisfaction with their lives. It has been shown to be both reliable and valid (Pavot & Diener, 1993).
- *Family Satisfaction Scale* (FSS; Carver & Jones, 1992) is a 14-item self-report instrument that appraises a person's degree of satisfaction with family functioning, relationships, and support. Carver and Jones (1992) found evidence for construct validity of the FSS.
- *Neurobehavioral Cognitive Status Exam* (Cognistat; Northern California Neurobehavioral Group 1988) is a screening device that provides standardized scores on ten dimensions of cognitive functioning. Kiernan et al. (1987) found evidence for concurrent validity when compared to the Mini-Mental Status Exam (MMSE; Folstein, Folstein, & McHugh, 1975); and predictive validity has been reported to exceed that for the MMSE (Starrat, Fields, & Fishman, 1992). Englehart, Eisenstein, and Meininger (1994) found that the Cognistat was a valid screening device for both geriatric and non-geriatric adults with brain injury.
- *VR Case Management Tracking Form* (developed by study staff) This instrument details all contacts that the on-site VR counselor has with or on behalf of clients. These contacts include not only individual and group counseling, but also VR-specific case management, job support, and other individualized services.

During the follow-up interviews, only a subset of the items included in this initial comprehensive assessment were asked. In keeping with the orientation of the project with regard to assessing the effects of treatment on employment outcomes, the following areas were covered during these follow-up sessions: satisfaction with life, satisfaction with family, community integration, general health issues including admittances to the hospital, current substance use, legal status, employment history over the past 9 months, and living arrangements.

Analysis Plan. For the multi-site component, error plots were generated to evaluate skews and other limitations in the data. Descriptive analyses were used to examine fundamental differences between and among individual site variables. Analysis of variance (ANOVA) techniques (e.g., mixed-model ANOVA's) were employed to compare group means on selected variables such as the ASI, ERS, CIQ, SWLS, and FSS. The associated F-tests were used to examine differences of repeated measures among groups of consumers, by type and extent of disability, gender, race, and nature of services provided. These comparisons were conducted within each sample and between sites. Longitudinal follow-up data were addressed through multivariate analysis of variance (MANOVA) to quantify differences among multiple dependent variables. Multiple regression analyses (OLS and Logistic) for both within site and cross site

data, and multiple regression coefficients were estimated for each independent variable in order to control for mediating factors such as demographics, substance use severity, disability severity, and initial employability rating.

The assessment of the single-site data involved both simple descriptive statistics and the use of ANOVA techniques that allowed for the analysis of the criterion data (e.g., employment outcomes) over time as well as across different subgroups of Program consumers (e.g., TBI vs. Mentally Ill vs. Other Consumers). Chi-Square statistics were used to assess changes across time for criteria that were non-metric in nature.

Progress-to-Date, Problems Encountered, Changes Made. With regard to the **R2** Project the initial sub-component, the multi-site study, was completed in accordance with the RRTC specified timelines. A technical report has been developed based on the initial and 9-month follow-up data (see the first part of Appendix B). Analyses incorporating the 24 month follow-up data were completed as well and the related findings are reported below under “**Key Findings.**” In addition, two journal article has been submitted based on the data from the multi-site study. During the course of this portion of the **R2** Project several technical issues arose, primarily issues related to data definitions and comparability across sites and having the database software “communicate” properly. These concerns were typically resolved rather quickly and the study was completed on schedule.

The more in-depth, single-site (CAM) study is an ongoing effort and related data collection are continuing. At different intervals during the course of the **R2** Project “snapshots” of the data were taken and related analyses completed. One last such set of analyses was completed in the Spring of 2001 and the results were summarized in a formal presentation at the American Psychological Association Convention. Near the end of the final year of the RRTC grant another “snapshot” was taken and related analyses completed. The associated results are summarized in a technical report (see second part of Appendix B). Basically, this (the single-site component of **R2**) also proceeded on schedule and the timeline anticipated in the original proposed “Research Plan Timelines” was maintained. Several basic problems encountered were (a) the time required to administer the initial intake assessments, (b) the management of the large mass of data resulting from the effort, and (c) the response rates obtained during the follow-up process. In response to the first of these issues, a computer-based administration process has been developed and is undergoing try-outs (Beta testing). It appears to have considerable potential for helping to

alleviate the first two of problems noted. In addition, we are exploring the possibility of changing our follow-up process to include an immediate post-closure follow-up and initiating periodic post closure contacts, which in the future should help improve the linkages maintained with consumers once they exit the CAM Program.

Key Findings. As noted earlier the primary objective of the multi-site study was to evaluate the impact of a well-designed case management program for individuals with TBI who also exhibit substance abuse problems. Although the results obtained to date are not 100% unequivocal, they do strongly suggest that case management does have beneficial effects for adults with concomitant TBI and substance abuse problems. These effects are evident in terms of life and family satisfaction, as well as physical well-being. Large changes in the benefits accrued in regard to employment were not observed, but a somewhat limited analysis of cost data suggests that case management related treatment may be cost-effective in many settings. A more complete description of the shorter-term results evolving from the multi-site component of **R2** can be found in the copy of the resource document, “Case Management for TBI Survivors with Alcohol Problems”, provided as part of Appendix B.

The longitudinal (*Intake to 9-Month Follow-up to 24-Month Follow-up*) or long-term findings evolving from the multi-site component of **R2** are summarized in Tables 1, 2, and 3. In each of those analyses the two-level independent variable evaluated was defined by an experimental group (i.e., the case management group - derived by combining subjects from the “TBI Network” and CAM Programs into this one group due to the small sample sizes) and control (i.e., no case management) group. A review of the results presented suggests that the effects observed were not statistically significant across the three time s evaluated, and hence, it could not be demonstrated that the beneficial effects of utilizing an integrated, case management approach to treatment yielded greater long-term improvements (especially across a 24-month period) in the selected, consumer outcomes than did participation in a more traditional treatment setting. The emergence of this non-significant finding (which was particularly consistent for the 24-moth follow-up) may well have been due to the small sample sizes observed during the 9-month and 24-month intervals studied. On both occasions the “data loss” was substantial - over 50% for the 9-month interviews and roughly 70% for the 24-month interviews, which most likely negatively reduced the power of the associated statistical tests from what was anticipated at the study’s initiation.

The preliminary results obtained for the second component are also somewhat mixed. Basically, the analyses undertaken indicate that participation in the CAM program has had a significant positive impact on consumers' abstinence from AOD, satisfaction with their lives, assessment of selected health issues, and status regarding legal problems. As was observed in the multi-site study, although participation in CAM appeared to positively influence employment status, the increase observed using the sample at the time the analyses were completed did not reach statistical significance. A more detailed description of these and other results related to the single-site portion of this research project can be found in the TECHNICAL REPORT provided as part of Appendix B.

Table 1
ASI and employment by treatment group

DEPENDENT VARIABLES	COMPARISON GROUPS:						TEST STATISTICS:			
	Control			Experimental			MANOVA Wilks' lambda (F, df, p)	Univariate t tests		
	M	SD	n	M	SD	n		t	df	p
T1 alcohol use	.059	.095	97	.146	.160	208	.993 F = .113 df = 2, 30 p = .894	-5.904	285.0	.000
T2 alcohol use	.065	.118	54	.115	.172	85		-2.042	136.3	.043
T3 alcohol use	.063	.073	30	.134	.188	23		-1.710	27.1	.099
T1 drug use	.013	.042	97	.052	.074	212	.983 F = .882 df = 2, 103 p = .417	-5.754	292.4	.000
T2 drug use	.006	.022	80	.034	.062	110		-4.471	145.1	.000
T3 drug use	.005	.025	65	.018	.074	68		-1.372	82.0	.174
T1 # Days worked past mo	5.13	9.41	90	3.20	7.77	212	.979 F = .649 df = 2, 60 p = .526	1.72	142.9	.088
T2 # Days worked past mo	6.41	9.38	64	.00	.00	18		5.467	63.0	.000
T3 # Days worked past mo	7.15	10.8 5	66	6.26	9.95	69		.498	133	.620
T1 # months current job	43.5 9	42.0 3	27	22.2 0	66.4 8	108	univariate F = 2.38 df = 1, 54 p = .129	1.592	133	.114
T2 # months current job	23.9 3	45.4 3	27	4.06	12.8 0	68		2.237	27.7	.034

Table 2
Health Outcomes by treatment group

DEPENDENT VARIABLES	COMPARISON GROUPS:						TEST STATISTICS:			
	Control			Experimental			MANOVA	ANOVA		
	M	SD	n	M	SD	n	Wilks' lambda (F, df, p)	F	df	p
T1 Satisfaction with Life	15.16	7.82	93	13.74	7.54	197	.982	2.19	1, 288	.140
T2 Satisfaction with Life	15.84	8.53	80	17.13	8.11	114	F = .824 df = 2, 92 p = .442	1.15	1, 192	.286
T3 Satisfaction with Life	18.23	8.01	60	15.12	8.06	67		4.75	1, 125	.031
T1 SF36 Physical Functioning	65.45	30.47	101	65.23	27.22	196	univariate F = 0.30	.004	1, 295	.950
T2 SF36 Physical Functioning	67.35	29.90	81	67.07	29.32	116	df = 1, 184 p = .586	.004	1, 195	.949
T1 SF36 Role Physical	50.74	37.82	101	41.75	40.39	197	univariate F = 1.84	3.45	1, 296	.064
T2 SF36 Role Physical	64.51	36.41	81	46.77	40.98	116	df = 1, 186 p = .177	9.78	1, 195	.002
T1 SF36 Body Pain	73.83	27.10	99	54.92	28.86	197	univariate F = 0.03	29.4 2	1, 294	.000
T2 SF36 Body Pain	75.14	27.28	81	58.62	31.39	116	df = 1, 185 p = .867	14.6 8	1, 195	.000
T1 SF36 General Health	66.34	22.28	100	52.28	24.58	197	univariate F = 0.78	23.0 7	1, 295	.000
T2 SF36 General Health	64.49	21.62	81	56.63	26.43	115	df = 1, 183 p = .379	4.88	1, 194	.028
T1 SF36 Vitality	58.35	24.68	100	45.08	27.66	196	univariate F = 2.25	16.3 7	1, 294	.000
T2 SF36 Vitality	51.85	23.42	81	46.13	25.41	115	df = 1, 184 p = .136	2.57	1, 194	.111
T1 SF36 Social Functioning	65.40	33.59	99	56.32	31.49	192	univariate F = 0.01	5.20	1, 289	.023
T2 SF36 Social Functioning	70.99	33.00	81	59.59	31.29	116	df = 1, 181 p = .935	6.05	1, 195	.015
T1 SF36 Emotional	66.00	39.92	100	51.10	42.26	197	univariate F = 2.20	8.56	1, 295	.004
T2 SF36 Emotional	69.55	38.80	81	46.26	42.11	116	df = 1, 186 p = .140	15.5 4	1, 195	.000
T1 SF36 Mental Health	66.14	24.30	101	53.11	26.06	195	univariate F = 0.00	17.4 1	1, 294	.000
T2 SF36 Mental Health	68.84	22.46	81	57.34	26.05	116	df = 1, 186 p = .979	10.3 8	1, 195	.001

*Note: All SF36 scores are transformed scores; the larger the score the bigger the problem.

TABLE 3
Transportation (0 = No, 1 = Yes) by Treatment Group

DEPENDENT VARIABLES	COMPARISON GROUPS:						TEST STATISTIC:		
	Control			Experimental*			Chi Square		
	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>X</i> ²	<i>df</i>	<i>p</i>
License T1 (0 = No, 1 = Yes)	.59	.49	93	.36	.48	213	14.55	1	.00
License T2 (0 = No, 1 = Yes)	.70	.46	71	-	-	-	-	-	-
License T3 (0 = No, 1 = Yes)	.64	.48	67	.48	.50	71	3.71	1	.054
Car T1 (0 = No, 1 = Yes)	.40	.49	91	.24	.43	211	7.34	1	.007
Car T2 (0 = No, 1 = Yes)	.55	.50	66	-	-	-	-	-	-
Car T3 (0 = No, 1 = Yes)	.45	.50	67	.43	.50	70	.05	1	.821

*Note: There were no data available for T2 license or car access for the experimental subjects.

R3: Effective Delivery of Vocational Rehabilitation Services to People Living with HIV/AIDS

Statement of Problem/Background. With the recent development of medication and new therapies, the expected life span for people living with HIV has increased dramatically. HIV/AIDS is no longer the acute deadly disease of the early 1980's but has emerged as a long term chronic illness. As the number of deaths related to AIDS declines, the number of people living with the disease has increased substantially. This recent trend is attributed to improved treatments and increased utilization of medical care. Thus, HIV/AIDS has begun to take on the characteristics of a life long hidden disability which can place limitations on an individual's ability to work. Appropriate VR services can assist individuals with HIV/AIDS cope with work limitations and return to the workforce. At the same time, such interventions can provide financial and emotional support and increase a person's lifespan, health and well-being.

Existing research has shown that AIDS can significantly impact employment, finances, and quality of life (Ellerman,1995). Half of all people living with HIV/AIDS leave the workplace within two years of an AIDS diagnosis (Yelin, Greenblatt, Hollander, & McMaster, 1991) and job loss is more likely for people living with HIV/AIDS than for seronegative individuals (Kass, Munoz, & Chen, 1994). Since the largest estimated cost relating to HIV/AIDS is the cost of

forgone work (Scitovsky & Rice, 1987), meeting the challenges of vocational rehabilitation is a crucial part of responding to this public health crisis.

A previous study examined and correlated the characteristics of jobs held by people living with HIV or AIDS and subsequent job loss (Massagli, Weissman, Seage, & Epstein, 1994). The researchers found that those who held physically demanding jobs were more susceptible to job loss than those with college educations and flexible scheduling. This finding is consistent with previous studies suggesting the desirability of shifting chronically ill workers to less physically demanding jobs and otherwise altering work demands (Greenwald, et al., 1989; Yelin, et al., 1991).

Employment is important to the quality of life and economic well-being of everyone, including people living with HIV/AIDS. Within the employment arena it is also important to have the opportunity to make informed choices related to vocational programming and one's ultimate vocational goals. Vocational rehabilitation counselors, therefore, must have the skills to assist people in making appropriate job choices as evidenced by the study conducted by Yelin and associates (1991). In this regard, people living with HIV/AIDS need to be able to choose jobs that will accommodate the disabling aspects of the disease over time and not provide stress that further compromises the immune system (Hunt, 1996; World Health Organization, 1990). In addition, people living with HIV/AIDS must also make choices that will impact their ability to retain employment. One of these choices is related to disclosure of HIV/AIDS status to current or potential employers (WID, 1994) and fellow employees. Another is their choice regarding the use of alcohol and illicit drugs to cope with disability and stresses in their lives.

Vocational rehabilitation professionals need to actively address these types of issues related to serving people with HIV/AIDS, as professionals and as a field. People with HIV or AIDS are and will continue to be present on caseloads throughout the country because of the disability of HIV/AIDS or another primary disability, such as substance abuse (Hunt, 1996). Until recently, however, the need to provide vocational rehabilitation services to people with HIV/AIDS was not well met. Studies have also shown that rehabilitation counselors need specialized training and experience focused specifically on working with this population (Glenn, 1997; Hunt, 1996; WID, 1994). The field of rehabilitation has begun to research and develop policies, programs, and practices for serving people with HIV/AIDS, but many questions remain unanswered. They

can begin to be answered through research involving two partners present in every rehabilitation effort, consumer and counselor.

Pilot Study. In 1994, the RRTC on Drugs and Disability at WSU conducted a service-related, one year pilot study utilizing case study methodology to identify the challenges that might impede the delivery of vocational rehabilitation services to people living with HIV/AIDS. The goals were to document needs of these individuals and to discuss community-based HIV/AIDS services with VR counselors, which could assist with client outcomes. The study's design was qualitative and exploratory in nature. Two separate cohorts of participants were included. Ten subjects were recruited from the four largest metropolitan areas in Ohio: Cincinnati, Cleveland, Columbus, and Dayton. A second cohort included five individuals recruited from the New York City area. Over six months, three interviews were conducted with each subject. In addition, subjects were contacted by telephone and by mail to monitor their contacts with the VR system.

The vocational rehabilitation experiences of these 15 individuals living with HIV/AIDS suggested five major barriers to the effective delivery of vocational rehabilitation services to this population: 1) timely delivery of services; 2) coexisting substance abuse; 3) failure to identify limitations in ability to work; 4) accessibility of centralized services due to illness or confidentiality; and 5) consumer ignorance of eligibility for vocational rehabilitation services (RRTC, 1996e). Among these identified challenges, coexisting substance abuse was identified as one of the most crucial. In fact, more than 80% of participants acknowledged a past or present substance abuse problem; 70% reported past or present use of crack cocaine; and an equal number reported current use of alcohol or other drugs. These observations strongly suggest that substance abuse is coexisting in a large percentage of people living with HIV/AIDS. However, among participants in this pilot study who received evaluative or rehabilitative services from the state VR system, substance abuse issues were barely addressed (one out of the ten cases in the Ohio cohort).

Research Questions or Hypotheses. As more and more people living with HIV/AIDS are entering state VR systems, there was a need to extend the pilot study completed in the previous RRTC agreement. Hence, the goal of the **R3** Project was to examine relationships between vocational rehabilitation services, HIV/AIDS as a disability, and substance abuse. In

keeping with the emergent research design for this primarily qualitative study, a number of research questions were raised. Those questions included:

1. What percentage of vocational rehabilitation consumers living with HIV/AIDS report moderate or severe problems with substance abuse and what are the demographic characteristics of those consumers?
2. How related is substance use/abuse to key VR outcomes for consumers who are living with HIV/AIDS?
3. What barriers exist for persons with HIV/AIDS with regard to accessing and utilizing vocational rehabilitation services to obtain or maintain gainful employment?
4. What transitional techniques can VR counselors use to assist consumers living with HIV/AIDS in their return to the work force?
5. Is there a relationship between client-reported ability to work and reported levels of substance abuse among consumers with HIV/AIDS?
6. Is there a relationship between client-reported ability to work and satisfaction with VR services and level of disease progression among consumers with HIV/AIDS?
7. Is there a relationship between rehabilitation counselors' perceptions, levels of knowledge, training/experience, and self-reported skill levels and consumers' with HIV/AIDS vocational rehabilitation outcomes and reported satisfaction with services?

Methods. The basic underlying research design for this Project was a single group, longitudinal design wherein the primary subjects, persons living with HIV/AIDS, were interviewed three times with approximately 6 months intervening between contacts. In keeping with the questions raised above, the data secured from consumers was supplemented by that secured from a sample of vocational counselors, who were surveyed using a mailed questionnaire. Decisions made by RRTC staff relative to this study were guided by a design and advisory team that consisted of two researchers, two persons living with HIV/AIDS, two (HIV/AIDS) specialty physicians, Director of the ORSC Bureau of Vocational Rehabilitation, and a representative from the National Association on Alcohol, Drugs, and Disability (NAADD).

Sampling and Subjects. Subjects for the Project were recruited from two populations from across the state of Ohio, VR eligible consumers who are living with HIV/AIDS and VR counselors. The first set of subjects were individuals living with HIV/AIDS and interested in or actually seeking vocational rehabilitation services from the Ohio Rehabilitation Services Commission (ORSC). Based on a sampling strategy that considered respondent demographic

distributions, RRTC staff resources, the qualitative nature of the study, and the results of a preliminary “statistical power analysis,” it was estimated that a minimum sample size of 45 would be required for the project. Thus, it was decided that a total of 60 individuals would be included in order to comprise a full cohort for the repeated interviews. The sampling strategy used took into account the potential subjects’ ethnic, gender, sexual orientation, and educational characteristics. To qualify for inclusion in the study, subjects had to be at least 18 years of age, diagnosed as HIV seropositive, and currently utilizing or interested in accessing ORSC services.

HIV/AIDS as a disability is still not well-defined and documented by the VR system for several reasons. One reason is that until recently, persons with HIV frequently needed to be too sick with AIDS to work before they qualified for VR services (Gutterman, Director of Ohio BVR, personal conversation 4/95). In addition, HIV/AIDS carries a significant stigma in our society and VR clients perceive that employers may be reticent to utilize the services of someone that they know is HIV positive. Also, the ORSC database does not include an HIV descriptor classification (only “other blood-related conditions”). Fortunately, a unique method for recruiting potential respondents existed which had been utilized by another program within our Department. A number of physicians specialize in service to the HIV/AIDS population. These physicians were crucial to the recruitment process because most people with HIV/AIDS have at least periodic contact with their doctors. Quite often these specialty practices employ the services of case workers who know a great deal about the employment status of their patients. Discussing the study with these physicians and their staffs, posting notices in AIDS-related newsletters, and leaving flyers at HIV health service agencies was seen as extensively covering the population of potential participants. Also, a \$200 stipend was used to serve as a significant inducement for participation. As in our earlier pilot study, four major metropolitan areas with the highest incidence rates in the state of Ohio (Cincinnati, Cleveland, Columbus, and Dayton) were used as recruitment cities. Each of these areas has one or more physicians who are experts in HIV/AIDS and who specialize in serving this population.

Initially, all subjects recruited in this study were to be currently utilizing ORSC services. After initial recruitment efforts met with only limited success, however, this inclusion criterion was relaxed somewhat. At that point individuals were included in the study if they either were currently utilizing ORSC services or desired to avail themselves of those services. Subsequently, a sample of 53 individuals living with HIV/AIDS was identified for the study.

Later in the course of the study, VR counselors within ORSC who work with these individuals were also recruited as participants in the R3 study. The criterion for counselor inclusion was current employment with ORSC as a rehabilitation counselor with primary caseload responsibility. In all, 55 counselors out of the total of 320 across the State of Ohio who were sent project questionnaires responded.

Assurance of Human Subjects Protection. Human Subjects protection documents for the project were filed with the Human Subjects Committees at the Ohio Rehabilitation Services Commission and Wright State University prior to initiation of any data collection activities. The RRTC currently has a federal Certificate of Confidentiality that provides additional protection of subjects' confidentiality and an addendum was filed requesting an extension of that Certificate to cover subjects in this research component. Before any data were collected from a subject, the subject was oriented to the project and any questions he/she had were answered. An informed consent document that describes the study, procedures, and potential benefits and risks to the subject was provided to and signed by each subject. This protocol was used with both client and counselor participants.

Data Collection Strategy. As indicated earlier, the interviews of the primary subjects for the study occurred over an 18-month period. In all, three interviews were conducted starting in the Spring of 2000, with each being approximately 6 months apart. The first and third interviews were conducted in person, while the second was done over the phone. All personal interviews took place in private locations mutually agreed upon by the subjects and interviewers (e.g., AID community services offices or libraries). In addition, the initial interviews were all taped to ensure that the "richness" of the subjects' responses, particularly to open-ended items raised during the interview, was not lost via the interviewer transcription process.

Each consumer interview form used included both quantitative and qualitative items intended to contribute a complementary perspective. This inclusion of qualitative or open-ended items was seen as a way to gain further insight into the quantitative data that were being collected. Thus, all three interviews contained open-ended questions and areas for discussion. As noted earlier, the initial set of interviews was tape recorded in order to ensure fidelity of the interviewer data with respondents' qualitative responses. The research team for the project involved four experienced interviewers who received specific project-related training.

VR counselors participating in the study were queried regarding their perceptions, knowledge, and self-reported skills/training levels related to the provision of services for people living with HIV/AIDS. The counselors completed the survey instrument described in the materials that follow. The list of mailing labels for the counselors was provided by ORSC and they physically mailed out the instruments provided to them by project staff. One intent was to compare and contrast counselor perceptions and skills with clients' VR outcomes and reported satisfaction with services.

As alluded to earlier, monetary compensation was provided to all consumer respondents. A check was given to each subject at the end of each interview. Specifically, all subjects received a payment of \$50 after the initial interview and again after the 6 and 12 month follow-up interviews, or a total of \$150. Counselor participants received no monetary compensation.

Data Elements and Variables. In all, three somewhat different, consumer interview forms were developed for the study. The three instruments were different, but included some similar if not identical items for use in tracking changes in selected areas of concern, e.g., substance use and self-reports of emotional as well as physical health. The first of these instruments focused on HIV status, disease progression, employment history, employability and work skills, job seeking efforts and skills, substance use, social support, and vocational rehabilitation services and referrals. A number of demographics and other background-related items were included as well. The initial instrument contained a total of 112 single and multi-part items. The follow-up instruments contained items relating to many of these same areas, as well as items relating to specific contacts with counselors (type, length, and frequency of contact), issues addressed with counselors, assessment and plans for services, and satisfaction with VR services. The second and third forms contained 109 and 122 items, respectively.

For the cooperating sample of counselors an instrument soliciting their perceptions, knowledge, experience/training, and skill levels relating to HIV/AIDS was utilized. That instrument is a compilation of items derived from a previous study of rehabilitation counselors (Glenn, 1997). Reliabilities of the composite scores generated were estimated using Cronbach's alpha. Associated results indicated high internal consistency reliabilities: perception, 0.88; knowledge, 0.81; experience/training, 0.68; and skills, 0.97 (Glenn, 1997). An additional section adapted from an instrument developed by the World Institute on Disability (1994) (26 items) was used to measure perceptions VR counselors have toward persons living with HIV/AIDS.

In the second section, counselors' knowledge was measured by a series of questions developed by Peterson (1991) and used by Hunt (1996) and Glenn (1997) in national studies of rehabilitation professionals. This part of the instrument had 38 questions about the rehabilitation counselors' knowledge of the course of HIV/AIDS; situations that place a person at risk for contracting the disease; legislation affecting rights of persons with HIV/AIDS; stressors related to HIV/AIDS; and medical treatment modalities. These questions required true/false responses.

Counselors' self-reported skill levels were assessed via a scale used in a previous study of rehabilitation counselors (Glenn, 1997). This measure was designed to investigate specific information related to counseling, planning and resource acquisition as well as other aspects of the rehabilitation counseling process. Skill levels were rated by counselors for 14 items, with a seven point Likert scale for each item. The final draft of the survey instrument for the VR counselors was submitted to and approved by ORSC (in addition to the appropriate IRB Boards as pointed out earlier).

Analysis Plan. The data analyses for this project were approached in two basic ways. First, both consumer and counselor data were analyzed using descriptive and bivariate techniques. Specifically, percentage distributions, means, and standard deviations were generated and reported. These statistics have been used to provide a basic description of consumers' HIV status, employment patterns, substance use, and vocational rehabilitation services utilization as well as counselors' perceptions, knowledge, education/training, and skill levels. Chi-Square and Pearson correlation techniques were used to examine zero-order relationships between rehabilitation outcome, VR services, substance use, and other identified variables. Where applicable an Analysis of Variance technique was used to compare group means for different cohorts, while paired comparisons t-tests and Chi-Square analyses were used to examine data over time. Summaries of the qualitative consumer data have been merged with the results gleaned from the quantitative analyses, where helpful. For example, comparisons of consumer satisfaction with their comments regarding problems they encountered in accessing or utilizing available VR services. This linking of the numeric and qualitative data is seen as adding contextual background and explanatory detail to the quantitative findings. The qualitative data were also synthesized/evaluated in an effort to identify recurring themes and issues which link HIV, substance abuse, and VR services outcomes. Grounded theory procedures and techniques

will enable theoretical interpretations that are grounded in empirical findings (Strauss & Corbin, 1990).

Progress-to-Date, Problems Encountered, Changes Made. The data for the **R3** study were collected in accordance with the projected timelines, as was the entry and “cleaning” of data secured during the three rounds of consumer interviews and the counselor survey. Also, the analyses of the “processed” portions of the data have been completed. Basically, according to the projections contained in the Center’s “Research Plan Timelines” Chart, the project was completed on schedule. The attendant results/findings are summarized in the Technical report presented in Appendix C and the manuscript for a journal article describing these findings has been developed and submitted for publication.

One of the initial problems encountered in the study was alluded to in the description of the sampling process. That is, it was originally assumed that the sample of consumers for the study could be identified via the rolls of active consumers maintained by the state’s VR agency, however, this proved not to be a workable approach. Therefore, the alternative strategy for locating potential subjects (i.e., by going through the physicians who most often served such patients) and relaxing of the selection criterion dealing with potential subjects’ being active VR clients were invoked. These two changes resulted in our being able to secure the required sample of subjects. The other shortcoming that occurred related to the low response rate (17%) realized for the VR counselors. This low rate was not expected and was not improved much by the involution of a follow-up effort. Although this rate was low, it was assumed to be adequate for the purposes of the study, particularly since the strategy to match consumer and counselor data as anticipated in the original proposal could not be accomplished efficiently given the required changes in the consumer sampling strategy noted above.

Key Findings. Several more general findings evolving from analyses of the **R3** project data are as follows:

- Overall, a significantly greater proportion of the consumers living with HIV/AIDS in the **R3** study had substance abuse problems than did the six-state sample of VR consumers involved in the epidemiology study (R1), with over 60 percent of the R3 subjects having MAST scores that indicate an alcohol problem and almost 50% reporting that they used illegal drugs within the year preceding the initial interview.

- It appears that larger proportion of the consumers in **R3** who participated in VR have received treatment services for alcohol/drug problems and consider themselves to be alcoholics or addicts in recovery than the comparable proportion of sampled consumers who did not participate in VR.
- Of the males, who made up 75 percent of the **R3** consumer sample, 36 percent reported using drugs in the past month and two-thirds had MAST scores that indicated alcohol problems, while for the subsample of females only 8 percent reported using drugs in the last 30 days and half had MAST scores that might indicate an alcohol problem.
- Roughly half of the **R3** consumer sample who were unemployed had high MAST scores and self-reported drug use in the past year, while for those who were working full time, these usage indicators were 100 percent for the MAST and 14 percent for drug use in the past year.
- Initial comparisons of (1) high and (2) low alcohol/drug use subsamples of consumers yielded no significant relationships (correlations) between substance use and either ability to work or vocational rehabilitation outcomes.
- It was found that satisfaction with VR services for those consumers who participated in such services was significantly positively correlated with job satisfaction and positive employment changes.

The specific analyses and related results upon which these and additional **R3** findings are based are summarized in the Technical Report found in Appendix C.

R4: A Study of the Effectiveness of the PALS Substance Abuse Prevention Approach for Youth with Learning Vulnerabilities

(NOTE: Based on concerns raised by members of the review panel during the Center's Formative Program Review, the decision was made to drop the research project originally proposed and replace it with a project focused more on youth in transition. Thus, in the materials that follow details of that new R4 initiative are presented.)

Statement of Problem/Background. By some estimates, individuals with disabilities account for 13.5% to 18% of our nation's population (Kraus & Stoddard, 1989; Carney, 1991). At the same time, studies of this major subpopulation indicate that roughly 25% or more could be classified as experiencing "substance abuse" or "substance dependence" based on DSM - IV criteria, more than twice the rate that occurs in the general population (Ford & Moore, 1992; RRTC on Drugs & Disability, 1996c). It has also been shown that rates of substance abuse by

specific disability groups can be substantially higher than that which occurs in the general population (Brown, et al, 1989; Regier, et al, 1990, Heinemann, et al, 1988; Ralph & Barr, 1989). The costs to our society associated with this issue are also quite substantial. For example, it has been projected that substance abuse among persons with disabilities may be costing our nation as much as \$80 billion per year in rehabilitation costs, Medicare-related expenses, problematic behavior, and lost productivity (Rice, et al, 1990; Holder & Blose, 1991). It is most often societal enabling, mistaken beliefs, lack of access to prevention and treatment resources which are the reasons why substance abuse rates are higher among persons with disabilities (SAMHSA, 1998; Moore & Polsgrove, 1991; Harley, et al, 1997), not inherent conditions of disabilities themselves.

To date, most discussions and related research dealing with the issue of substance abuse and disability have focused upon incidence rates for adults. There has been some research, albeit limited, indicating that youth with disabilities (who comprise about 13% of the nation's school-age population (NCES, 1999) also report comparable or higher incidence rates of substance use than their peers (Kessler & Klein, 1995; Morgan, et al, 1994; Demers, 2000). This is particularly true at the higher grade levels. Recent findings demonstrating these trends are presented in Table 4, which was abstracted from three sources - Demers, French, and Moore (2001), the Dayton Area Drug Survey (Falck, et al, 1999), and Monitoring the Future Study (NIDA, 2000) conducted annually by the U.S. Department of Health and Human Services. In addition to documenting an elevated level of substance use/abuse among youth with disabilities, available research has indicated that the risk factors associated with their substance use/abuse include those faced by others (Prendergast, et al, 1990; APA, 1987; Clayton, 1992; Ford & Moore, 1992; Freeman & Dyer, 1993) plus risks more specific to the experience of disability (Moore & Ford, 1991; Helwig & Holicky, 1994; Higgins, 1990; Moore & Siegal, 1989).

Although it has been consistently shown that youth with disabilities are at considerable risk regarding substance use/abuse, other research suggests (a) that such youth often do not have access to effective drug prevention programming in school (SAMHSA, 1998; Kress & Elias, 1993) and (b) that traditional drug prevention strategies are insufficient for these students because the material remains largely cognitively inaccessible to them or risk factors are not addressed at all, e.g., use of medications (Prendergast, et al, 1990; Morgan, et al, 1999).

Table 4
Reported Substance Use Among Several Samples of Older, School-Age Youth

Source of Data (Year)	Description of Sample	Grade Levels of Sample		Prevalence of Past Month's Substance Use			
			N	Tobacco	Alcohol	Marijuana	Inhalants
Demers and French (2000) ¹⁸	Sample of Special Education students from the Dayton, Ohio Metropolitan Area	9 th	70	30.9%	33.8%	13.2%	4.4%
		10 th	71	47.9%	49.3%	32.4%	5.6%
		11 th & 12 th	30	50.0%	53.3%	46.6%	0.0%
DADS (1999) ¹⁹	General sample of all students from the Dayton, Ohio Metropolitan Area	9 th	2834	30.1%	38.2%	22.2%	8.9%
		10 th	1130	33.9%	42.7%	23.4%	4.6%
		12 th	1933	39.0%	50.8%	25.1%	2.0%
Monitoring the Future Study (2000) ²⁰	Nationally representative sample of all students	8 th	16700	22.0%	24.0%	9.7%	5.0%
		10 th	13600	32.2%	40.0%	19.4%	2.6%
		12 th	13600	43.0%	51.0%	23.1%	2.0%

Also, special education teachers remain a critical source of support and advice for these students, even when other students increasingly turn to peer relations for this support (Morgan, et al, 1999). However, the teachers and parents of special needs children are typically provided little information on the importance of substance abuse prevention, nor do they have training in how to reinforce prevention messages based on their already-existing activities.

Several logistical barriers exist which make it difficult to provide appropriate substance abuse prevention education to students with disabilities: (1) little information is disseminated to illustrate the types and degrees of risk faced by these students; (2) school systems are “overflowing” with existing mandates, curricula, and required tasks (e.g., development and monitoring of I.E.P.’s in special education, along with the delineation of applicable and “acceptable” alternative assessments required under “No Child Left Behind,” are a major administrative responsibility), which make it difficult to introduce new subject material even when it is deemed important; (3) over the past several years, special education students have spent increasingly greater amounts of time in inclusion classrooms, often leaving less time for individualized instruction; and (4) misunderstandings of prevention education by parents have

led to conflicts with school officials which has resulted in some teachers being reluctant to address topics they see as “controversial”. To be effective, a substance abuse prevention program for students with disabilities must be sensitive to each of the above factors. Ideally, prevention education for these students should supplement current educational programs rather than introduce another curriculum, it must be time and cost-effective, and it must enlist the support and understanding of parents.

The PALS Approach. A program that appears to hold promise for addressing the unique prevention education needs of youth with disabilities is the “PALS” Program, developed by Substance Abuse Resources and Disability Issues (SARDI) at Wright State University’s School of Medicine. Recipient of the 1994 and 1999 Ohio Exemplary Prevention Award from the Ohio Department of Alcohol and Drug Addiction Services (ODADAS), PALS (or Prevention through Alternative Learning Styles) has evolved over the last several years to include specific instruction for impactors of youth in how best to deliver prevention education messages to youth with various learning styles. Because of the close relationships between substance abuse and violence, and the number of violence-related issues impacting youth with disabilities, components of violence prevention have been integrated into the PALS trainings and materials.

PALS is based on components of three conceptual models, two of which come from substance abuse prevention research and the third derived from special education theory. For the past decade, prevention educators have known that adult role models, or “one caring adult” can have more influence on whether or not a youth will initiate drug use than all other environmental factors (Bernard, 1991). This adult need not be the parent, and in fact other research has shown that special education students rely on teacher and other adult guidance more so than other students in the school (Morgan, et al, 1994; Morgan, et al, 1999). The special education teacher, especially in concert with the student’s parent (s), can greatly influence major decisions such as those surrounding initiation of substance/drug use.

The second principle is derived from “resiliency” models of prevention, which have been taken from the public health field. Under such models it is predicted that youth will be less likely to become involved with substance use if they are “inoculated” or made more resistant to risk factors and influences which promote use (Hawkins, et al., 1992). This theoretical approach is the most widely adopted in the country today. In order for a youth to avoid substance abuse, according to this theory, they must develop attitudes and skills which promote sobriety and good

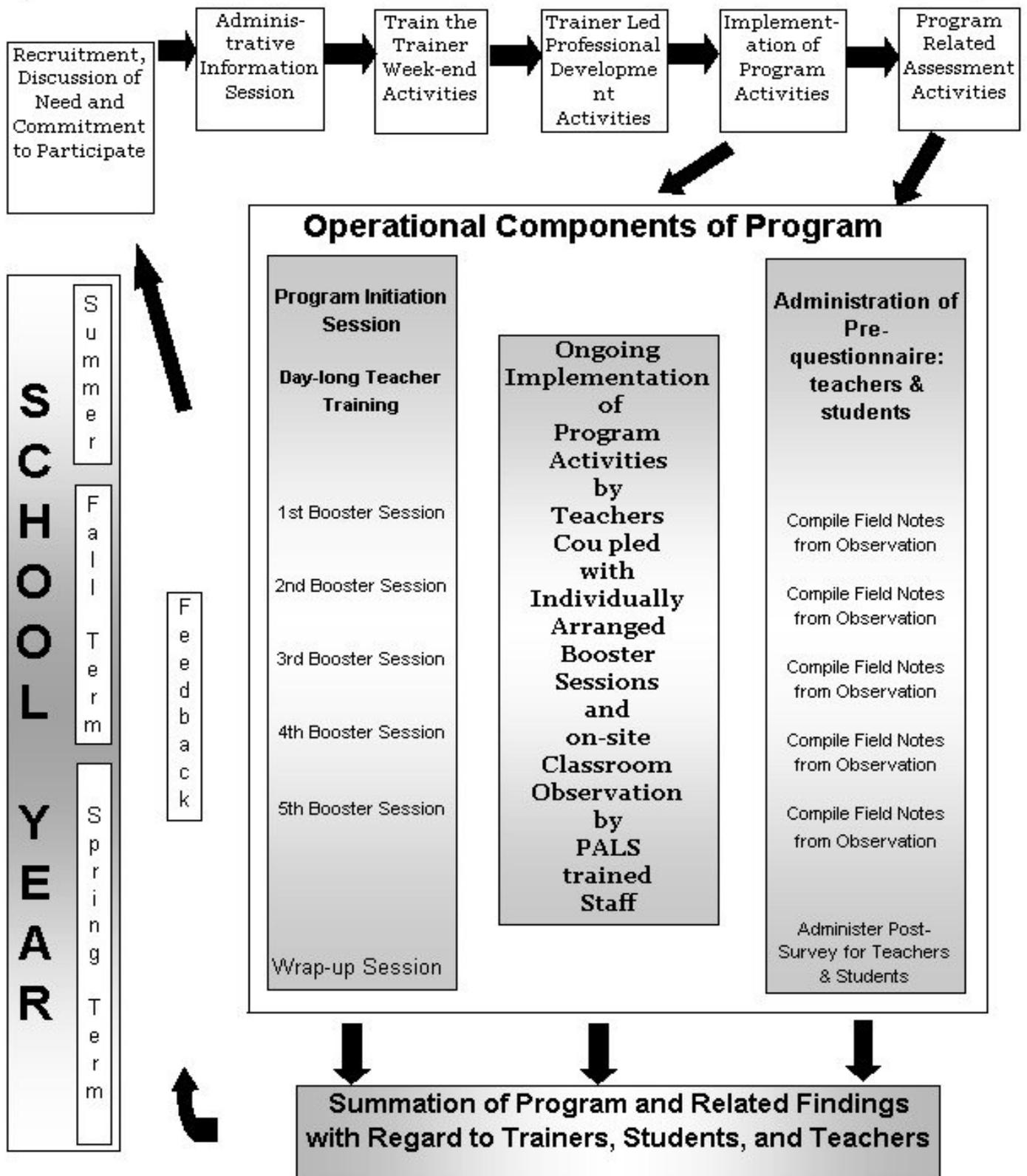
choices. This approach emphasizes education in basic drug use dangers, as well as skill building in such areas as recognizing and resisting peer pressure, recognizing and avoiding drug using environments, dealing effectively with stress, and learning how and where to communicate in a non-threatening way about drug use questions (NIDA, 1997).

In order for prevention education material to be accessible to youth with disabilities, it must be modified in content and also in style of presentation to match students' specific needs and abilities. An excellent model for modifying curriculum material was developed at the Center for School and Community Integration Institute for the Study of Developmental Disabilities at Indiana University (Ebeling, et al, 1994). By modifying this model of instruction for substance abuse prevention such as occurs during PALS training, the approach allows teachers to understand prevention messages that might be effective for youth with disabilities, and it gives them the tools needed to locate and modify other prevention materials that may also be helpful for their students.

Based upon "best practices" gleaned from prevention and special education research, the PALS Project is illustrated schematically on the following page. That schematic serves as the conceptual framework for the proposed project. The PALS approach consists not of a unique curriculum (although the Program Handbook has a number of model lessons and demonstrations to assist with conceptualizing the approach), but rather it emphasizes that adults involved with students in special education need to re-conceptualize their personal definitions of "prevention" so teachable moments can be maximized to assist youth in resisting substance use and violence. The initial origins of the PALS training by SARDI staff began in 1992 and it is continuing to evolve, based on evaluations and teacher feedback. Over the last several years PALS has been undergoing experimental vs. control group pilot testing to determine its effects upon students' attitudes and behaviors regarding substance use. These pilot studies, which have been relatively small in terms of the numbers of participating teachers and students, have been focused on youth outcomes. The results have been routinely utilized to further refine the training and materials prior to initiation of broader replication efforts (e.g., recently the PALS was nominated for formal consideration as one of CSAP's Model Prevention Programs). Our work to date suggests that youth with disabilities initiate first substance use (tobacco, alcohol, and marijuana) on average about one year later than their non-disabled peers (15 yrs of age vs. 14 yrs for general education students in Ohio). However, by 12th grade special education students' use appears to

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exceed that of their general education peers in all three of the indicated drug categories. Also, through analysis of student surveys, we have determined that peer pressure is especially important in special education as a factor in initial drug use and students with disabilities report substantial levels of peer pressure in junior high school. Students with disabilities must enhance their skills at resisting peer pressure earlier than high school in order to avoid this source of encouragement to use drugs. As a result of these findings, the PALS project has shifted in the last several years to focus more on junior high students, since available research clearly suggests that delaying the age of onset of first drug use can have a significant impact on reducing a person's overall risk for chemical dependency (SAMASA, 1998). In addition, our pilot test results over the last two years that relate to PALS's impact on the AOD-related knowledge, attitudes, and behaviors of special education students have been encouraging, particularly given the preliminary nature of this overall development effort. The criterion-related descriptive and inferential statistics for the 1999-2000 and 2000-2001 school years are summarized in Table 5. As shown in that summary, for the 1999-2000 school year the Experimental students' performance on all seven evaluative criteria was higher or more positive than that of students in the Control group. Those differences, however, did not reach the specified level of statistical significance (i.e., $p < .05$)². The results for the 2000-2001 school year generally did not show the same consistent pattern of positive program results as was observed for the previous school year, but they did show that the PALS students' knowledge/awareness of ATOD issues and factors increased significantly more from pre-to-post testing than did comparable criterion scores of the Control students. The results for the other criteria were in most instances not statistically significant³, except for the experimental students feeling greater peer pressure to use ATOD and a higher past month prevalence rate. These combined results, although encouraging, do not unequivocally document the "success" of the PALS Program in regard to all the designated student outcome criteria. They do, however, clearly suggest areas where additional emphasis

¹ As noted earlier, the overall quality, severely limited score distributions, and highly skewed nature of several of the student criteria necessitated the use of statistical tests that were less desirable (e.g., the analysis of posttest score via Mann-Whitney Tests) in that they did not effectively incorporate all the available data (e.g., pretests) and changes from Time 1 to Time 3) and, therefore, were not the most powerful tests available (e.g., Analyses of Covariance or a Multivariate Repeated Measures ANOVA).

³ The highly skewed nature and limited score distributions of the last six criteria necessitated the use of the designated statistical tests, which had the same concerns associated with their use as the tests employed with the 1999-2000 criterion data. Furthermore, the significant background differences between the Experimental and Control groups noted earlier may have contributed, at least in part, to the fact that the Experimental students' scores were not systematically higher as occurred in 1999-2000.

should be placed during Program-related training and where additional changes/improvements need to be made in the criterion measures.

Table 5
Comparison of PALS and Control Students on Knowledge/Attitudinal/Behavioral Criteria

SCHOOL YEAR	CRITERION	TIME	GROUPS*:				RESULTS OF STATISTICAL COMPARISONS
			Experimental		Control		
			Mean	St. Dev.	Mean	St. Dev.	
99-2000	Ever Used ATOD?	T ₃	8.22	1.44	7.96	1.58	Z = 0.6 (p = .52)***
	Used ATOD in Last 30 Days?	T ₃	2.98	7.04	3.84	4.16	Z = -1.2 (p = .22)***
	Intent re. Use of ATOD in Future	T ₃	2.30	2.95	3.36	3.31	Z = -1.8 (p = .08)***
	Perception of Harm from ATOD Use	T ₃	2.78	2.25	2.89	2.13	Z = -0.5 (p = .63)***
	Peer Pressure regarding ATOD Use	T ₃	4.70	2.29	5.61	2.523	Z = -1.7 (p = .08)***
	Portrayal of Best Friends' ATOD Use	T ₃	13.23	3.74	13.81	3.90	Z = -0.4 (p = .70)***
	Self-Image/Getting Along with Others	T ₃	12.30	2.56	12.01	2.83	Z = 0.2 (p = .82)***
00-2001	Knowledge of ATOD Issues	Post	13.2**	2.11	12.1**	2.11	F = 8.3 (p < .00)***
	Conflict Resolution/Violence Prevent.	Post	9.1**	2.09	9.5**	2.09	F = 1.9 (p = .17)***
	Intent re. Use of ATOD in Future	Pre Only	19.2	2.61	19.5	2.45	Z = -1.4 (p = .16)***
		Post	18.6	4.09	19.3	2.68	Z = -1.7 (p = .08)***
	Peer Pressure regarding ATOD Use	Pre Only	12.2	2.69	11.1	2.43	Z = -2.8 (p < .00)***
		Post	12.2	2.94	11.4	2.66	Z = -1.9 (p = .06)***
	Perception of Harm from ATOD Use	Pre Only	11.9	2.64	12.3	2.75	Z = -1.4 (p = .16)***
		Post	12.5	2.66	12.6	2.92	Z = -0.6 (p = .57)***
	Past Month ATOD Prevalence Rate	Pre Only	0.48	0.50	0.36	0.48	Z = -1.5 (p = .13)***
		Post	0.52	0.50	0.34	0.48	Z = -2.3 (p = .02)***
Lifetime ATOD Prevalence Rate	Pre Only	0.68	0.47	0.68	0.47	Z = -0.0 (p = .97)***	
	Post	0.68	0.47	0.64	0.48	Z = -0.1 (p = .92)***	

* The useable n's for 1999-2000 were 64 (Experimental) and 70 (Control), while for 2000-2001 they were 66 and 82, respectively.

** The values shown are predicted posttest means based on adjustments for the covariate, i.e., pretest scores (Stevens, 1992, p. 327).

***For 1999-2000 the test statistics shown are the Z-Score approximations estimated for two-sample Mann-Whitney U Tests, for the first two criteria listed for 2000-2001 the test statistics shown are the F-Values for Analyses of Covariance Tests, while for the last five criteria the test statistics shown are Z-Score approximations estimated for two-sample Mann-Whitney U Tests - one computed for the pretests only and a second for the posttests only per criterion.

Research Questions or Hypotheses. While the preliminary results noted above were encouraging, it was assumed the PALS Program and related criterion instrumentation (not a trivial concern when dealing with the Program's target population) needed to undergo additional pilot testing. Thus, for FY 2002 and FY 2003 the Program was implemented in a number of special education classes within the Dayton Public Schools, an urban district that serves predominately minority youth. The hypotheses addressed by that 2-year effort were basically the same as those addressed during the preceding pilot efforts, namely ---

- a. Teachers and other “impactors” who complete the PALS training will feel more confident in their ability to effectively implement PALS materials and activities in their instruction.
- b. Teachers trained via the PALS Program will utilize related prevention materials/activities in their classrooms and their students will be cognizant of their prevention-related efforts.
- c. Students with disabilities taught by PALS-trained teachers, as contrasted with students with disabilities not involved in PALS, will report lower “past month” and “lifetime” substance usage rates, less intent to use ATOD in the future, heightened awareness of both peers’ influence on their own ATOD use and the harm associated with ATOD use, and increased awareness/knowledge of a variety of ATOD-related issues and concerns as well as actions they should take in potential conflict situations.

Methods. The basic research design underlying the 2001-2002 and 2002-2003 PALS implementation efforts in the Dayton Public Schools was a quasi-experimental, non-equivalent control group design similar to that used during the previous two years’ pilot tests. Under that strategy, during the 2001-2002 school year five of the six middle schools across the District were randomly designated as experimental (or PALS schools - 3) and control schools (2) with all special education students in each school (i.e., potentially all students in each special education classroom in each school where-in the teacher volunteered to participate in the study) being exposed to the same “condition” or “treatment”. During the 2002-2003 school year the one middle school in Dayton that did not participate in the 2001-2002 pilot test, along with the two “control” schools for that same year, served as the “experimental” schools, while three middle schools from Springfield, Ohio (which is part of the SMSA for Dayton), served as the “non-equivalent” control schools. As occurred in 2001-2002, special education students in classrooms in the “experimental” schools where the teachers volunteered to participate in the study were actually exposed to the PALS Program.

Sampling and Subjects. The middle schools in Dayton and associated estimates of the target population of special education students in those schools who could have potentially been involved in the 2001-2002 study are provided in Table 6. During that year a total of 71 of those students actually completed the PALS-related evaluation instruments - 19 in “experimental” classrooms/schools and 52 in “control” classrooms/schools. During the 2002-2003 school year the total number of students who participated was 112, with 76 being from “experimental”

classrooms/schools and 36 being from “control” classrooms/schools. Several reasons why these samples were so disappointingly small are touched upon in the materials that follow.

Table 6
Overview of Proposed Target Population of Students for 2001-2002 Pilot Test

PARTICIPATING MIDDLE SCHOOLS	GROUPS:		
	African Americans	Other Minorities	Caucasians
Fairview Middle School	135	2	16
Kiser Middle School	47	1	38
Macfarlane Middle School	56	1	24
Roth Middle School	94	3	22
Wilbur Wright Middle School	21	2	80
TOTALS	383 (67%)	9 (2%0)	180 (31%)

It was initially estimated that a total of roughly 25 professional staff from the Dayton Public Schools would participate in the PALS training each year. Those individual were seen as being special education teachers (minimum of 9), other professional staff from the cooperating schools (e.g., regular education teachers, counselors, and administrative personnel), and one or two district staff. Furthermore, in most instances the participants were seen as being “volunteers” from the “experimental” middle schools. In reality during the 2001-2002 school year only 7 “experimental” teachers volunteered to implement PALS in their classrooms, while 4 others participated in related training. For the 2003-2003 school year these numbers increased to 15 volunteer teachers and 10 others who participated in training, but did not implement PALS themselves.

Assurance of Human Subjects Protection. Human subjects protection documents for the project were filed with the Human Subjects Committee at Wright State University (WSU) for each year of the proposed effort, as had been done in each of the previous years. The procedures to be followed in 2001-2002 and 2002-2003 basically mirrored those used previously and, therefore, received appropriate IRB approvals from WSU’s IRB. Subsequently, the IRB-approved protocols from Wright State had to be shared with appropriate parties in the cooperating districts and their approvals secured as well - before any work on implementing the study could be initiated. During the 2001-2002 school year, in particular, this second step in the

approval process was especially cumbersome and time-consuming, and caused significant delays in the projected project implementation schedule. Those delays caused over half of the school year to be lost for implementation and appeared to significantly reduce the number of teachers who could/would commit to participate in implementing PALS during that school year. As reflected by the improvement in the numbers of teacher participants in 2002-2003, the securing of district-level approvals of the human subjects protocols was not as cumbersome an issue that year and, hence, did not have the same magnitude of negative impacts on the recruitment of teacher (and thereby students) participants.

Data Collection Strategy. The 2001-2002 and 2002-2003 implementations of PALS involved the provision of in-school ATOD and violence prevention education activities to samples of primarily African American students with disabilities from three of the Dayton Public Schools (DPS) middle schools listed in Table 6. During the first month of the project, after district approvals were secured for the “Human Subjects Protocols,” the Dayton Public Schools designated a primary trainer who was to serve as an on-site coordinator. This individual was a current District employee who was to commit a portion of her/his time to overseeing implementation of the proposed grant-related prevention activities. Also several weeks after all approvals had been garnered and implementation initiated, PALS staff met with interested educators from the “experimental” schools in a focus group format, reviewed PALS materials, and discussed related cultural competency and relevance issues (for example, did the current materials/activities reflect culturally relevant issues involving differences in family structure and relationships? Did they reflect differences in “the circumstances with which drugs are offered for different racial/ethnic populations” as suggested by NIDA (1997)?).

Following this general orientation the teachers from the “experimental” schools, who were interested in implementing PALS in their classrooms, participated in an all day training that was followed by five booster sessions throughout the remainder of the school year. Teachers were asked to complete a pre-survey prior to the all day training and a post-survey after the training was completed. Teachers were also interviewed at the end of the school year to obtain their opinions of their experiences with PALS. Teachers also conducted a minimum of five activities from the PALS curriculum (which were almost exclusively related to the topics covered in the five booster sessions alluded to above) with their students.

Consent forms with a cover letter were distributed to all students in special education at each Middle School. Those individuals who returned a signed consent form were given pre-tests toward the beginning of the school year (prior to PALS implementation) and a post-test at the end of the school year. Students in the control schools received only the regular prevention curriculum that the school generally uses. The students in the experimental schools received additional prevention education based on what their teachers learned through PALS. All students in the experimental schools received these extra lessons; however, only those with consent forms were given the surveys to complete.

Data Elements and Variables. The different student criteria used as part of the 2001-2002 and 2002-2003 implementation efforts were basically the same variables used for the pilot test completed during the 2000-2001 school year. A listing of those variables was provided earlier in the bottom half of Table 5. The cooperating teachers were also asked to complete the same questionnaire as the one used in previous years. That instrument was administered at the initiation of the training workshop, immediately following that training session, and again near the end of the school year. More detailed descriptions of these instruments and the variables they are used to generate can be found in Demers, French, and Moore (2002).

Analysis Plan. The data obtained as part of the 2001-2002 and 2002-2003 pilot tests were analyzed using several statistical techniques. For example, the teacher data was analyzed using descriptive statistics and Chi-Square analyses. At the same time, most analyses of the student-related outcome data involved the use of descriptive statistics, Chi-Square tests, and selected rank tests. The use of Chi-Square analyses and two-sample rank tests (even several multiple rank tests as occurred in 2000-2001) in regard to the student criterion were necessitated by several characteristics of the criteria - their severely limited score distributions (e.g., for the monthly prevalence rates and perceived harm variables) and considerable skewness. In some instances these shortcomings in the data meant that the analyses completed were not necessarily the most powerful possible and may not have fully "utilized" all information collected as part of the evaluations. For the criteria which in 2000-2001 were shown to be "fairly normally" distributed, i.e., Knowledge/Awareness of AOD Issues/Concerns and Awareness of Conflict Resolution/Violence Prevention Strategies, more traditional Analysis of Covariance techniques were applied. The results of this array of analyses have been summarized in a set of

annual final reports that were submitted to the school districts involved and served as the primary source documents for a journal article.

Progress-to-Date, Problems Encountered, Changes Made. As alluded to in the preceding description, the continued pilot testing of PALS for the 2001-2002 and 2002-2003 school years were completed on time. However, in both instances significant operational concerns were encountered. More specifically, in 2001-2002 a number of barriers were encountered this year that were not barriers in previous years and were, therefore, unanticipated. This was our first collaboration with a large, complex school district like the Dayton Public Schools and we initially had difficulty accessing the students, parents, and teachers. The system is multi-tiered and difficult to enter. Teachers were also difficult to engage (i.e., quite reluctant to “take on” any extra project-related work in their classrooms). The decision to utilize Dayton Public Schools was to learn how effective the PALS approach would be in an urban school district where a minority population is the majority (i.e. high percentage of African American students).

Several school district events created delays in initial implementation of the program. A number of key positions had new people in place for the 2001-02 school year, who were unaware of the project, so it was necessary to secure approval from the Assistant Superintendent of Pupil Services and the Director of Special Education. The unforeseen need to inform a number of other administrators created delays. For example, when a call was placed to the new director of Special Education to obtain needed staff information, she stated that the Research and Evaluation Director must be made aware of the project. That director, who was also quite new, needed to approve the PALS program since it contains a survey instrument. These types of initial delays resulted in a significant, multi-month delay in distributing and collecting the consent forms. At that point, there was a very low response rate initially, and a second round of forms had to be distributed during the weeks of January 7th and 14th after students returned from the holiday break. By the third week of January, there was a return rate of only 18%. Several ideas were implemented over the next few weeks to increase the return rate. An extra effort was made to secure additional respondents. The school district provided an additional letter on their letterhead to show support for the project. Also, a postage-paid return envelope was included to increase the ease of returning the consent. Also, students returning their consent forms were treated to a small reward (candy bar). These efforts increased participation slightly. Overall, the

small numbers of participants, both teachers and students, for the 2001-2002 school year were problematic.

During the 2002-2003 school year a number of similar operational barriers were encountered that were not as surprising as they were the previous year and hence, were navigated more easily. It remained extremely difficult, however, to access students because of the lack of parental involvement and lack of parental trust and bonding with the schools. This issue seem to be systemic to the Dayton Public School System itself, which tends to be difficult to “enter” and engage because of its multi-tiered and non-trusting nature. On a more positive note, individual teachers were more easily engaged than last year due to our being able to access them earlier in the school year, the increased incentives offered, and the expansion of PALS lessons to include more “ready to use” materials for students.

It appears that in settings like Dayton small student sample sizes will continue to be a problem if we have to continue to rely on signed permission forms from parents. In addition, some of the teachers who had the most success in recruiting students and parents via the consent forms were not the teachers involved in the training and implementation of PALS. It is likely that some of the experimental students did not receive very much (or any) of the curriculum. We provided incentives this year to students in the form of soda pop and chips for all students completing the pre test and then the same reward was used at the time of the post test. Other strategies tried were to give WalMart and McDonalds gift certificates to students if they completed both surveys and to provide students with a field trip/alternative activity if they completed both tests. These efforts increased our numbers over those for the 2001-2002 school year; however, the small student sample size continues to be problematic. The problem is the required consent procedures in such settings adversely impact collection of the requisite evaluation data, but at the same time students seem to enjoy participating in the Program-supported activities, an outcome that alludes documentation due to the small pool of evaluative data collected.

Key Findings. The results related to student outcome criteria obtained from earlier pilot tests of the PALS Program were briefly described in the preceding materials - see Table 5. Generally, those results suggest that in the limited pilot tests completed PALS was successful in bringing about positive changes in students’ levels of knowledge regarding the “dangers” of substance use, their understanding of peer pressure to engage in substance use, and their actual

behavior regarding the use of some substances. At the same time, the data obtained from participating teachers were very positive - they liked the training, thought they had learned some important concepts and skills as a result of their involvement with PALS, felt the materials and activities covered both during the PALS workshop and the follow-up (“booster”) session were very appropriate for their students, and most importantly, they actually used those materials and activities in their classrooms with their special education students.

The 2001-2002 and 2002-2003 pilot tests provided an opportunity to see how robust and generalizable these student and teacher outcomes were across major variations in settings, student populations, and training, all of which are important considerations if the PALS Program is to be both disseminated and successful in other areas of the country. Generally the results of these more recent pilot tests suggested:

- During the 2001-2002 pilot test, students in the experimental group demonstrated major gains from the pretest to the posttest in knowledge of the “dangers” associated with substance use and in their conflict resolution skills, while the control group did not exhibit such gains. In addition the control students reported an increase in their reported substance use over the past 30 days between pretesting and posttesting, but the experimental students did not.
- As occurred in the previous year, during the 2002-2003 pilot test experimental students demonstrated pretest to posttest gains in knowledge of the “dangers” related to substance use and conflict resolution skill. Also, they reported lower use of the different illegal substances noted on the posttest than they did on the pretest.
- The prevalence rates (both past month and lifetime) associated with substance use among the 7th and 8th grade special education students involved in the 2002-2003 pilot test - see Tables 7 and 8 below - continue to illustrate the need for enhanced prevention for this target population.
- The teachers, those who participated in the training and implementation of PALS during both the 2001-2002 and 2002-2003 school years, showed an increase in their perceived abilities to adapt and create prevention materials for use in their classes. They also showed an increase in knowledge and in confidence related to substance abuse prevention. Their pre to post responses to the following questionnaire items increased significantly:
 - I believe that I can adapt and create prevention activities for youth with disabilities.
 - I feel confident in my ability to increase resiliency in youth who have disabilities.

- I feel confident in my ability to provide substance use/abuse prevention to individuals who have disabilities.
- I am knowledgeable about the subgroups of youth with disabilities at highest risk for violent behavior.
- I understand the goals of substance abuse prevention for youth with disabilities.
- I feel confident in my ability to identify additional risks associated with substance abuse for people with disabilities.

Table 7
Comparisons of Past 30-Day Prevalence Rates Across Several Samples

SCHOOL YEAR	SOURCE OF SAMPLE	GRADE LEVEL	PREVALENCE RATES:				
			% Using Tobacco	% Using Alcohol	% Using Marijuana	% Using Inhalants	
99-2000	Monitoring the Future Study (2000)	12	31.4	50.0	21.6	2.2	
	Dayton Area Drug Survey	12	39.0	50.8	25.1	2.0	
	PALS (1999-2000) Pretest	11 & 12	50.0	53.3	46.6	0.0	
	Monitoring the Future Study (2000)	10	23.9	41.0	19.7	2.6	
	Dayton Area Drug Survey (2000)	10	33.9	42.7	23.4	4.6	
	PALS (1999-2000) Pretest	10	47.9	49.3	32.4	5.6	
	Monitoring the Future Study (2000)	8	14.6	22.4	9.1	4.5	
	Dayton Area Drug Survey	9	31.1	38.2	22.2	8.9	
	PALS (1999-2000) Pretest	9	30.9	33.8	13.2	4.4	
	00-2001	Monitoring the Future Study (2001)	8	12.2	21.5	9.2	4.0
		PALS (2000-2001) Pretest	8	26.3	22.1	15.6	13.8
		Dayton Area Drug Survey	7	5.0	13.3	4.4	5.0
PALS (2000-2001) Pretest		7	21.3	25.3	13.3	5.3	
PALS (2000-2001) Pretest		6	23.8	4.8	0.0	4.8	
2002-03		PALS (2002-2003) Pretest	7 & 8	25.7	19.3	16.5	5.5
	Monitoring the Future Study (2003)	8	10.2	19.7	7.5	4.1	

Table 7
Comparisons of Lifetime Prevalence Rates Across Several Samples

SCHOOL YEAR	SOURCE OF SAMPLE	GRADE LEVEL	PREVALENCE RATES:			
			% Using Tobacco	% Using Alcohol	% Using Marijuana	% Using Inhalants
2002-03	Monitoring the Future Study (2003)	8	28.4	45.6	17.5	15.8
	Dayton Area Drug Survey (2002)	7	19.2	27.3	7.5	8.0
	PALS (2002-2003) Pretest	7 & 8	28.1	28.1	18.1	10.9

- In 2002-2003 an explicit objective and related activities were implemented to enhance the involvement/engagement of parents/guardians in the PALS initiative being offered in the experimental schools in Dayton. This objective was partially met. Related experiences

suggest this may be one of the most difficult areas in which to initiate change. Parents and guardians were difficult to engage at all phases. Many of them would not sign consent forms to allow their child to participate in the evaluation. However, we did recruit ten family members to attend the year end activity that included performances by the children as well as entertainment and food. We also included door prizes donated from the community for students and for the adults in attendance. These incentives were utilized in the recruiting efforts by both PALS staff and teachers and may have influenced some participation. In addition, some family-related materials (e.g., stories and games) were developed for parents to read and/or utilize with their children. A related resource section and parent introduction to these materials is still under development. The stories themselves are completed and have been field tested with a focus group of special education students from one of the experimental schools. It is our intention to make these materials available to families of special education students who are interested in them in coming years.

- During the 2001-2002 ad 2002-2003 a PALS web site was also launched. That site contains materials (e.g., games and fact sheets) for student use, both individually and under the guidance of a teacher or parent. Hence, it contains some materials for teachers, students, and parents, with the major emphasis at this point being upon the provision of student activities. The site has been piloted and is undergoing ongoing revision and refinement based upon the results of that pilot test and information being gleaned for its ongoing use in cooperating school. The ALS web site can be accessed by going to the following address -
____**WEB_Site Address**____.

OVERVIEW OF TRAINING PROJECTS

Training Goals

As outlined in its funded grant application, the RRTC planned to complete a number of different types of training activities. The specific training goals used to help guide those efforts were as follows:

- To provide education, training, and internship experience to undergraduate, graduate, doctoral, and post-doctoral students.
- To develop TOT materials and conduct two Summer Institutes.
- To develop curriculum materials to infuse co-existing disability into existing curricula.
- To modify the web site and introduce, promote, and conduct the web course Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation.
- To plan and conduct a national conference related to substance abuse and vocational rehabilitation.
- To develop, plan, and conduct in-service trainings for professionals and for consumers and provide technical assistance.

The primary target groups for the associated training initiatives included both management and service delivery personnel responsible for providing vocational rehabilitation services for public agencies, community-based organizations, independent living centers, transitional employment programs, advocacy organizations, hospitals, rehabilitation facilities, substance abuse programs, and individuals with disabilities. Strategies for providing training and dissemination involved traditional in-service and pre-service training, conference and annual meeting presentations, publications in refereed field journals, and use of distance learning techniques and the Internet. Our training efforts were linked with a number of organizations, including state vocational rehabilitation agencies, CSAVR, Regional Rehabilitation Continuing Education Programs (RRCEPs), independent living centers, alcohol and drug services departments at national and state levels, including ATTCs. Consumers or members of the disability community were contracted through NAADD and by working with national, state, and local organizations that are advocacy oriented or consumer-driven as well as through reaching individuals with disabilities who staff treatment and rehabilitation programs.

Progress to Date

The RRTC has made significant progress and major contributions to the field through its training initiatives. The basic goals of the training plan as noted above, along with the progress made in accomplishing those different goals, are summarized in Table 9. (One of the major, ongoing training efforts undertaken by the Center and listed in Table 9 was the Minority Student Enhancement Program (MSEP), which is described in Appendix D.) The related training sessions and workshops provided were conducted by a variety of RRTC staff, including Co-principal investigators and NAADD members who were trained as presenters and co-presenters. Over the course of the current grant cycle, the RRTC offered more than 70 training activities which can be broken down as follows: 18 State Trainings, 3 Grand Rounds, 4 Regional State Vocational Rehabilitation, 1 Native American Nation, 7 Train the Trainer, and 39 Other Trainings. (A sampling of those different training sessions is provided in Exhibit 1.) Those efforts resulted in the following numbers of persons being trained: Consumers - 688, Vocational Rehabilitation Professionals - 1,998, and AOD Treatment Providers and Other Professionals - 2,007, or a TOTAL of 3,893 people.

Problems Encountered and Changes Made.

The majority of the problems encountered as part of the Center's training efforts were related to implementation of the web course. Initially the course was hosted on the server at the University of Missouri at Columbia. However, they subsequently restructured their distance education program and informed us that due to policy changes our course could no longer be housed there. In addition, the numbers of participants enrolling in the course through this host were much smaller than anticipated, which also impacted the decision by UM to discontinue its role with the web course.

Efforts to market the course to a wider audience of individuals and professionals have been less effective than we had hoped. It was targeted to academic programs in rehabilitation, state agencies and substance abuse treatment programs. To date the course has been taken by students as part of a Masters level program in rehabilitation counseling, by a state VR agency and as a continuing professional education course. At present, the University of Arkansas at Little Rock serves as the host site for the course. Since the selection of this new host during the

TABLE 9
TRAINING INITIATIVES RELATED TO THE RRTC's PROPOSED TRAINING PLAN

GOALS	ACCOMPLISHMENTS
<p>Provide education, training, and internship experience to undergraduate, graduate, doctoral, and post-doctoral students.</p>	<ul style="list-style-type: none"> • Two graduate students have participated in Rehabilitation Counseling at New York University (NYU), specializing in substance abuse and coexisting disabilities. They have been involved in conducting research on substance abuse and blindness, working through an internship in substance abuse and rehabilitation, and writing an article to submit for publication. • An additional four graduate students at NYU participated as co-investigators in the development of the GRASP (Guide to Rehabilitation Assessment and Planning). This was possible through additional support from a research and practice grant from the Northeastern Addiction Technology Transfer Center, funded by the Center for Substance Abuse Treatment. The students assisted in constructing and pilot testing this instrument that is focused on issues relating to people with co-existing disabilities. • A total of 20 graduate students and 12 faculty supervisors from NYU participated in the pilot testing of an on-line library in clinical supervision, SATOL (Substance Abuse Treatment On-Line Library). This activity was supplemented through additional funding from the New York State Office of Alcoholism and Substance Abuse Services. The content of this activity included a focus on co-existing disabilities as a rehabilitation counseling challenge. Two other graduate students had participated in the development of this on-line library. • Three graduate students in the fields of psychology, public health, and education at NYU were selected to participate in the planning and organization of the 2nd National Conference on Drugs and Disabilities. These students attended the conference as well and assisted both participants and presenters. These students are continuing their involvement by assisting with the post-conference evaluation and dissemination activities. • A total of four additional students from NYU have been involved with the RRTC. One graduate student participated in the development of the Web course, <u>Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation</u>. Another graduate student participated as co-trainer in the two summer institutes conducted by the RRTC. A third graduate student participated in an interdisciplinary internship experience sponsored by the RRTC. One undergraduate psychology student has been employed as a student assistant and has been working on the conference proceedings and the future development of the web course. • At Wright State University (WSU), the RRTC has the Minority Student Enhancement Program (MSEP), a program created to provide minority students and faculty from Historically Black Colleges and Universities with training and experience in disability issues, rehabilitation, and substance abuse research. For faculty mentors, the primary goals are to increase capacity in research and application for funding; collaborate on research in substance abuse among individuals with disabilities with a focus on African-Americans; and increase capacity to be mentors. For students, the primary goals are to increase knowledge, skill and experience in disability, rehabilitation and substance abuse research; encourage interest in the area of rehabilitation research; and foster writing skills. The MSEP includes didactic research experience for faculty and students and didactic instruction for students. A total of five faculty, three graduate students, and 14 (with nine completing) undergraduate students and faculty have participated in the MSEP over the past three years. • WSU also has recently added the position of Post-Doctoral Researcher as part of the RRTC research staff as a means of providing additional training in the area of rehabilitation research and to add to the research expertise of the staff. The individual hired has a strong background in biology and science and a doctoral degree in Curriculum and Teaching. His extensive skill in research and teaching will be an invaluable resource for the RRTC, particularly in the new R4 component that addresses the needs of transitioning youth. • Five graduate students from the School of Professional Psychology at Wright State University have completed internships through the RRTC at the CAM treatment program for people with co-existing disabilities. They conducted comprehensive assessments, individual counseling, group counseling, and case management activities. In addition, they were involved in program development activities and were involved in data collection for the research components of the RRTC. An additional three students are currently enrolled in internships with CAM. One undergraduate student completed a practicum with CAM and learned about the substance abuse treatment field and assisted in the delivery of didactic sessions with consumers in the program.
<p>Develop TOT materials and conduct two Summer Institutes</p>	<ul style="list-style-type: none"> • The first summer institute was conducted ahead of schedule in Salt Lake City, May 30-June 1, 1998. The audience consisted of 15 members of NAADD. The content of this TOT was training in the use of the manual, <u>Substance Abuse, Coexisting Disabilities, and Vocational Rehabilitation</u>. • The second summer institute was also conducted ahead of schedule in Washington, D.C., June 28-30, 1999. The audience were 30 trainers and educators who had a strong background in substance abuse, disability and/or vocational rehabilitation. This TOT focused on the use of the manual, <u>Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation</u> and on the web course of the same name.

	<ul style="list-style-type: none"> • A third institute was held in Seattle, Washington, January 14-16, 2000. This TOT was sponsored by both the RRTC and the Region X Regional Rehabilitation Continuing Education Program. The audience were 15 trainers and educators from the region. This TOT also focused on the use of the manual, <u>Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation</u> and the web course of the same name.
<p>Develop curriculum materials to infuse co-existing disability into existing curricula.</p>	<ul style="list-style-type: none"> • At NYU, the Master's Program in Rehabilitation Counseling has had the opportunity to infuse additional information into their current curricula related to co-existing disability. A curriculum on co-existing disabilities was provided to each of the Rehabilitation Counseling faculty for each course in the program. In this way, all students were provided with enhanced education in co-existing disabilities. In addition, students in the course "Substance Abuse and Vocational Rehabilitation" were the initial pilot test group of distance course developed by the RRTC. The following semester, this web course was integrated into the syllabus. To date, 150 students have benefited from these efforts. • A Challenge grant from NYU provided additional funding to develop a doctoral level curriculum in the area of substance abuse. The focus of this curriculum is on an interdisciplinary approach to substance abuse policy, research and practice. • An elective course for medical students at Wright State University has recently been developed and approved for implementation in the Spring term, 2002. This elective is entitled "Caring for Person with Disabilities" and will be offered through the Department of Community Health. This course will introduce students to the social and medical issues surrounding the treatment of persons with disabilities. Students will be exposed to the field of Physical Medicine and Rehabilitation as well as treatment settings throughout the university community.
<p>Modify the web site and introduce, promote, and conduct the web course <u>Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation</u></p>	<ul style="list-style-type: none"> • The web course is based on the manual by the same name and consists of three modules. Each module has on-line readings and related case studies that were a new addition this funding cycle. Each module has discussion questions and assignments. • The course was reviewed by students and faculty at NYU and Virginia Commonwealth University. The course was pilot tested at the graduate level in an introductory course on substance abuse at both universities. • The course has been taught to the counselors at the West Virginia State Vocational Rehabilitation Agency and as a continuing professional education course. • Evaluations of the course by the graduate students and the continuing education students were extremely positive. They rated as very high the navigation ease, the quality of the content, the linkages to on-line sites, the discussion questions and the assignments. • The SARDI and RRTC web site have been updated on a regular basis. Last fiscal year, NAADD members were instrumental in thoroughly reviewing the web site and making suggestions for improvement.
<p>Plan and conduct a national conference related to substance abuse and vocational rehabilitation.</p>	<ul style="list-style-type: none"> • The RRTC conducted the 2nd National Conference on Drugs and Disabilities: Facilitating Employment for a Hidden Population, June 3-5, 2001. The conference was co-sponsored by a Knowledge Dissemination Conference Grant: CSAT/SAMHSA; the National, DC/Delaware, Mid-Atlantic and Prairielands Addiction Technology Transfer Centers; NAADD; and National Counsel on Rehabilitation Education. • There were 150 participants representing the widest variety of a national audience representing cross-discipline, cross-function and cross-organization diversity; included 25 individuals with disabilities. All participants had applied for attendance and were selected based upon their expertise in the field and commitment to effecting change post-conference.
<p>Develop, plan, and conduct in-service trainings for professionals and for consumers and provide technical assistance.</p>	<ul style="list-style-type: none"> • NAADD members participated in the first TOT summer institute and developed awareness of and skills in delivering the material that is contained in the manual <u>Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation</u>. Following the TOT, some NAADD members participated as co-trainers in trainings at: State of Connecticut, Bureau of Vocational Rehabilitation; National meeting of directors of Addiction Technology Transfer Centers; and State of Minnesota, State Agency for the Blind. • A number of training activities have been conducted by the RRTC. These include one day and multiple day sessions for pre-professional and professional audiences; conference plenary and break out sessions; panels; train the trainer sessions; and in-service sessions. A total of over 70 were conducted by the RRTC this funding cycle. The audiences for these trainings have been state agencies, students, treatment providers, and community organizations. • Technical assistance has been provided to a number of agencies including national and regional Addiction Technology Transfer Centers; National Center on Alcohol and Substance Abuse (CASA); CASAWORKS for families (funded by Robert Wood Johnson Foundation); New York State Association of Substance Abuse Providers; Institute for Professional Development in the Addictions (NY State); and CSAVR Training Directors.

Exhibit 1

Sample of Training Sessions and Workshops 1997 - 2001

- Vocational Aspects of Working with Persons Who Experience Substance Use Disorders. Ohio Rehabilitation Services Commission, Dayton and Southwestern Region. Dayton, OH. (7/01)
- Improving Access for Persons with Disabilities: Lessons in Systems Change and Innovation. Change Book Workshop. Boston, MA. (7/01)
- Substance Abuse and Brain Injury Training. Anixter Center, Chicago, IL. (06/01)
- Review of Findings from Departmental Epidemiology Study. MD Vocational Rehabilitation Services. (5/01)
- Substance Abuse and Vocational Rehabilitation. West Virginia Division of Rehabilitation Services, Clarksburg, WV (5/01)
- HIV and Vocational Rehabilitation. West Virginia Division of Rehabilitation Services, Clarksburg, WV (5/01)
- Motivational Interviewing- Phase II Training- Ohio Supreme Court Drug Courts Program, Cleveland and Cincinnati, OH, (4/01)
- Motivational Interviewing Introductory Training, Ohio Supreme Court Drug Courts Program, Cleveland and Cincinnati, OH, (1/01)
- Substance Abuse Prevention for Learning Disabled Youth. Apples or Oranges: Learning Disability and Substance Abuse. Center for Addictions and Substance Abuse (CASA). New York City (2000)
- Vocational Aspects of Working with Persons Who Experience Substance Use Disorders. Southwestern Region, Ohio Rehabilitation Services Commission. Cincinnati, OH (12/00)
- Vocational Aspects of Working with Persons Who Experience Substance Use Disorders. Portland State University, Vocational Rehabilitation Job Development Series, (10/00)
- Treatment Retention of Persons with TBI and Substance Abuse", Journey Towards Independence, Fairfax, VA, (10/00)
- Motivational Interviewing for Multiple Need Adolescents, Columbus Youth Forum, Columbus, OH, (10/00)
- Presentation describing the methodology and preliminary results of the ODMH Grant project regarding to cognitive compensation training for dually-diagnosed individuals. ODMH Research Results Briefing. Columbus, OH. (10/00)
- Communication Barriers: Clinical Issues Related to Deafness. Innovative Insights: New Attitude on Accessibility, Woodbridge, New Jersey. (10/00)
- Substance Abuse and Disability Issues in the Treatment Setting. Pima Prevention Partnership, Tucson, Arizona (9/00)
- Substance Use and Vocational Outcomes Associated with Specialized outpatient Treatment: Preliminary Findings in the Consumer Advocacy Model. American Psychological Association. Washington, D.C. (8/00)
- Chemical Dependency Treatment and Dual Disorders: The New Hampshire Model. Lindy Fox, M.A., and Thomas Fox, M.D., Wright State University (8/00)
- How to Make Your Program Accessible to People with Disabilities. Casa Esperanza, Roxbury, MA (8/00)
- Practical Approaches for Substance Abuse Recovery and Vocational Rehabilitation for Persons with Traumatic Brain Injuries. Red Lake Nation, Red Lake, MN (7/00)
- Making Treatment Accessible for Persons with Disabilities. 42nd Annual Institute of Alcohol and Drug Studies, Austin, Texas (7/00)
- Substance abuse and traumatic brain injury: A Practical Approach. 19th Annual Symposium of the Brain Injury Association. Chicago, IL; (7/00)
- Substance Abuse, Co-existing Disability, and Vocational Rehabilitation: A Follow-Up Training. CT Department of Social Services, Bureau of Rehabilitation Services, Waterbury, CT (6/00)
- Addressing Substance Abuse in the VR Process to Enhance Employment Outcomes. Southwestern Region, Ohio Rehabilitation Services Commission. Cincinnati, OH (5/00)
- Substance Abuse and Brain Injury, 2 day workshop for the New Mexico Rehabilitation Center, Roswell, NM, (5/00)
- Substance Abuse, Disability and Vocational Rehabilitation. Virginia Department of Rehabilitative Services, Richmond, VA (5/00)
- Treating People with Co-existing Cognitive and Physical Disabilities. Delaware ATTC, DANYA International, Inc., Washington, DC (5/00)
- Substance Abuse and Co-existing Disabilities: Overview, Research Data, Treatment and Intervention Strategies. TBI Model Systems Project, Kessler Rehabilitation Institute and Hospital. Orange, NJ (4/00)

- Substance Abuse, Co-existing Disability, and Vocational Rehabilitation. Alaska Division of Rehabilitation Services, Anchorage, (4/00)
- Models of Chemical Dependency Treatment. Stepping Forward: Creative Approaches in Prevention, Treatment & Recovery for Deaf People, Minneapolis, Minnesota. (3/00)
- Vocational Decision Making in Substance Abuse Treatment. American Rehabilitation Counseling Association, Washington, DC (3/00)
- Trainer of Trainer: Substance Abuse, Disability and Vocational Rehabilitation. Regional Continuing Education Program, Western Washington University, Bellevue, WA (1/00)
- Motivational Interviewing Training. CSAT Research Interviewers, Ohio State University, Columbus, OH (3/00)
- Secondary Prevention and Intervention of Substance Abuse in the Acute Rehab Setting. MetroHealth Physical Medicine Grand Rounds, Cleveland, OH (2/00)
- Making Treatment Accessible for People with Disabilities. Mid-America ATTC, Kansas City, MO (2/00)
- Substance Abuse, Disability, and Vocational Rehabilitation. RRCEP IV, Seattle, WA (1/00)
- People with Disabilities in Chemical Dependency Treatment. Chemical Dependency Class, University of Dayton, Dayton, OH. (11/99)
- CAM: A Look at Specialized Treatment. Eastway Mental Health Services, Dayton, OH (10/99)
- Vocational Decision Making in Substance Abuse. ACA Conference, Washington, D. C., (10/99)
- CAM: A Look at Specialized Treatment. Comprehensive Outpatient Rehabilitation Programs, Miami Valley Hospital, Dayton, OH (9/99)
- CAM: A Look at Specialized Treatment. Crisis Care, Dayton, OH (9/99)
- Cognitive and Functional Consequences of Traumatic Brain Injury and Substance Abuse. Andrews University, Physical Therapy Department, Moraine, OH (9/99)
- Using the Addiction Severity Index to Identify Substance Abuse Among People with Disabilities. RRTC on Drugs & Disability, Dayton, OH (8/99)
- Train the Trainer: Substance Abuse, Coexisting Disabilities and Vocational Rehabilitation., Region X, RCEP, Seattle, WA (8/99)
- Holistic Approach to Substance Abuse. Region VII RCEP, Kansas City, Missouri (8/99)
- Substance Abuse and Co-Existing Disabilities. KS Department for the Blind, Kansas City, MO (7/99)
- Substance Abuse, Co-Existing Disability, and Vocational Rehabilitation: A Training of Trainers. RRTC on Drugs & Disability, Washington, D.C. (6/99)
- Summer Institute. University of Utah School of Alcohol and Other Drug Dependency 48th Annual Session, Salt Lake City, UT (5/99)
- Multiple Sclerosis and other Disabilities: Substance Abuse Issues in Medical Rehabilitation. Grand Rounds, Harborview Medical Center. Seattle, WA (6/99)
- Making Treatment Accessible for People with Disabilities. Addiction Technology Transfer Center, Washington, D.C. (5/99)
- Multiple Sclerosis and other Disabilities: Substance Abuse Issues in Medical Rehabilitation. Grand Rounds, Harborview Medical Center. Seattle, WA (6/99)
- The Consumer Advocacy Model Program: Considerations for Adaptation in a Hospital Setting. Guest Lecture, Mount Sinai Hospital, RRTC on Community Integration with a Traumatic Brain Injury. New York City. (4/99)
- Identifying and Assessing Substance Abuse Problems with Deaf, Deafened and Hard of Hearing Individuals. The Region X Symposium on Rehabilitation and Deafness, Partners in the Process: Improving Employment and Education Outcomes for Individuals who are Deaf, Hard of Hearing, Late Deafened, and Deaf Blind. Seattle, Washington. (4/99)
- Analysis of Researchers' Attitudes Toward Null Hypothesis Testing. Annual Meeting of American Education Research Association, Montreal, Canada (4/99)
- Substance Abuse Risk Factors and Students with Disabilities. Association of Counselors and Guidance Personnel. Springfield, MO (3/99)
- SCI and Substance Abuse: Medical Rehabilitation Perspectives. Grand Rounds-Center of the Medical College of Wisconsin, Spinal Cord Injury Model Systems Center. Madison, WI (3/99)
- Substance Use Disorder and Physical Medicine: Grand Rounds. The Medical College of Wisconsin, Milwaukee, WI (3/99)
- Alcohol and Other Drug Abuse Among Persons with Spinal Cord Injury. Symposium sponsored by NIDRR, Independence First. Milwaukee, WI (3/99)
- Substance Use Disorder Treatment for People with Physical and Cognitive Disabilities. Workshop sponsored by Montgomery County Alcohol, Drug and Mental Health Services Board. Dayton, OH. (3/99)
- Treating People with Coexisting Cognitive and Physical Disabilities. Alcohol, Drug Addiction, and Mental Health Services Board for Montgomery County, RRTC on Drugs & Disability, Dayton, OH (3/99)
- The Neuropsychology of Head Injury. Rehabilitation Research and Training Center of Drugs & Disability, SARDI, Wright State University, Dayton, OH (3/99)

- Providing Accessible Prevention Education for Youth with Disabilities. Wright State University Ohio PALS Program, Cincinnati, OH. (3/99)
- Assessment of Vocational Preparedness and Achieving Employment Outcomes. South Dakota Department of Human Services, Pierre, SD (3/99)
- Intervention and Treatment Considerations when Serving Individuals who are Deaf. South Dakota Department of Human Services, Pierre, SD (3/99)
- Vocational Services in Chemical Dependency Programs/Chemical Dependency Issues in VR Programs. South Dakota Department of Human Services, Pierre, SD (3/99)
- Assessment and Treatment for People with Developmental Disabilities. South Dakota Department of Human Services. Pierre, SD (3/99)
- Collaboration in Service Delivery. South Dakota Department of Human Services. Pierre, SD (3/99)
- Treating People with Coexisting Cognitive and Physical Disabilities. Alcohol, Drug Addiction, and Mental Health Services Board for Montgomery County, RRTC on Drugs & Disability, Dayton, OH (3/99)
- Introduction to AOD Treatment. Minority Student Enhancement Program Seminar. Dayton, OH. (2/99)
- Relationship between Substance Abuse Severity Indicators and Cognitive Performance in a Dual-diagnosis Population. Meeting of the American Neuropsychiatric Association. New Orleans, LA. (2/99)
- Substance Abuse Treatment and Persons with Disabilities: Treatment Planning. Pima Prevention Partnership, Tucson, AZ (1-2/99)
- Orientation to MSEP. Minority Student Enhancement Program Seminar. Dayton, OH (1/99)
- Persons with Disabilities and Their Interactions with Physicians. Medical Students Education-continued Disability Orientation for Community Health Class. (1/99)
- Substance Use, Disability and Vocational Rehabilitation. Regional meeting of the Regional Rehabilitation Continuing Education Program, University of Missouri-Columbia. (1999)
- Substance Abuse Intervention and Program Planning. West Virginia Division for Rehabilitation Services (1999)
- Substance Abuse and Attention Deficit Disorder. St. Vincent DePaul, Dayton, OH. (11/98)
- Cognitive and Functional Consequences of Traumatic Brain Injury and Substance Abuse. Andrews University, Physical Therapy Department, Moraine, OH (9/98)
- Substance Abuse Treatment and Disability Issues. Ohio Association of Alcoholism and Drug Abuse Counselors Dayton Chapter, RRTC on Drugs & Disability, Dayton, OH (7/98)
- Cognitive Implications of Substance Abuse. CAM, Dayton, OH (7/98)
- Summer Institute: Trainer of Trainers Session for Substance Abuse, Disability, and Vocational Rehabilitation. Washington, D.C. (6-7/98)
- Substance Abuse and Co-Existing Disabilities. Ohio Rehabilitation Services Commission, Southwest Region Counselors Workshop, Dayton, OH (6/98)
- Training of Trainers: Substance Abuse, Disability, and Vocational Rehabilitation. National Association of State Alcohol and Drug Abuse Directors Annual Meeting, Salt Lake City, UT (6/98)
- Substance Abuse and Co-Existing Disabilities. Minnesota Department for the Blind, St. Paul, MN (2/98)
- Understanding Disability. Community Health Student Class, Wright State University School of Medicine, Dayton, OH (1/98)
- Vocational Decision Tree: A model for working with Coexisting Disabilities. Advocates for Vocational Rehabilitation of Substance Abusers, NY, NY (1998)
- Preventing Problems Related to Substance Abuse in Vocational Rehabilitation. West Virginia Rehabilitation Association, Charleston, WV (1998)
- Using the Addiction Severity Index to Identify Substance Abuse Among People with Disabilities. RRTC on Drugs & Disability, Dayton, OH (12/97)
- Adapting Substance Abuse Prevention for People with Developmental Disabilities. Cuyahoga County Board of Mental Retardation and Developmental Disabilities, Cleveland, OH. (11/97)

last year of the grant cycle, there has been widespread notification of its availability and efforts made by the RRTC to increase the course's visibility and utilization.

Given the concerns with implementation of the initial web course outlined above, and the attendant resource requirements, the development of the second proposed web course, "Adapting Treatment for Individuals with Coexisting Disabilities," was delayed. Once the current course is more fully utilized and more interest generated in this type of course, developing and making the new course available will become one of our top priorities in the future.

OVERVIEW OF DISSEMINATION ACTIVITIES AND ACCOMPLISHMENTS

Background - Technical Assistance and Dissemination Activities

In addition to the numerous formal training activities noted above, the training goals listed earlier include several related, technical assistance and dissemination emphases. The technical assistance and dissemination (TA/D) strategy employed by the RRTC on Drugs and Disability could be characterized as multi-faceted, eclectic, and opportunistic in nature. For example, the Center's TA/D strategy has attempted to address (a) the widespread dissemination of information for general use to professionals (e.g., our manual - **Substance Abuse, Disability, and Vocational Rehabilitation**) and (b) more specialized information dissemination on topics where historically little information has previously been available (e.g., rehabilitation and vocational concerns for persons who are Deaf and diagnosed with a substance use disorder - topic of a conference presentation and paper generated by the RRTC for ADARA). Moreover, through our TA/D strategy we have endeavored to provide consumers, who represent a wide variety of conditions, perspectives, and needs, with access to specific information (e.g., Spinal Cord Injury and Alcohol Use - a collaborative initiative undertaken with the RRTC on Spinal Cord Injury in Colorado, or our own widely-reprinted fact sheet entitled "Signs and Symptoms of Substance Abuse Among Persons With Disabilities") from which they can directly benefit. Professionals who have accessed RRTC information represent a wide cross-section of the rehabilitation community. Likewise, consumers who have contacted our program vary from persons with prevalent conditions (e.g., learning disability) to low incidence disabilities (blindness). Also, the community contexts represented by consumers who have accessed the Center's informational resources have ranged from independent living centers to prison populations (e.g., the RRTC received and responded to 15 consumer requests from prisoners over the past several years). Furthermore, given the pervasive nature of substance use/abuse in the general population as well as among persons with disabilities, we have attempted, whenever possible, to collaborate with other organizations, RRTC's, federal agencies, or constituencies to enhance the dissemination and utilization of our findings and materials.

Generally speaking, our technical assistance and dissemination activities are based upon the following set of premises:

- Using research findings to focus and help drive information dissemination is important (e.g., the finding that approximately 25% of all state VR consumers we sampled describe themselves as alcoholics or drug addicts in recovery - and less than half of them discussed this with their VR counselor, has resulted in the initial preparation, production, and field testing of a screening instrument specifically for VR counselors' use that is available on our website)
- Having a strong web presence is increasingly important (and historically the RRTC had the highest "hit" rate of any website in the School of Medicine - over 5,000 hits most years)
- Providing brief informational materials targeted toward specific needs is generally better than providing larger manuals or monographs (e.g., our most widely-reproduced and disseminated materials have been those that are one or two pages in length)
- Distributing information (e.g., handouts/brochures/briefs) through professional conferences serves many more persons than we could otherwise reach
- Leveraging other resources has increased the effectiveness of the RRTC's dissemination efforts (e.g., over 20,000 VR training manuals in circulation, with majority printed and distributed free by the National Clearinghouse on Alcohol and Drug Information - NCADI/SAMHSA)
- Providing resources to trainers and training programs has extended the impact of our educational efforts

The process of translating proposed research projects and their associated findings into products and related dissemination efforts involves several steps. An overview of those steps as related to our current **R3** effort is provided in Exhibit 2.

As indicated above, the RRTC's various dissemination efforts have generally been targeted toward multiple audiences. Our primary audience, in that it is the group all our efforts are intended to ultimately benefit, has been consumers (i.e., persons with a disability and coexisting substance abuse problem). As a result, a number of our products and services have been directly targeted toward this population. In many cases, however, the products we've developed and services we've provided are focused upon helping others better understand the needs and barriers faced by the members of our primary population, and thus be better able to serve those consumer needs. These populations have included, among others, VR counselors, substance abuse

treatment personnel, policy makers, doctors, decision makers, educators, and others who serve our primary population, along with related consumer, professional, and/or advocacy groups and organizations.

Exhibit 2
An Example of the Steps Involved in Our TA/D Initiatives

Example of D&U Plan: *R.3. Effective Delivery of Vocational Rehabilitation Services for Persons Living With HIV/AIDS*

- Pilot study encouraged by NIDRR staff, with supplement
- Findings suggest heavy substance abuse involvement of persons with HIV
- Literature review sparse on persons with HIV and barriers to employment
- Focus group of consumers & advisory group of mixed professionals (HIV specialized MD's, VR counselor, state VR director, physical therapist specialized in HIV, HIV and employment specialist, consumers, NAADD representative, and HIV researchers-including those identified from literature search)
- Research questions and potential products identified
- Pilot test research instrument and interview procedures
- Study formulated, protocols reviewed, and IRB approval sought
- Continued advisory group meetings during study inception and execution
- All interviewers (4) meet regularly for training, fidelity reviews, debriefing
- Initial findings released to advisory group, feedback solicited, products discussed
- Conferences identified and abstracts submitted
- Journal articles, brochures, and special consumer-oriented brochure developed with feedback from advisors (first article submitted, and brochure outlined now)
- Website articles updated and additional HIV links added
- Information to be shared with HIV organizations and research entities

Conference Participation and Related Presentations

One of the major types of dissemination activities undertaken by RRTC staff and affiliated collaborators has been their involvement in presentations and related conferences. During the RRTC grant cycle, staff and affiliated collaborators were represented at over 40 conferences. The types of conferences involved can be broken down as follows: 2 International Conferences, 24 National Conferences, 3 Regional Conferences, 10 State Conferences, and 4 Local Conferences. A sampling of those conferences is presented in Exhibit 3.

The initial conference noted in Exhibit 3 is unique in that it was called for as part of the Center's grant agreement with NIDRR. The RRTC held the "*2nd National Conference on Drugs and*

Exhibit 3

Sample Conference Presentations 1997 – 2001

- RRTC on Drugs and Disability. Second National Conference on Drugs and Disabilities: Facilitating Employment for a Hidden Population-Substance Abuse and co-existing Disability, Baltimore, MD. (6/01)
- An Analysis of Chemical Dependency Treatment Services and Outcomes for Persons who are Deaf and Hard of Hearing. ADARA National Conference, Monterey, CA. (5/01)
- Invited address based on ODMH Grant project regarding cognitive compensation training for dually-diagnosed individuals. University of Toledo, Department of Psychology. (5/01)
- Substance Abuse and Rehabilitation: Are We Doing Enough? Charlotte Institute of Rehabilitation Medical Education Conference; Charlotte, North Carolina; (5/01)
- Substance Abuse and Employment: Issues for EAP Providers. New York, NY, Employee Assistance Professionals Association, (5/01)
- Making Treatment Accessible for Individuals With Disabilities, Part II. Danya, International, Washington, D.C., (5/01)
- Brain Injury and Substance Abuse. Brain Injury Association of New Hampshire Annual Conference, Concord, NH (5/01)
- Relationship of Race and Education Level to Potential Alcohol Abuse Among Persons with Disabilities. MSEP Student Program Poster Presentation , Wright State University School of Medicine Spring Central Research Forum. (5/01).
- Approaching Youth and Adults with Disabilities; The Challenge of Adapting Prevention Messages. Thriving in Prevention, Alcohol and Drug Abuse Prevention Association of Ohio, Canton, OH. (5/01).
- Current Research Related to Substance Abuse within the Deaf and Hard of Hearing Communities. ADARA Biennial Conference, Monterey, California. (5/01)
- Drugs and Disabilities. Ohio Department of Alcohol and Drug Addiction Counselors. (5/01).
- Quest for Community: A Call to Action Diversity Conference. MSEP Student Program participation Wright State University. (4/01).
- The Odyssey Continues-No limits. Annual NARRTC Meeting. Washington, D.C. (4/01)
- Alternatives in Chemical Dependency Treatment. ADARA Biennial Conference, Monterey, California. (5/01)
- Substance Abuse and Disability Forum. American Rehabilitation Counseling Association Forum, American Counseling Conference, San Antonio, TX, (3/01)
- TBI and Substance Abuse. Ohio Association of Physical Therapist Annual Conference, Columbus, OH, (3/01)
- The Gray Area: Boundaries and Ethics in Providing Rehabilitation Services for Deaf and Hard of Hearing Individuals. New England RCD Training Conference, Portland, Maine. (12/00)
- An Analysis of Statewide Substance Use Treatment Episode Data and Persons with Coexisting Disabilities. American Public Health Association Conference, Boston , MA (11/00)
- Treatment Retention of Persons with TBI and Substance Abuse, 11th Annual State of the States in Head Injury, Kansas City, MO (9/00)
- The Red Flags of Substance Abuse. Invited presentation for the Virginia Rehabilitation Counseling Association, Collaborations Conference, Alexandria, VA (8/00)
- Substance Use and Vocational Outcomes Associated with Specialized outpatient Treatment: Preliminary Findings in the Consumer Advocacy Model. American Psychological Association. Washington, D.C. (8/00)
- Making Treatment Accessible for Persons with Disabilities. 42nd Annual Institute of Alcohol and Drug Studies, Austin, Texas (7/00)
- Vocational and Career Counseling to Support Recovery. International Counseling Conference, Costa Rica (6/00)
- Vocational Decision Making in Substance Abuse, ACA Conference, Washington, D. C., (10/99)
- Substance abuse and traumatic brain injury; keynote address for 1-day training sponsored by and the Toronto Area Addiction Services Coalition; Toronto, Ontario (3/00).
- Rehabilitation Leadership. National Rehabilitation Administrators Association, Minneapolis, MN(11/99)
- Impact of Disabilities on Treatment Programs. NJ Conference on Drugs and Disabilities, Woodbridge, N.J. (10/99)
- Technical Literacy, Professional Motivation, and Learner Outcomes. World Conference on the World Wide Web and Internet, Honolulu, HI (10/99)
- Vocational Decision Making in Substance Abuse, ACA Conference, Washington, D. C., (10/99)

- Substance Abuse and Traumatic Brain Injury. West Virginia Traumatic Brain Injury Association, Charleston, WV. (10/99)
- Substance Abuse and Persons with Disabilities: Clinical Responses. Keynote address, Annual Training Conference for Rehabilitation Professionals. Pierre, SD (9/99).
- Co-Existing Disabilities and Vocational Rehabilitation. 15th Annual Conference on Employment Supports, Hartford, CT (9/99)
- Measurement Properties of the Cognistat in a Community TBI Sample. Paper presented at the 1999 Annual Meeting of the American Psychological Association, Boston, MA (8/99)
- Prevalence of Alcohol and Illicit Drug Use Among Women with Disabilities. Promoting the Health and Wellness of Women with Disabilities, the Centers for Disease Control and Prevention, San Antonio, TX (8/99)
- Substance Use Among Vocational Rehabilitation Consumers with a Disability of Mental Illness. 1999 Annual Meeting of the American Psychological Association, Boston, MA (8/99)
- Substance Abuse and Vocational Rehabilitation. Presenter, Utah School of Alcoholism and other Drug Dependencies. (6/99)
- Technology Transfer and Web Course Augmentation Based on Learner Attributes. ED-MEDIA 99, Seattle, WA (6/99)
- Technology Transfer and Web Course Augmentation Based on Learner Attributes. ED-MEDIA 99, Seattle, WA (6/99)
- Web Based Distance Education. Panel Presentation, NARRTC (4/99)
- Substance Abuse Risk Factors and Students with Disabilities. Association of Counselors and Guidance Personnel. Springfield, MO (3/99)
- Sex, Drugs and Hep C in HIV. HIV, Women and Vocational Rehabilitation. Conference sponsored by RRCEP, University of Missouri.(12/98)
- Some of Us Really Don't Understand: Adapting Prevention Strategies to Meet the Needs of All Learning Styles. Ohio Prevention and Education Conference, Dublin, OH (12/98)
- We Don't All Learn the Same: Adapting VATOD Prevention. Ohio Association of Alcoholism and Drug Abuse Counselors 1998 Annual Conference, Dayton, OH (10/98)
- Adapting Treatment for People with Disabilities. CSAT Technical Assistance Project Conference for AOD Treatment Providers Minneapolis, MN (7/98)
- Substance Abuse, Co-existing Disabilities and Vocational Rehabilitation. American Rehabilitation Counseling National Conference, Vancouver, WA (3/98)
- Substance Abuse and Rehabilitation: Shifting the Landscapes and Paradigms. Bridging the Millennia: Rehabilitation Counseling in a New Era, 15th Annual Professional Development Symposium, The Alliance for Rehabilitation Counseling (NRCA/ARCA), Vancouver, WA (3/98)
- Substance Abuse, Disability, and Vocational Rehabilitation: A Panel Presentation. NCRE Leadership Conference, (3/98)
- Cognitive Correlates of Substance Abuse. American Neuropsychiatric Association, New Orleans, LA (2/98)
- HIV/AIDS and Rehabilitation: A Report on Perceptions, Knowledge, and Self-Reported Skill Levels of Rehabilitation Specialists. The Alliance of American Rehabilitation Counseling Association and National Rehabilitation Counseling Association Conference, Vancouver, WA (1998)
- Overview of the RRTC on Drugs & Disability. Client Services Committee, CSAVR Conference, Seattle, WA (11/97)
- Substance Abuse Among People with Visual Impairments. AER Conference Cleveland, OH (10/97)

Disabilities: Facilitating Employment for a Hidden Population” from June 3-5, 2001 in Baltimore, MD. Originally the conference was proposed for FY5 of this funding cycle, however, plans progressed rapidly and support for the effort was phenomenal. We were able to obtain supplemental funding in the form of a grant from CSAT. In addition, a number of other entities provided support, both financial and in-kind, for the conference. This enabled us to proceed with the conference a year early, providing us with additional time to develop materials and products for dissemination. The goals of the conference were to:

1. Identify leaders in the field, programs, and processes of change with the most promise for addressing treatment and rehabilitation needs of persons with substance abuse and coexisting disabilities,
2. Engage a variety of disciplines and perspectives in a dialogue about treatment and rehabilitation approaches for persons with substance abuse and coexisting disabilities,
3. Establish a body of findings and consensus statements that reflect recommended changes for improving rehabilitation outcomes for the target population,
4. Disseminate conference proceedings, consensus statements, and recommendations by means of a variety of electronic and print media.

The conference was developed to focus on the issue of change within the context of the conference theme and the goals of the RRTC. This process was an adaptation of the change process approach that CSAT and the National Addiction Technology Transfer Centers have been developing. The process had not been used in a conference setting and was introduced at this conference since the change process provided a vehicle for achieving the conference goals.

The plenary speakers included 11 leaders in the field of substance abuse, coexisting disability, vocational rehabilitation. They represented policy leaders, program directors, researchers, university faculty and consumers. The work group leaders and facilitators included 25 professionals in the field. They were trained in the conference structure, format and goals. Each person was provided with a leadership manual. Six of the leaders and facilitators were consumers. Conference assistants included four graduate students who assisted the speakers and participants throughout the conference.

The work group sessions resulted in desired outcomes for change, action plans to support the changes, time frames, and leadership and evaluation methodologies to measure the

effectiveness of the strategies. The recommendations to the field include initiatives to address: collaboration, increased employer involvement, integrated treatment, employment as integral to treatment, reduction of stigma, public education about the field, increased consumer activism, increased employment opportunities, expanded funding for research, model program approaches, and expanded research to practice initiatives.

Subsequently, RRTC staff and consultants analyzed the data evolving from the conference evaluation and developed a set of conference proceedings (see Appendix E). A policy paper was also developed for dissemination. In addition, the conference web site was continued for another year as a forum for dissemination of conference proceedings and findings as well as an on-going avenue for discussion on topics relevant to the field.

Provision of Technical Assistance

During the period from 1997 through 2001, the RRTC was also frequently involved with responding to requests for technical assistance. These requests were often involved one-on-one interactions with consumers, students, family members, and professionals calling to request materials and to seek advice on where to locate additional materials related to substance abuse and disability. We often send out information and bibliographies to people who request these items. As a RADAR site, we also receive a number of requests for materials. In addition, individuals contacting us through the RADAR site also ask questions related to how to access services for themselves or for family members who have co-existing disabilities. For example, not too long ago, a woman contacted us and told us about her brother who has a brain injury and substance abuse problems. He was on the verge of being dismissed from his housing and from a work program that he was involved in because of his behaviors and his continued use of alcohol. The woman was sent a number of materials for herself and for the Easter Seals Program with which her brother was involved. She also was provided some information related to treatment programs in her area and the state vocational rehabilitation office closest to her brother. RRTC staff “fielded” several thousand such requests for information/assistance by individuals during the grant period from 1997 through 2002.

In addition to the provision of such one-on-one assistance, the RRTC has been involved in a number of technical assistance efforts of a collaborative nature with other key organizations

and agencies that serve the rehabilitation field. A sampling of these other technical assistance projects in which the RRTC has been involved during this funding cycle are described below:

- June, 2001: The RRTC on Drugs & Disability and the National Center for the Dissemination of Disability Research jointly updated the *Guide to Substance Abuse & Disability Resources Produced by NIDRR Grantees*. This was a re-edited and re-printing of the booklet produced in 1999. This booklet includes listings of a variety of publications available in the area of substance abuse and co-existing disabilities. This was distributed at the National Conference in June, 2001.
- February, 2000: Provided use of survey instrumentation, Substance Use Among Rehabilitation Consumers for Vocational Rehabilitation Services, to PIMA Prevention in Tuscon, AZ.
- July, 1999: Provided Technical Assistance under a Center for Substance Abuse Treatment contract to the Substance Abuse Treatment Program within the Redfield Developmental Center in Redfield, South Dakota. The consultation provided training to staff who work with chemically dependent youth with developmental disabilities. The technical assistance also included curriculum development assistance.
- June, 1999: The RRTC on Drugs & Disability and the National Center for the Dissemination of Disability Research jointly developed the *Guide to Substance Abuse & Disability Resources Produced by NIDRR Grantees*. This booklet includes listings of a variety of publications available in the area of substance abuse and co-existing disabilities.
- January, 1999: Consultation at Harborview Medical Center, Seattle- MS RRTC, Consultation on design of substance abuse related items in MS epidemiology research, with Charles Bomardier, Ph.D., and staff.
- December, 1998: Provided Technical Assistance under a Center for Substance Abuse Treatment contract to the Redfield Developmental Center in Redfield, South Dakota. The technical assistance related to program development for a substance abuse treatment program which would provide services to individuals with mental retardation and developmental disabilities.
- December, 1998: *Substance use disorder treatment for people with physical and cognitive disabilities* (Treatment Improvement Protocol Series #29) Washington, DC: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration was approved for publication and dissemination. Dennis Moore, Ed.D., Director of the RRTC on Drugs & Disability was the consensus panel chair. Jo Ann Ford, MRC, Assistant Director of SARDI was a work group leader and John de Miranda, MEd., Executive Director of the NAADD, was a consensus panel member.

February, 1998: Provided information and consultation services to the Director, Clinical Director, and Substance Abuse Counselor of a new chemical dependency program in northern Ohio that will focus on individuals with developmental disabilities.

Publications

During the current RRTC Grant cycle, staff and affiliated collaborators have prepared and submitted for publication a myriad of manuscripts for publication. A sampling of those publications is provided in Exhibit 4.

EXHIBIT 4 Refereed and Other Publications (current funding cycle)

- Allen, J. B., Moore, D., & Sample, E. B. (1999). Relationship between substance abuse severity indicators and cognitive performance in a dual-diagnosis population (abstract). Journal of Neuropsychiatry and Clinical Neurosciences.
- Baker, J., Fiedler, R., Czyrny, J., & Heinemann, A. (1998). Predicting follow-up functional outcomes in outpatient rehabilitation. American Journal of Physical Medicine and Rehabilitation, 77, 202-212.
- Bausch, R. & Weber, G. (2000). Work as a critical component of recovery. Dayton, OH: RRTC on Drugs and Disability, Wright State University. Published in the RRTC website: <http://www.med.wright.edu/citar/sardi/rrtc.html>.
- Demers, J. (Ed.). (1998). Alcohol, tobacco and other drug prevention activities for youth and adults with disabilities. Dayton, OH: The SARDI Program, Wright State University School of Medicine.
- Demers, J. (1999). Prevention issues and the PALS response. Impact, 12 (3), 10-11.
- Demers, J., French, D., and Moore, D.. (2001) The Preliminary Evaluation of a Program to Help Educators Address the Substance Use/Prevention Needs of Special Education Students. Journal of Alcohol and Drug Education, 45(3).
- de Miranda, J. (2000). Policy and its implementation: Where the rubber hits the road. Dayton, OH: RRTC on Drugs and Disability, Wright State University. Published in RRTC newsletter and website: <http://www.med.wright.edu/citar/sardi/rrtc.html>.
- Double jeopardy: HIV and disability (1999). Dayton, OH: RRTC on Drugs and Disability, Wright State University. Published in the RRTC newsletter and in the RRTC website: <http://www.med.wright.edu/citar/sardi/rrtc.html>.
- Ford, J. (1999). Connecting vocational rehabilitation and drug treatment in Dayton. Impact, 12 (3), 18-19.
- Ford, J. (2001). The culture of disability. NAADD Report, 4 (1), 3. San Francisco, CA: National Association on Alcohol, Drugs and Disability.
- Ford, J. & Corbitt, E. (1999). Substance abuse: a strong risk, often overlooked. Window on Wellness: Health and Wellness Publication for People with Disabilities, 3 (2), 8-11.
- Ford, J. & Moore, D. (1999). Substance abuse resources and disability issues: training manual, 3rd Printing. Dayton, OH: The SARDI Program, Wright State University.
- Glenn, M., Garcia, J., Li, L., & Moore, D. (1998). Preparation of rehabilitation counselors to serve people living with HIV/AIDS. Rehabilitation Counseling Bulletin, 41 (3), 190-200.

- Guide to substance abuse and disability resources produced by NIDRR grantees (2001). (2nd ed.). Austin, TX: National Center for the Dissemination of Disability Research and RRTC on Drugs and Disability.
- Heinemann, A.W. (2000). Functional status and quality-of-life measures. In R.G. Frank & H.R. Elliott (Eds.), Handbook of rehabilitation psychology (pp 261-286). Washington, DC: American Psychological Association.
- Heinemann AW, Corrigan J, Moore D. (2000). Community-based case management for traumatic brain injury survivors. Paper presentation at the annual convention of the American Psychological Association, Washington DC, August 5, 2000. Rehabilitation Psychology, 45, 312.
- Li, L. & Ford, J. (1998). Illicit drug use by women with disabilities. The American Journal of Drug and Alcohol Abuse, 24 (3), 405-318.
- Li, L., & Moore, D. (1998). Acceptance of disability and its correlates. Journal of Social Psychology, 138 (1), 13-25.
- Li, L. & Moore, D. (2001). Disability and illicit drug use: an application of labeling theory. Deviant Behavior, 22 (1), 1-21.
- Li, L., Ford, J., & Moore, D. (2000). An exploratory study of violence, substance abuse, disability, and gender. Social Behavior and Personality, 28 (1), 61-72.
- McCarty, D. & Levine, H. J. (1999). Needs of people with chronic and/or disabling conditions. In M. Lillie-Blanton, R. M. Martinez, B. Lyons, & D. Rowland (Eds.). Access to health care: promises and prospects for low-income Americans (pp. 61 – 71). Washington, DC: The Kaiser Commission on Medicaid and the Uninsured.
- Moore, D. (1999). Substance abuse and persons with developmental disabilities: Where are we at? Impact, 12 (3), 2-3, 22-23.
- Moore, D. (2000). News from the Rehabilitation Research and Training Center, Wright State University. The NAADD Report, 3 (1), 4-5. San Francisco, CA: : National Association on Alcohol, Drugs and Disability.
- Moore, D. & Li, L. (1998). Prevalence and risk factors of illicit drug use by people with disabilities. The American Journal on Addictions, 7 (2), 93-102.
- Personal Stories. (2001, summer). Six personal stories depicting aspects of substance abuse and persons with disabilities. Dayton, OH: RRTC on Drugs and Disability, Wright State University. Published in the RRTC website: <http://www.med.wright.edu/citar/sardi/rrtc.html>.
- Pringle, D., Li, L., Sample, E., Moore, D., Imbrogno, D. & Glaser, R. (1997). Evaluation of physical fitness, activity level, and substance abuse in vocational rehabilitation patients (abstract). Medicine & Science in Sports & Exercise, 34 (5), s1172.
- RRTC on Drugs and Disability. (1999). Educational and health survey. In Substance use disorder treatment for people with physical and cognitive disabilities: treatment improvement protocol (TIP). Rockville, MD: Center for Substance Abuse Treatment (CSAT/SAMHSA) and the National Clearinghouse on Alcohol and Drug Information.
- Sample, E., Li, L. & Moore, D. (1997). Alcohol use, ethnicity, and disability: comparison of African-American and Caucasian groups. Social Behavior and Personality, 25 (3), 265-276.
- Siegal, H.A., Li, L., Leviton, L.C., Cole, P.A., Hook, E.W., Bachmann, L., & Ford, J. (1999). Under the influence: Risky sexual behavior and substance abuse among driving under the influence offenders. Sexually Transmitted Diseases, 26 (2), 87-92.
- Substance Abuse Among Consumers of Vocational Rehabilitation Services: summary of an epidemiology study (1997). Dayton, OH: RRTC on Drugs and Disability, SARDI Program, Wright State University. Published in the RRTC website: <http://www.med.wright.edu/citar/sardi/rrtc.html>.
- Wolkstein, E. (2000). Employing the GrASP to determine vocational rehabilitation goals for persons with substance abuse disabilities. New York, NY: New York State Office of Alcoholism and Substance Abuse Services.

- Wolkstein, E. & Spiller, H. (1998). Providing vocational services to clients in substance abuse rehabilitation. Directions in Rehabilitation Counseling, 9, 65-77.

Recognitions and Other Awards

During the current RTC funding cycle Center staff and collaborators have received a number of awards for their service to the field. A brief summary of those recognitions and awards is presented in Exhibit 5.

Exhibit 5 **Inventory of Recognition & Service Awards** (not otherwise listed in this document)

- * Invitation by SAMHSA in 2001 to submit PALS Program for formal consideration as a MODEL Prevention Program and inclusion in the National Prevention System Database
- * Receipt of the 1999 Ohio Exemplary Prevention Education Award from OH Dept of Alcohol and Drug Addiction Services
- * Receipt of multi-year funding for PALS Program by Paramount's Kings Island in recognition of the services it provides special education students
- * The Center's clinical program, CAM, has been chosen by the National Association of State Alcohol and Drug Addiction Departments (NASADAD) and SAMHSA to be one of 10 integrated dual diagnosis programs to be studied in-depth regarding innovative approaches to funding traditionally under-supported services, with the resultant findings being disseminated by both groups
- * Honors & Awards (selected entries for Dennis Moore, Center Director, only)
 - Selected as Chairperson and content editor for volume of Treatment Intervention Protocols (TIP) monograph series, working title: "Substance use disorder treatment for persons with physical and cognitive disabilities", (Treatment Improvement Protocol Series #29), Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA). 1999
 - Primary Reviewer, August 1998, CFDA #84.133B NIDRR grant application review for RRTC on Aging with Mental Retardation. Responsible for Grant and Site review.
 - Appointed Board of Trustees, The Community Network, Xenia OH. Provider of publicly funded alcohol, drug, and mental health services for Greene County. \$6 million annual budget. 1998-2000.
 - Advisory Board, Comprehensive Outpatient Rehabilitation Services, Rehabilitation Institute of Ohio, Miami Valley Hospital
 - Elected President, National Association of Rehabilitation Research and Training Centers (NARRTC)
 - Director's Invitee, Policy Workgroup on "Addressing Underage Drinking", SAMHSA, Washington, D.C., July 27-28, 1998
 - Invited Advisor, Kennedy Foundation, Washington, D.C., Department of Labor project for Employment of Persons with Substance Dependence and Developmental Disabilities.
 - Appointed Panelist: Domain II: Reducing Stigma and Changing Attitudes - CSAT National Treatment Plan, SAMHSA. Several meetings in 1999-2000
- * Other Recognitions – Dennis Moore, Center Director
 - Reviewer, Mental Retardation, American Association on Mental Retardation, 1998
 - Reviewer, Mental Retardation, 1999
 - Reviewer, Journal of Drug Issues, 1999
 - Advisory Board, Comprehensive Outpatient Rehabilitation Services, Rehabilitation Institute of Ohio, Miami Valley Hospital
 - Committee member. Montgomery County ADAMHS Bd Alcohol and Drug Outcomes Committee, Patrick Hollenbeck, Chairperson

* SARDI/RRTC clinical program Nominated for Innovations in American Government Award. Harvard School of Business/Ford Foundation, 2000

Highlights of Other Center-Related Dissemination Activities

During the five-year grant period RRTC staff and their collaborators have completed a number of other major dissemination-related initiatives. A sampling of those efforts would include the following:

- Over 1,200 VR counselors and substance abuse counselors trained during this cycle in substance abuse identification and rehabilitation practices, and over half of those trainees received copies of our VR manual and screening tools, which accompanied training. Since December, 1999, participating counselors have also received free of charge SAMHSA TIP#29, Substance Disorder Treatment for Persons with Physical and Cognitive Disabilities, which was developed with RRTC personnel in leadership and editing roles.
- A total of over 8 conference presentations, two articles, and numerous citations have been produced to date based on our CDC/NIDRR funded research study dealing with case management and its impact on sobriety and employment for persons with substance use disorders and traumatic brain injuries (John Corrigan, OSU, and Allen Heinemann, RIC, were Co-P.I.'s with Dennis Moore).
- CAM, the clinical treatment site addressed in the second component of our R2 study, was recently chosen by the National Association of State Alcohol and Drug Addiction Departments (NASADAD) and SAMHSA to be one of 10 integrated dual diagnosis programs to be studied in depth regarding innovative approaches to funding traditionally under-supported services. The findings from that effort are being disseminated by both entities nationally.
- The structure and functions of CAM's integrated services model has been described in 4 articles to date - through NAADD's consumer-oriented newsletter, the widely distributed newsletter of the RRTC on Developmental Disability, the widely distributed electronic newsletter of the Addiction Technology Transfer Center, *Eye on the Field*, and a specialty publication disseminated by the TBI Network.
- The PALS Program (**R4**) received the 1999 Ohio Exemplary Prevention Award from the Ohio Department of Alcohol and Drug Addiction Services (ODADAS), and a description of

that Program has been featured on both the ODADAS and Ohio Department of Education web sites.

- Over 400 PALS-related training manuals have been distributed, 2 articles prepared, and 4 conference presentations made dealing with the **R4** PALS project. We have also submitted, at the invitation of SAMHSA, an application to have PALS become a national model program for replication.
- Approximately 12,000 pieces of literature (e.g., brochures, pamphlets, etc.) have been distributed to consumers and consumer-support personnel from the Center.
- The RRTC website has been re-developed and currently offers all of our shorter publications for free download. In the last year or the grant that site has tripled in size and the associated hit rate continued to climb.
- We collaborated on an extensive project with the National Center for the Dissemination of Disability Research (NCDDR) involving the production and distribution of two separate printings (and a second edition) of the Guide to Substance Abuse Resources produced by NIDRR grantees. Over 5,000 copies of that publication are in circulation and the National Clearinghouse on Alcohol and Drug Information is offering it both in their catalogue and through their website.
- The Center completed its state of science conference on 6/3/01 through 6/5/01 that was co-funded by NIDRR, SAMHSA, NAADD, and several others. Conference Proceedings and a policy booklet involving extensive recommendations to the field have subsequently been completed (see Appendix E). An interactive website available before and after the conference was also available for interested parties. The policy booklet has been widely distributed to VR, substance abuse, rehabilitation, mental health, independent living, and related fields, and is also available on the SARDI website.
- RRTC staff were also involved in a variety of other collaborative dissemination efforts (in which the RRTC has been cited), including the following
 - Brochure - “Disability Terminology”, with RRTC, University of Kansas (introduced, then modified disability language associated with persons with substance use disorders)

- Brochure - “Employing and Accommodating Individuals With A History of Alcohol or Drug Abuse”, with Program on Employment and Disability, Cornell University, Susanne Bruyere, P.I.
 - Monograph/Training Manual, with RRTC on Minority Rehabilitation, Howard University, Sylvia Walker, P.I. (in development)
 - Booklet - “Substance Abuse and Disability Resources”, with NCDDR, John Westbrook, P.I.
 - Nested brochures - “TBI and Substance Abuse”, with OSU TBI Model Systems, John Corrigan, P.I.
 - Interactive website for 2nd *National Conference on Substance Abuse and Coexisting Disabilities*, with DANYA
 - Newsletter - *Impact* (special issue on substance abuse, which was guest edited by RRTC staff, and they also contributed 3 articles) with Institute for Community Inclusion, University of Minnesota
 - Working Papers - Estimates of persons with disabilities needing substance use disorder treatment in the U.S., based on U.S. Census and TEDS national databases and two state AOD databases, developed by RRTC for NAADD’s Robert Wood Johnson access unlimited project, John de Miranda, Executive Director
- As described earlier, during the current grant cycle RRTC staff provided over 70 trainings in a wide range of settings and to a diverse array of audiences. Also, near the end of the earlier RRTC grant cycle, WSU and NYU developed a training manual, Substance Abuse, Disability, and Vocational Rehabilitation. That curriculum has been well received by the field, with 200 copies distributed nationally at no cost and over 500 additional copies sold for a cost recovery fee. The manual is being used by rehabilitation professionals in preservice and inservice training settings. In addition, because of its applicability to the substance abuse field, the Substance Abuse and Mental Health Services Administration’s Center for Substance Abuse Treatment (CSAT) has supported printing additional copies for distribution. NIDRR received publication credits in the 1998 printing. CSAT has distributed 1,000 copies of the document through the National Clearinghouse on Alcohol and Drug Information, the Addiction Technology Transfer Centers and treatment provider networks. Our staff

continues to use this manual as a core document for training. In the near future the hope is to significantly update the content and expand accessibility through new formats.

- As noted earlier, during the RRTC grant cycle, RRTC staff and collaborators accomplished a great deal in the area of presentations at professional conferences - making over 40 such presentations. The conferences involved include among others, those of the American Counseling Association, specifically the American Rehabilitation Counseling Association; National Rehabilitation Counseling Association Symposium; National Rehabilitation Association; Association on Higher Education and Disability Conference; President's Committee on Employment of People with Disabilities; Interdisciplinary Rehabilitation Conference; National Association of State Directors of Special Education; Annual Scientific Meeting of the College on Problems of Drug Dependence, Inc; Therapeutic Communities of America; the International Congress on Alcohol and Drug Dependence; and the American Psychological Association.