# Job Seekers' Training for Patients with Drug Dependence
# Version 3.8
### National Institute on Drug Abuse
### Clinical Trials Network

## Protocol Team:

**Mid-Atlantic Node**

| | |
|---|---|
| Dace Svikis, Ph.D. | Lead Investigator |
| Maxine Stitzer, Ph.D. | Node Principal Investigator |
| Gena Britt, Ph.D. | Investigator |
| Lori Keyser-Marcus, Ph.D. | Protocol Coordinator |
| Shanna McCullough | Node Coordinator |

**Job Training Protocol Development Team**

***Scientific Collaborators:***

| | |
|---|---|
| Conrad Wong, Ph.D. | Mid-Atlantic Node |
| Robert Hubbard, Ph.D. | North Carolina Node |
| Kenneth Silverman, Ph.D. | Ohio Valley Node |
| Elizabeth Wells, Ph.D. | Washington Node |

***CTP Collaborators:***

| | |
|---|---|
| A'delle Chellis | South Carolina CTP |
| Mark Cowell | South Carolina CTP |
| Bill Cornely | Delaware Valley CTP |
| Matthew Kelley | Southwest CTP |
| Zvjezdana Martella | Great Lakes CTP |
| Frank Satterfield | Mid-Atlantic CTP |

***JSW Training Consultant:***

| | |
|---|---|
| Peter Loeb, M.S.W. | Allen/Loeb Associates |

***Design/Analysis and Data Management:***

| | |
|---|---|
| Ken Kolodner, Sc.D. | Mid-Atlantic Node |
| Rui Li, M.S. | Mid-Atlantic Node |
| Aimee Diskin | Mid-Atlantic Node |
| Reesa Laws | Oregon Node |
| Suzanne Gillespie, M.S. | Oregon Node |
| Gregory Bovasso | Delaware Valley Node |

***Medical Safety Officer:***

| | |
|---|---|
| Robert Schwartz, M.D. | Mid-Atlantic Node |

***Regulatory & QA Specialist:***

| | |
|---|---|
| Tina Brown | Mid-Atlantic Node |

***Training Specialist:***

| | |
|---|---|
| Therese Killeen, R.N., Ph.D., C.S. | South Carolina Node |

***NIDA CCTN Representative:***

| | |
|---|---|
| Cynthia Kleppinger, M.D. | NIDA |

# TABLE OF CONTENTS

## LIST OF ABBREVIATIONS

| | | |
|---|---|---|
| AB | = | Alcohol Breathalyzer |
| AE | = | Adverse Event |
| ASF | = | ASI Lite Follow-up |
| ASI-Lite | = | Addiction Severity Index-Lite |
| ASIA | = | ASI Addendum for Women |
| ASP | = | ASI Lite Pre-Treatment |
| BAL | = | Blood Alcohol Level |
| BRCI | = | Biopharmaceutical Research Consultants, Inc. |
| CAB | = | Common Assessment Battery |
| CDR | = | Central Data Repository |
| CES | = | Clinic Employment Survey |
| CIDI | = | Composite International Diagnostic Interview |
| CJRB | = | Community Job Resources Brochure |
| CRF | = | Case Report Form |
| CSAT | = | Center for Substance Abuse Treatment |
| CTN | = | Clinical Trials Network |
| CTP | = | Community Treatment Program |
| DD | = | Data Dictionary |
| DF | = | Drug-Free (Abstinence based) Treatment |
| DMAS | = | Data Management and Analysis Sub-Committee |
| DMC | = | Data Management Center |
| DSMB | = | Data Safety Monitoring Board |
| DUS | = | Drug Use Screen |
| GCP | = | Good Clinical Practice |
| GEE | = | Generalized Estimated Equations |
| IEC | = | Inclusion/Exclusion Criteria |
| IRB | = | Institutional Review Board |
| JSA | = | Job Seekers' Workshop Attendance |
| JSW | = | Job Seekers' Workshop |
| JSWF | = | Job Seekers' Workshop Facilitator Checklist |
| JSWP | = | Job Seekers' Workshop Post-Satisfaction |
| LI | = | Lead Investigator |
| MM | = | Methadone Maintenance |
| PCL | = | Participant Checklist |
| PRB | = | Protocol Review Board |
| PTF | = | Patient Tracking Form |
| QA | = | Quality Assurance |
| RA | = | Research Assistant |
| RAN | = | Randomization |
| RBS | = | Risk Behaviors Survey |
| SAE | = | Serious Adverse Event |
| SOP | = | Standard Operating Procedure |
| ST | = | Standard Treatment (Control Group) |
| STR | = | Study Termination Form |

| | | |
|---|---|---|
| SUD | = | Substance Use Diagnosis |
| TAU | = | Treatment as Usual |
| TEP | = | Training and Employment Program |
| TLFB | = | Timeline Follow Back Interview |
| TLFB-E | = | Timeline Follow Back Interview for Employment |
| UDS | = | Urine Drug Screen |
| VFJ | = | Vocational Survey Follow-up Job (follow-ups 1-3) |
| VFT | = | Vocational Survey Follow-up Training (follow-ups 1-3) |
| VIS | = | Visit Form |
| VSF | = | Vocational Survey Follow-up |
| VSP | = | Vocational Survey Pre-Treatment |
| VSPJ | = | Vocational Survey Pre-treament Job Addendum |
| WRAT-3 | = | Wide Range Achievement Test |

# SUMMARY OF STUDY PLAN

Rationale: The concept for this proposal was generated by Mid-Atlantic Node Community Treatment Program (CTP) Directors to address a critical need in treatment enhancement. Drug abuse patients who are employed typically have better treatment outcomes than those who are unemployed. Further, the cost-benefit for drug abuse treatment could be significantly improved if more patients returned to productive employment. Despite high rates of unemployment among drug abuse patients, community treatment programs often lack sufficient resources to provide ancillary vocational services. If effective, such programs could increase rates of employment, which would significantly improve not only clinical, but also cost-benefit treatment outcomes.

Objective: The study will examine the effectiveness of Job Seekers' Workshop (JSW), a three session, manualized program designed to train patients in the skills needed to find and secure a job.

Design: Using a randomized between-group design, the study will compare outcomes for patients randomly assigned to standard treatment plus JSW or standard treatment (ST) alone. Outcomes will be evaluated at 1, 3, and 6 months following randomization, and will be examined separately for participants in methadone maintenance (MM) as compared to outpatient drug free (DF) treatment modalities.

Subjects: Primary study participants will be drug and/or alcohol dependent individuals who are: 18 years of age or older, enrolled in drug treatment for at least 30 days, categorized as either unemployed (i.e., not having worked at all for the month prior to study recruitment) or underemployed (i.e., having worked no more than 20 hours/week in the past month), and have expressed an interest in obtaining a job. For the purposes of this study, months will be defined in terms of

weeks—1 month equals 4 weeks. In addition, an anonymous clinic-wide survey of patient demographics will be implemented four times during the course of study enrollment. These anonymous data will be aggregated and compared to demographic and other psychosocial and clinical (treatment) data for study participants.

Workshop content:

*Workshop training procedures.* The JSW curriculum will be offered by designated treatment staff who will be trained to deliver the intervention. The training workshop will consist of three training sessions, lasting approximately 4-hours each.

Participants will be expected to attend weekly workshop sessions. This will allow participants to practice their newly acquired skills during the time between sessions. In order to facilitate actual treatment delivery, however, each session will be offered up to twice per week, with one session as needed, designated as a "make-up" session. Further, the fourth week of each month will be used specifically for make-up sessions, as needed, thereby completing a monthly 4-week cycle.

The time of day and day of the week when JSW workshops and make-up sessions will be determined individually by each CTP based on participant and therapist schedules. For example, in MM programs, if unemployed clients are typically dosed late in the afternoon, JSW sessions might be scheduled in the afternoon from 1 PM – 5 PM. In contrast, for a DF program that provides outpatient services only in the morning, JSW sessions might be scheduled from 9 AM – 1 PM.

*Usual care comparison procedure.* During the time the study is in progress, participating CTPs will offer all clients admitted to their programs a Community Job Resources Brochure (CJRB). The CJRB will provide program clients with information about job placement and vocational training resources. The specific information provided in a CJRB will vary across participating CTP sites according to the number and types of job-related services available in that specific community. Information provided will be concrete including names, addresses and telephone numbers for service and resource providers. Because it will be integrated as part of usual care, both control and experimental subjects, as well as study non-participants, will receive the CJRB.

Data Analysis:

Two primary outcome measures will be examined. The first is time to either a new taxed job or enrollment in a job-training program during a 3-month follow-up period. For underemployed participants, time to taxed income employment will apply only to a job different from that described at baseline. Taxed income

employment is defined as a job in which the employer withholds income tax. A job skills training program is defined as one that prepares an individual for work and requires candidates to apply for program enrollment. Survival analysis using Cox proportional hazards regression will be used to test the hypothesis that JSW group participants will be more likely to report either employment in a taxed income job or placement in job training during the 3-month follow-up than subjects in the ST group. Analyses will be conducted on the intent-to-treat sample. Separate analyses will be performed for MM and DF groups, as clients in the two modalities are likely to yield different outcomes.

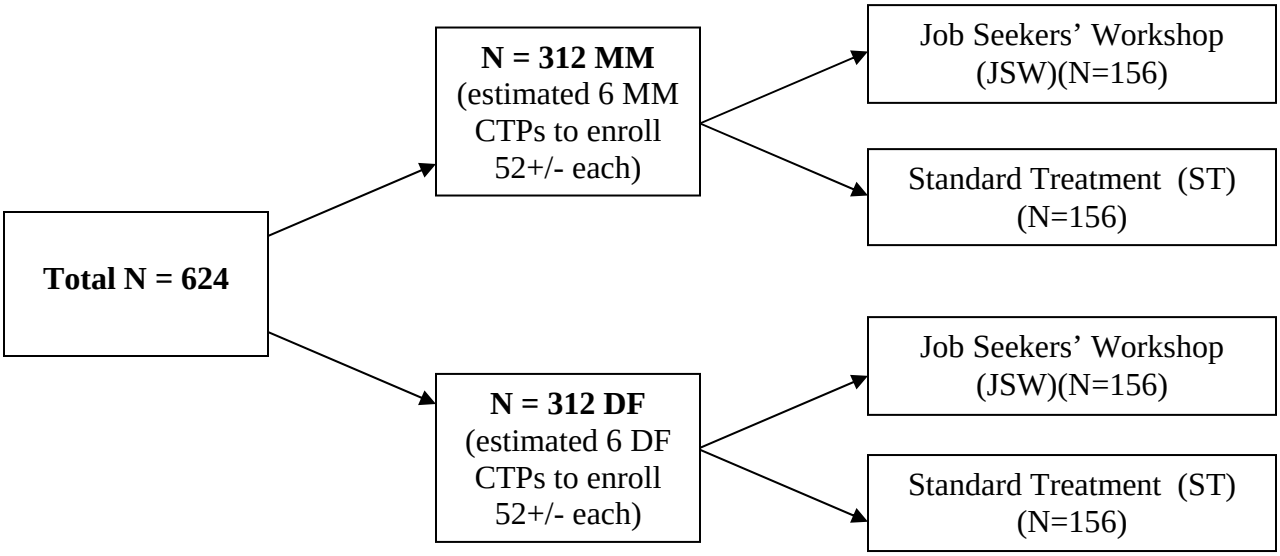
The second outcome measure is total hours worked in a taxed income job and/or hours accumulated in job skills training during the 3-month follow-up period. For underemployed participants, only hours worked at a new taxed income job will qualify for the analysis. We expect that this measure may be skewed, which will require log transformation of the data. Mixed models (using SAS procedure PROC MIXED) will be used to test the hypothesis that JSW participants will report working or enrollment in job training for significantly more hours in the 3-month follow-up than ST participants. Separate analyses will be performed for MM and DF with an intent-to-treat sample.

Secondary outcome analyses will focus on such measures as time to first taxed employment in the 6-month follow-up period; time to first taxed or non-taxed employment in the 6-month follow-up period; total hours worked in a taxed or non-taxed income job and/or hours accumulated in job skills training during the 6-month follow-up. The majority of the analyses will be performed on the intent-to-treat sample and will compare participants in the JSW and ST groups. Additionally, research participant data will be compared to information routinely acquired from patients enrolled in the program.

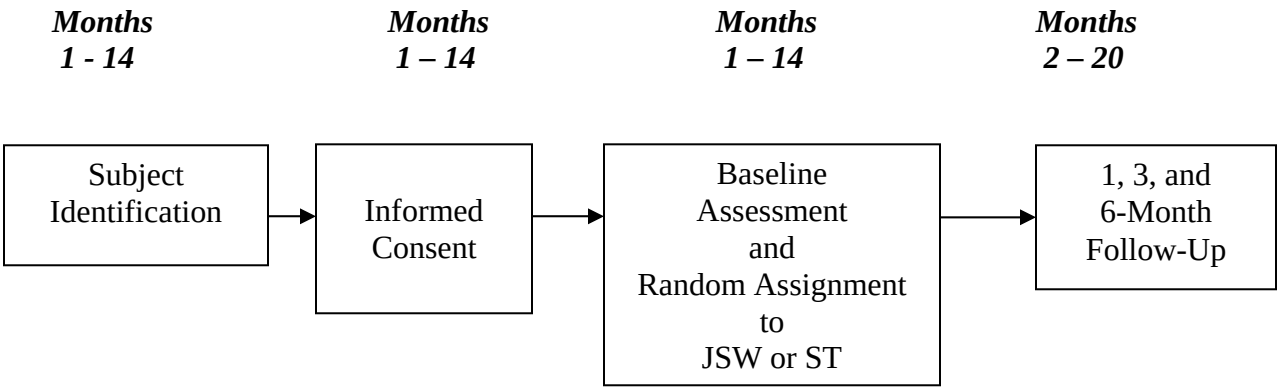
Summary: Overall, this study will provide a valid and detailed assessment of the ability of the Job Seekers' Workshop to improve employment outcomes for clients enrolled in both community methadone and drug-free treatment clinics. The study inclusion criteria are broad so as to best serve the treatment community; the workshop has been previously tested and found efficacious; the usual care intervention reflects and standardizes community treatment practices; feasibility considerations have been addressed throughout. Finally, outcome measures and data analyses are well suited to the aims of the study and will reflect both acquisition and maintenance of new employment. This study should provide extremely valuable information about an ancillary service that is of high importance to treatment providers and their clients. If rates of employment among drug abuse clients can be increased, this would have a significant positive impact on public acceptance as well as cost-benefit ratio of drug abuse treatment services.

# STUDY SCHEMA AND PROJECT TIMELINE

## Study Schema




## Projected Study Timeline




***Anonymous Patient Survey:**
**Month 2** **Month 8** **Month 12** **6 months post enrollment of final participant**

***Note: Site-specific calendar, with months derived from study start-up at each individual CTP.**

# 1.0 INTRODUCTION

## 1.1 Background and Rationale

Several factors contribute to low rates of employment in drug dependent individuals including low motivation to work, insufficient skills to obtain a job, and lack of vocational skills necessary to qualify for available work. Several comprehensive vocational assistance programs for drug abusers have been described and large-scale supported work programs have been attempted (Kidorf, Hollander, King, et al., 1998; Lamb, Kirby, & Platt, 1996; McLellan, 1983; Platt, 1995).

To date, however, empirical support for the efficacy of such programs is limited (Dennis, Karuntzos, McDougal, et al., 1993; Hubbard, Craddock, Flynn, et al., 1997; Schottenfeld, Pascale & Sokolowski, 1992), particularly for drug dependent patients. To illustrate, the Training and Employment Program (TEP) provided comprehensive vocational services to 249 opiate dependent patients. Rates of employment at follow-up, however, did not differ for TEP participants as compared to controls (Dennis, Karuntzos, McDougal, et al., 1993). Such comprehensive programs also require significant financial resources typically unavailable to drug treatment providers, making them expensive and often impractical for large scale implementation.

An alternative, potentially more economical approach is to provide training in skills needed to find and secure a job (e.g., preparing a resume). One such program, Job Seekers' Workshop (JSW), was developed by Sharon Hall and colleagues (Hall, Loeb, & Norton, 1977). The program targets skills needed to find and secure a job, as well as vocational goal setting and methods for locating available employment. The JSW was developed specifically for drug dependent individuals and has demonstrated efficacy across several well-designed studies (Hall, Loeb, Coyne, et al., 1981; Hall, Loeb, LeVois, et al., 1981; Hall, Loeb, & Norton, 1977). One study of 55 parolees or probationers with documented histories of heroin use found that 80% of individuals randomly assigned to job skills workshop were employed at 12-week follow-up compared to 52% of controls ($p<.03$) (Hall, Loeb, Coyne, et al., 1981).

The other two random assignment studies tested JSW in methadone maintenance patients (Hall, Loeb, LeVois, et al., 1981; Sorensen, Hall, Loeb, et al., 1988). Both compared JSW to a control group (provision of vocational materials). The first study targeted 49 job-seeking methadone patients. At 3-month follow-up, JSW participants were over three times more likely (50%) than controls (14%) to have a job or training placement ($p<.05$) (Hall, Loeb, LeVois, et al., 1981). The second study targeted 60 unemployed methadone maintenance patients. Again, more experimental (52%) than control (30%) subjects were employed at 12-week follow-up, although the difference failed to reach statistical significance. In this study, it was noted that JSW was ineffective for patients who had not worked in the past 5 years.

Taken together, this series of studies provides empirical support for the efficacy of a behaviorally based job seekers' workshop designed to help drug dependent patients find

and obtain employment. These studies were conducted several decades ago, however, in small, relatively homogeneous samples of primarily methadone-maintained individuals. Significant technological advances have taken place since that time in relation to not only job skills training, but also job seeking. The current protocol, through the NIDA CTN, will study the efficacy of JSW in a much larger and more heterogeneous sample of drug dependent individuals. The study will be conducted in both methadone maintenance and drug free treatment modalities. The manual for training counselors to become JSW leaders has been updated to include new technologies (e.g., internet-based job searches, resume writing). Finally, the training protocol has been revised to include state-of-the-art methods for assessing competence and adherence.

The JSW model is likely to be useful to community drug treatment programs and can be readily adopted by them. Interestingly, the research group that created the JSW experimentally examined methods for disseminating the workshop in a study that involved 198 drug treatment programs across 6 states (Sorensen, Hall, Loeb, et al., 1988). Programs were randomly assigned to a 1-day technical assistance site visit dissemination program, a training conference dissemination program or a printed material control group. The study found in-person training, either by conference or site visit, produced higher rates of program adoption (20-30% adopting) than did the control condition that relied solely on mailed materials (4% adopting). Based on these findings, the current protocol will deliver the training in-person to participating sites.

Since the 1980s, there has been a proliferation of vocational services for disadvantaged populations including welfare recipients and ex-offenders (Buck, 2000). All such programs incorporate the skills training delivered by the Job Seekers' Workshop. However, most go beyond this core training to provide job placement and follow-up services. Job placement through formation of direct alliances with employers is a specialized vocational service that goes beyond the scope of community drug treatment programs and will not be considered in this proposal. Job retention, on the other hand, is critical for long-term success of this project. Achieving job retention is of particular concern for individuals with substance use disorders. In a recent study of supportive employment counseling for persons with severe mental illness, outcomes were poorest for those with co-morbid substance use disorders (Lehman, Goldberg, Dixon, et al., 2002). Although job retention services are not part of this protocol, job retention will be an outcome measure due to the importance of this issue.

Drug dependent patients report strong interest and motivation for vocational services. Among methadone patients eligible for the TEP project, over 3/4$^{ths}$ (79%) claimed they were willing and able to participate (French, Dennis, McDougal, et al., 1992). The feasibility of adding employment services to the Clinical Trials Network (CTN) community treatment programs is supported by results of a recent survey conducted in two large Mid-Atlantic Node methadone maintenance community treatment programs. Over half of the patients were either unemployed or underemployed (part time work) and over half of these reported interest and willingness to participate in JSW in order to obtain employment or find a better job.

In summary, unemployment is a chronic problem in drug dependent individuals. Methods to enhance rates of employment are needed. While comprehensive vocational training programs are impractical, more basic training in skills needed to get and keep a job have widespread applicability and, if effective, are likely to be supported and adopted by community drug treatment providers.

# 2.0 STUDY OBJECTIVE

The purpose of this study is to implement and evaluate Job Seekers' Workshop (JSW), a 12-hour job search training program. The study will evaluate both acceptance of the training model by patients at participating CTPs, as well as the effectiveness of the intervention for increasing rates of employment among study participants.

# 3.0 STUDY PARTICIPANTS

## 3.1 Patient Population

Patients in both methadone maintenance (MM) and drug free (DF) modalities will be enrolled. The patient population will be drug dependent individuals who are at least 18 years of age, report an interest in getting a job, and have been in treatment at a participating CTP for at least 30 days prior to study enrollment. Both unemployed and underemployed patients will be eligible for study participation. Unemployed patients will be defined as those reporting no employment (taxed or non-taxed) in the four weeks prior to study enrollment. Underemployed patients will be defined as those who report having worked no more than 20 hours/week in the four weeks prior to study enrollment.

For underemployed participants, the intervention will offer them the opportunity to improve their work situation, and their outcome measures will focus exclusively on new employment (i.e., work other than that present at baseline). The decision to include underemployed patients was made in response to feedback from participating CTP directors. Specifically, they reported that failure to include underemployed patients in the intervention would adversely impact program operations and staff as well as patient morale. In addition, since rates of recruitment may be lower at some participating CTPs than others, it is important to maintain adequate group size for the JSW intervention. Inclusion of underemployed patients in the research will serve not only to improve weekly rates of JSW group attendance, but also to broaden the range of patients participating in the intervention.

## 3.2 Study Sites

It is projected that the study will be conducted at approximately 6-methadone maintenance and 6 outpatient drug free programs. With recruitment rates estimated at four patients per month per site over the 14-month recruitment period, we anticipate recruitment will yield adequate patient volumes for study completion.

To date, several CTPs have formally expressed an interest in participating in this protocol (see below). Both MM and DF programs are represented. Potential CTPs were asked to provide additional information (e.g., patient volumes, treatment modalities) following Protocol Review Board (PRB) re-review of the current protocol (Version 3R).

**Potential CTP Sites:**

**California/Arizona Node (1 CTP)**
**Oregon Node (1 CTP)**
**South Carolina Node (1 CTP)**
**Mid-Atlantic Node (3 CTPs)**
**Great Lakes Regional Node (2 CTPs)**
**Northern New England Node (2 CTPs)**
**Southwest Node (1 CTP and 1 pilot CTP site)**

Since there is such broad interest in the protocol, the lead node will need to select participating CTPs from among those expressing interest. This will be done based on previously developed CTN criteria that take into account regional and patient diversity as well as ability to enroll the needed study sample. In the case of this protocol, the number and type of community vocational resources may also be considered in the selection process.

Residential DF programs were also considered for inclusion in the study plan, as these programs would in many ways be ideal places in which to deliver the Job Seekers' Workshop. However, residential programs differ importantly from outpatient programs in that the ability of clients to engage in job search activities would be delayed until their residential treatment ended. Because of this important difference, we feel that it would be best to develop a revised protocol specifically tailored for residential programs. Such a protocol could either be proposed as an ancillary study or could wait until results of the present study are available.

It should be noted that early discussions about study implementation with one of the sites listed above (NCI, Southwest Node), raised site-specific cultural issues that would require modification in protocol procedures. In addition, the Navajo Nation IRB noted specific requirements prior to their approval of the study for the CTP site. Based on these discussions, it was determined that the study conducted at the Na'nizhoozhi Center, Inc (NCI) would be considered a pilot study separate from the main trial, and Navajo participants would not be included in the larger multi-site data set. This would allow the Navajo Nation to review and approve any presentations or publications that use NCI data.

### 3.3 Inclusion/Exclusion Criteria

Unemployed (not employed during the four weeks prior to study enrollment) and underemployed (having worked no more than 20 hours/week in the four weeks prior to study enrollment) drug or alcohol dependent patients will be eligible for study

participation. Both men and women of all racial and ethnic groups will be invited to participate.

Primary Inclusion Criteria:
1) 18 years of age or older
2) DSM-IV diagnosis of Drug or Alcohol Abuse or Dependence (lifetime)
3) Enrolled in outpatient MM or DF treatment for a minimum of 30 days (since date of admission)
4) Unemployed (no taxed or non-taxed work in the four weeks prior to study enrollment) or underemployed (having worked no more than 20 hours/week in the 4 weeks prior to study enrollment)
5) Report interest in obtaining a job

General Exclusion Criteria:
Individuals will be excluded who are unable to provide informed consent due to cognitive impairment, psychiatric instability, or language barriers. Ability to provide informed consent will be assessed using a 10-item, exam that examines patient understanding of the research design and study procedures. Participants must score 80% or above to pass the test. Those persons who fail to pass the exam will have the opportunity to go over the consent form again with a member of the research team, followed by two opportunities to re-take the exam.

### 3.4 Participant Identification and Recruitment

Several mechanisms will be used to identify patients for potential study participation. First, flyers describing the study will be posted in visible areas within each CTP, including a telephone number to contact research staff about study participation. Second, counseling staff will be informed about the study and asked to refer patients who have been in treatment for at least 30 days, and are interested in obtaining employment. Third, potential participants will be identified by clinic staff during treatment team meetings and/or chart reviews, and referred to study staff.

Research staff will meet with potential participants and briefly explain the study. Those who express interest will begin the informed consent process. Those who consent will be scheduled for their baseline assessment.

# 4.0 STUDY DESIGN

### 4.1 Study Enrollment Procedures

A total of 624 unemployed or underemployed patients will be recruited from the participating CTPs from both MM and DF modalities. Participants will be stratified based on employment history (ever employed AT ALL in past 5 years, yes/no) and current employment status (unemployed vs underemployed). Based on patient volume estimates, we anticipate an average monthly rate of enrollment of four un- or under-

employed patients per CTP**,** with participants randomly assigned to JSW or ST at approximately equal rates. Across CTPs, average monthly enrollment is expected to be 24 unemployed/underemployed MM and 24 unemployed/underemployed DF participants. To avoid respondent bias, participants will be randomized after completing baseline assessments.

### 4.2 Clinic-Wide Employment Survey

Representativeness and generalizability of study findings will be assessed by comparing demographic and psychosocial characteristics of study participants to those for the program at large. The latter information will be obtained by periodic administration of a brief anonymous survey to patients at each participating CTP site. The survey will focus on three domains: demographics (e.g., age, race, gender), treatment progress (e.g., time in treatment, drug and alcohol use), and employment (e.g., current employment, employment goals including interest in obtaining a job). The survey will be administered four times at each CTP (at study months 2, 8, and 12, and 6 months post-enrollment of final participants at each site, derived separately for each CTP based upon individual study launch dates) in order to capture changes over time in demographic and employment characteristics of the clinic population. The sampling method used for the anonymous survey will be determined on a site-by-site basis in conjunction with the lead node.

### 4.3 Group Formation and Scheduling

There are three JSW workshop sessions and each session is approximately four hours in length. Participants are expected to attend one session per week. This session spacing will allow participants to practice their newly acquired skills during the time between sessions. In order to maximize treatment delivery, up to two sessions will be offered each week, so that those who miss a scheduled JSW session can still receive their scheduled training. Further, the fourth week of each month will be used specifically for make-up sessions, thereby maximizing treatment delivery within a monthly 4-week cycle. Specifically, the schedule will be as follows:

| | |
|---|---|
| Week 1 | Session 1 offered once, with make-up session as needed |
| Week 2 | Session 2 offered once, with make-up session as needed |
| Week 3 | Session 3 offered once, with make-up session as needed |
| Week 4 | Make-up sessions scheduled twice/week as needed |

The time of day and day of the week when JSW workshops and make-up sessions will be scheduled shall be determined individually by each CTP based on participant and therapist schedules. For example, in MM programs, if unemployed patients are typically dosed late in the afternoon, JSW sessions may be scheduled from 9AM – 1 PM. In contrast, for a DF program that provides outpatient services only in the morning, JSW sessions may be scheduled in the afternoon from 1 PM – 5 PM.

The proposed training schedule was created to maximize participant ability to attend all three JSW workshop sessions within one month following random assignment to either JSW or ST. Patients who provide informed consent, will be scheduled for their baseline assessment close to the next start date for the first of the three JSW sessions (Note: In the schedule above, this would be during Calendar week 1 or 4). Randomization will occur upon completion of the baseline assessment. Follow-up will be scheduled at 1, 3, and 6-months post-randomization. In most cases, participants will have finished the JSW workshop prior to 1-month follow-up.

Participants assigned to the JSW group will be informed about the cumulative nature of the 3-day workshop series, and how important it is to attend all three sessions and to attend them consecutively over the 3-week time period. They will be encouraged to attend the regularly scheduled workshop sessions whenever possible, but they will also be told that make-up sessions will be offered weekly for participants who were unable to attend a particular JSW session.

It should be noted that the protocol development team discussed potential use of incentives to encourage participants to attend all three JSW sessions. After careful review of pros and cons of such procedures, however, the protocol team elected not to use incentives. Thus, they have been eliminated from the protocol.

### 4.4 Design Considerations

#### 4.4.1 Attention to imbalance across groups

All CTPs participating in this protocol will offer their patients a Community Job Resources Brochure (CJRB) as part of treatment as usual. All study participants will receive the CJRB, regardless of group assignment. Those randomized to JSW, however, will be offered the 12-hour JSW program in addition to standard care with CJRB. In contrast, ST control group participants will receive only standard care with CJRB.

The proposed research design clearly introduces some methodological concerns. In a rigorous RO1 research grant, the control group would be matched to the experimental group for time and attention. The CTN paradigm, however, has been to compare empirically validated treatments to "treatment as usual," which is the design for the current protocol. That is, this study will determine if the 12-hour JSW program is a useful adjunct to treatment as usual. Specifically, before creating a 12-hour alternative treatment for use as a comparison group, it seems prudent to study first if the treatment + JSW produces better outcomes than ST. If such a comparison yields no group differences, there is little need to pursue the active ingredients within the JSW curriculum. If a group difference is found, however, this supports further research focusing on dose and other potentially relevant components of treatment.

It is also important to note that our primary outcome measures and many secondary outcome measures focus specifically on employment-related behaviors (time to first employment, total hours worked). We believe it is unlikely that intensification of drug

treatment by 12 hours will, in and of itself, improve employment-specific measures such as these. It will be of interest, however, to see if other secondary outcome measures (e.g., drug use, treatment retention) differ for the two groups and the extent to which such differences correlate with employment outcome measures as well.

#### 4.4.2 Cross-contamination

The threat of cross-contamination is also of concern. However, we believe several features of the design serve to minimize the extent to which it may affect outcome. First, a maximum of two therapists at each CTP will be trained in the JSW curriculum. These individuals will be instructed not to share specific elements of the training until study completion. In addition, fairly intensive training is required to master JSW. It includes role-plays, videotaping and feedback from the trainer. Within this context, it is unlikely that cross-contamination will occur to a degree that it will impact study outcomes.

We believe the precautions described above will adequately prevent cross-contamination. Although many treatment staff members feel job skills training is essential for patient recovery, both patient caseloads and the volumes of paperwork are high. Thus, counseling staff in most programs lack not only the curriculum materials, but also the time to provide such services to their patients. Nonetheless, we will survey patients in both groups at follow-up about job-related counseling they received.

#### 4.4.3 Generalizability of study findings

Sample representativeness will be assessed by conducting an anonymous survey with patients actively enrolled in treatment. At study months 2, 8, and 12, and 6 months post-enrollment of final participants at each site, all patients at each CTP will be asked to complete an anonymous survey with demographic items (e.g., age, race, gender), treatment measures (e.g., time in treatment) employment variables (e.g., current employment status, interest in obtaining a job). Aggregate data will be used to compare the rates of study enrollment to the rates of expressed interest in the study as a rough measure of recruitment effectiveness.

# 5.0 TREATMENT CONDITIONS

## 5.1 Job Seekers' Workshop (JSW)

The current intervention was modeled closely after the Job Seekers' Workshop (JSW) developed by Sharon Hall and colleagues (Hall, Loeb, & Norton, 1977). JSW was manualized by the Center for Substance Abuse Treatment (CSAT) (Loeb, LeVois, & Hall, 1982), and designed to improve job-seeking skills, especially behavior in a job interview. JSW is based on the premise that information and practice in job acquisition skills will facilitate job placement (Hall, Loeb, & Norton, 1977). Using focused, individualized education and practice, with videotape feedback and small group discussion, the training seeks to decrease the anxiety felt by many drug dependent

persons when approaching the seemingly insurmountable task of "getting a job." Specifically, the sessions focus on finding a job, completing a job application and interviewing for a job.

The CSAT manual for JSW served as the template for the current protocol. Some modifications were necessary, however, to modernize the original portfolio of skills needed to successfully compete in the present job market. These were essential in large part because technology had advanced considerably since the original Job Seekers' Workshop was developed and tested. For example, computer-based job search techniques have become an essential element of "job seeking," and will be discussed (when applicable) in JSW as a source of job leads. The Job Seekers' Manual is included as an Appendix.

### 5.2 Standard Treatment (ST)

All subjects across participating CTPs will be enrolled in either methadone maintenance or outpatient abstinence-based drug treatment. In general, ST will remain nonspecific and will be allowed to vary across participating CTPs. ST services are likely to include individual and/or group counseling as well as therapeutic adjuncts (e.g., parenting education, transportation). The theoretical orientation for each participating program is likely to vary. Within a given CTP program, however, study participants will be offered identical counseling and treatment services, regardless of group assignment (JSW or ST).

The only element that will be standardized across CTPs and offered as part of ST will be the Community Job Resources Brochure (CJRB). The CJRB will provide program patients with information about job placement and vocational training resources tailored to their community. The specific information provided in a CJRB will vary across participating CTP sites according to the number and types of job-related services available in that specific community. Information provided will be concrete including names, addresses and telephone numbers for service and resource providers. Because it will be integrated as part of usual care, control and experimental subjects, as well as study non-participants, will receive the CJRB. To maintain some consistency in CJRB format and structure, JSW research staff will be available to provide guidance and consultation during brochure development. They will also facilitate identification of community resources and their inclusion in the CJRB.

This component of the design is important, as failure to provide the ST group with any job-relevant information is likely to produce a contrast effect, with higher rates of drop out from the control condition. The CJRB will provide basic information relevant to both getting a job and keeping that job. In contrast to active JSW, the CJRB provides no interactive modeling, training or role-play activities, which are at the very heart of JSW training.

# 6.0 STUDY PROCEDURES

## 6.1 Informed Consent

As described in Section 3.4, several methods will be used to refer patients to JSW. Interested patients will begin the consent process. All patients will be encouraged to ask questions, and it will be stressed that a decision not to participate in the study will in no way influence a patient's treatment at the CTP.

## 6.2 Screening/Baseline Assessment

Patients who volunteer to be in the study will sign the consent form, witnessed by the research assistant or study coordinator, and complete a baseline assessment. Since JSW sessions will be offered throughout each calendar month, baseline assessments will be scheduled to occur shortly before the start of the next series of JSW workshops. Baseline assessment will focus on participant demographics, alcohol and drug use severity, psychosocial functioning, and drug abuse treatment, as well as employment/work history. Participants will be compensated $25 for completing baseline assessment. Specific measures for baseline assessment include:

Common Assessment Battery (CAB): The CAB focuses upon the domains of: participant demography, alcohol and drug use, psychosocial functioning, psychological symptomatology and DSM-IV Drug Use Disorder Diagnoses. The CAB measures include: Addiction Severity Index-Lite (ASI-Lite), and Composite International Diagnostic Interview/Substance Use Disorder (CIDI/SUD), Risk Behaviors Survey (RBS), Patient Demographics, and Drug Use Screening (DUS). In addition, AE CRFs and SAE forms will be completed if warranted.

Urine Drug Screen (UDS): Urine samples will be collected in drug test cups with temperature-controlled monitoring. On-site assays will be done using test cups and other laboratory materials through a NIDA-approved contractual supplier. Urine toxicology will test for the presence of: cocaine metabolites, opiates, methadone, THC, PCP, amphetamines, barbiturates, tricyclic antidepressants, methamphetamines and benzodiazepines.

Alcohol Breathalyzer (AB): An alcohol breathalyzer will be used to assess for recent alcohol use. Exact models will be chosen locally, and approved by the Lead Node.

In addition, the following protocol-specific measures will be administered. It is estimated that the protocol-specific baseline assessment will require 60-90 minutes to complete.

Wide Range Achievement Test (WRAT-3): The WRAT-3 assesses academic achievement and functioning (i.e., assigns grade level for reading, arithmetic and spelling; Wilkinson, 1993). The WRAT has excellent reliability and validity and is

frequently used both for clinical/educational as well as research purposes to measure academic achievement.

Addiction Severity Index- Addendum for Women: The ASI-Addendum collects gender-specific information in the areas of physical health and psychosocial functioning.

Patient Tracking Form (PTF): The PTF collects information (e.g., name, address, telephone number) for at least 3 other people who the participant states are familiar with his/her whereabouts and who might facilitate subsequent research efforts to locate the participant for follow-up assessment.

Vocational Survey Pre-Treatment (VSP): The VSP is an interviewer-administered measure of the participant's vocational history and related life experiences. It was developed specifically for this study. Pre-treatment items focus on employment history, previous job satisfaction, attitudes and response to unemployment (e.g., depression), self-efficacy expectations for specific job skills, as well as financial and social support systems. In addition, the VSPJ module collects more detailed information about the participant's longest job as well as any jobs he/she has held in the 4 weeks prior to baseline assessment. We estimate the VSP (including the VSPJ) will require on average, approximately 15 minutes to administer, but the time will vary based upon the length and depth of a person's work history.

Timeline Follow Back Interview for Employment (TLFB-E): The TLFB-E uses the standard timeline follow back methodology to collect employment-related information (e.g., days worked, number of hours worked per day). The TLFB was originally developed to measure alcohol consumption in problem drinkers, using a calendar to assist them in providing retrospective estimates of the target behavior (i.e., drinking) on a day-to-day basis over a specified time period. It has also been adapted for use in tracking other behaviors such as episodes of violence and gambling behavior (Caetano, Schafer, & Cunradi, 2001). The TLFB has demonstrated moderate to high levels of reliability and validity when used to measure drinking and drug use (Sobell et al., 1996). It was recently selected as the best measure to use in treatment outcome studies of alcohol abuse/dependence (Sobell & Sobell, under review). In the present study, TLFB-E will be used to collect data on daily employment status (worked/did not work, number of hours worked). At baseline, it will be used to confirm the participant meets study criteria for unemployed or underemployed during the 4 weeks prior to study enrollment.

In addition to the measures listed above, the Inclusion/Exclusion (IEC) CRF will be completed, and a determination of study eligibility will be made.

### 6.3 Random Assignment

Randomization will occur following completion of the baseline assessment. Participants will be randomly assigned to either the JSW or ST study groups with stratification on the basis of employment history (employed at all in past 5 years, yes/no) and current employment categorization (unemployed or underemployed), and a randomization CRF

(RAN) will be completed for each participant. URN randomization will occur centrally through the Oregon Data Management Center.

### 6.4 JSW Workshop Evaluation

At the end of each of the three JSW sessions, participants will be asked to complete the Participant Checklist (PCL). The checklist includes items related to session length and content.

The workshop leader will complete the Job Seekers Workshop Facilitator Checklist (JSWF) at the end of each session. It includes information regarding length of JSW session, number of attendees, and session content.

Additionally, for each person assigned to the JSW group, number of JSW sessions attended and time spent in each session will be cumulated as measures of "dose" of job training. The hypothesized distributions are described below in the statistical analysis section.

### 6.5 Study Follow-Up

Follow-up assessments will be scheduled at 1, 3, and 6 months following baseline assessment and randomization. A summary of the baseline and follow-up assessment schedule is provided in Table 1. At each follow-up, all participants will complete follow-up versions of the ASI-Lite, VSF and TLFB-E for the time that has elapsed since the previous assessment (e.g., either at baseline or the most recent follow-up visit).

The VSF follow-up includes items that assess job seeking efforts, job or vocational training program interviews, and so forth. For participants with employment or training within the follow-up period, appropriate VSF modules will be administered (e.g., VFJ1, VFJ2 or VST3 for jobs and/or VFT1, VFT2 or VFT3 for training), All participants will also provide a urine sample for on-site toxicological assay of recent drug use as well as an assessment with an alcohol breathalyzer to measure recent alcohol consumption.

For underemployed participants, who complete all 3 follow-up assessments, the TLFB-E will yield a 6-month daily record of their work (days worked, hours worked per day, taxable or non-taxable position) and vocational training (days attended, hours attended per day) activities. These measures will be separated into those worked in employment that preceded baseline assessment and those worked in employment in a new job obtained subsequent to baseline assessment. For unemployed participants the TLFB-E will yield the same measures, but will not be separated into pre- and post-baseline employment categories.

In addition to the measures described above, at 3-month follow-up, participants in both the JSW and ST groups will be asked to complete a brief survey (CJRB) about the Community Job Resources Brochure, with items evaluating its clarity, usefulness and

comprehensiveness. Participants randomized to the JSW study condition will also complete the JSA (JSW Attendance) and JSWP (JSW Post-Satisfaction) at 3-month follow-up.

Procedures for handling missing data (e.g., participants who miss one or more of the 3 follow-up assessments) are described below in the data analysis section of the proposal.

### 6.5.1 Schedule of Assessments

Table 1 provides an overview of the participant procedures and assessments for the Job Seekers Protocol.

**Table 1: Schedule of Participant Assessments and Procedures**

| Assessment/ Procedure | Screening/ Baseline-1/ Enrollment | ‡Job Seekers Workshop Phase | | | Follow-Up 1 (28d) | 2 (84d) | 3 (168d) |
|---|---|---|---|---|---|---|---|
| Time (Study day) | 000 | 001-042 | 002-042 | 003-042 | 026-056 | 082-112 | 166-196 |
| Phase | 01 | 02 | | | 03 | 04 | 05 |
| JSW/ST | | **Need to complete all 3 JSW sessions within 6 weeks** | | | | | |
| Consent and Consent Quiz | x | | | | | | |
| **Baseline Assessments | | | | | | | |
| Visit Form (VIS) | x | x | x | x | x | x | x |
| Demographic (DEM) | x | | | | | | |
| Drug Use Screen (DUS) | x | | | | | | |
| Addiction Severity Index-Lite Pre-Treatment (ASP) | x | | | | | | |
| Addiction Severity Index-Addendum for Women (ASIA) | x | | | | | | |
| Risk Behavior Survey (RBS) | x | | | | | | |
| Substance Use Disorder-CIDI (SUD) | x | | | | | | |
| Alcohol Breathalyzer (AB) | x | | | | x | x | x |
| Urine Drug Screen (UDS) | x | | | | x | x | x |
| WRAT (Reading section) (WRAT-R) | x | | | | | | |
| *Time Line Follow Back (TLFB) | x | | | | x | x | x |
| Vocational Survey Pre-Treatment (VSP) | x | | | | | | |
| Vocational Survey Intake Job Addendum (VSPJ) | x | | | | | | |
| ^Participant Tracking Form (PTF) | x | | | | ^x | ^x | ^x |
| Inclusion/Exclusion Form (IEC) | x | | | | | | |
| Randomization Form (RAN) | x | | | | | | |
| Other Assessments | | | | | | | |
| JSW Attendance (JSA) | | | | | | x | |
| JSW Post-Satisfaction (JSWP) | | | | | | x | |
| JSW-Participant Checklist (PCL) | | x | x | x | | | |
| JSW-Facilitators Checklist (JSWF) | | x | x | x | | | |
| Addiction Severity Index-Lite FU (ASF) | | | | | x | x | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Vocational Survey Follow-up (VSF) | | | | | x | x | x |
| *Vocational Survey Follow-up 1 Job Addendum (VSJ1) | | | | | ~x | | |
| *Vocational Survey Follow-up 1 Training Addendum (VST1) | | | | | ~x | | |
| *Vocational Survey Follow-up 2 Job Addendum (VSJ2) | | | | | | ~x | |
| *Vocational Survey Follow-up 2 Training Addendum (VST2) | | | | | | ~x | |
| *Vocational Survey Follow-up 3 Job Addendum (VSJ3) | | | | | | | ~x |
| *Vocational Survey Follow-up 3 Training Addendum (VST3) | | | | | | | ~x |
| Community Job Resources Brochure Survey (CJRB) | | | | | | x | |
| =Adverse Event (AE) | To be completed when appropriate | | | | | | |
| =Significant Adverse Event (SAE) | | | | | | | |
| ==Termination Form (STR) | | | | | | | x |
| ^^Clinic Employment Survey | Study mos. 2, 8, and 12, and 6mos post-enrollment of final participants | | | | | | |

Symbol Key

‡Could be as many as 8 sessions attended-study visit 03a, 03b etc, however only 3 sessions will have data collected.

** The Baseline Assessments must be completed within 14 days from consent.

*The TLFB is a worksheet that the RA will use to fill out the Vocational Surveys and addendums. It will not be entered into the data management system.

^ The participant tracking form will be filled out at baseline, and updated throughout the study if changes occur.

~ These forms will be collected only if participant has a new job/training or new information for a previous job/training.

= These forms will be completed only when appropriate.

== The termination form is filled out when the participant leaves the study. This will be filled out for EVERY participant that has signed consent.

^^ This form is not collected specifically on study participant – rather it is collected on all clients at a participating CTP at 4 time-points during the CTP's protocol activities.

### 6.6 Minimizing Study Dropouts

It is critical that we minimize study dropouts from both the JSW and ST study groups. To facilitate this process, subjects will be informed that they must remain active in drug treatment during the time they participate during the 3 weeks of the JSW intervention activities**.** Follow-up assessments, however, at 1, 3, and 6 months will be scheduled regardless of patient status in treatment.

To encourage follow-up participation by both JSW and ST subjects, follow-up assessments will be arranged either on-site at the program or in the community at a site agreed upon by both the research assistant and study participant. In addition, all participants will be compensated for their time and effort during follow-up. Specifically, they will receive $20 for 1-month follow-up assessment, $30 for 3-month follow-up, and $40 for 6-month follow-up. In addition, participants completing all three follow-up assessments will receive a $40 bonus for study participation. These methods (escalating payment schedule with bonus for completing all three follow-up assessments) are often used in follow-up studies of psychosocial interventions in drug treatment. Research suggests such methods are effective for maintaining high rates of study participation and follow-up. Thus, subjects in both the JSW and ST groups will have an opportunity to earn $130 for completing all three follow-up assessments. The RA will collect locator and tracking information on each participant, so that he/she can follow-up and maintain contact with those who discontinue treatment. In particular, cellular phone numbers will be recorded in the participant tracking log. Participants in both study groups will be contacted regularly, by phone, letter or in person to maintain rapport and encourage continued research study participation.

### 6.7 Subject Withdrawal

Participants can elect to discontinue participation in the study at any point during the intervention and throughout the 6-month period of follow-up. In addition, program CTP staff will have the discretion to withdraw patients from the study if they deem it clinically in the best interests of the patient. During the treatment phase, a participant can be withdrawn for a variety of reasons. These include a serious concurrent physical or psychiatric illness (e.g., psychiatric hospitalization for paranoid delusions), a serious or unexpected adverse event that places him/her at risk if study participation is continued, or non-compliance with clinic policy or study protocol. If a participant is terminated from the study for any reason, the Study Termination Form (STR), is completed in order to collect information with regard to reason for termination, etc.

The study may be terminated for a participant if, in the opinion of the investigator, the IRB, or the CTN DSMB, 1) continuation of the study would present a serious medical or psychological risk to the participant or 2) for other administrative reasons. In the event that a patient is discontinued prematurely from the study he/she will continue to be eligible for standard substance abuse treatment at the discretion of the CTP. Study participants who enter treatment randomization but are discontinued or terminated from the study will be contacted to complete follow-up assessments at 1, 3 and 6 months post-

intervention. Every effort will be made to allow all study participants to complete the protocol.

### 6.8 Participant Reimbursement

All study participants will have the opportunity to receive two forms of reimbursement. First, they will be compensated $25 for completing the baseline assessment. Second, they will be reimbursed for their time and effort in completing study follow-up visits. To minimize dropouts during follow-up, compensation will be dispensed on an escalating schedule. Specifically, participants will receive $20 for 1-month, $30 for 3-month, and $40 for 6-month follow-up assessments. In addition, participants who complete all three follow-up assessments will receive a $40 bonus for study participation. Taken together, participants assigned to either the JSW or ST groups will have an opportunity to earn $25 for baseline assessment and up to $130 for follow-up study participation for a maximum amount of $155.

### 6.9 Subject Confidentiality

All efforts will be made to maintain subject confidentiality. Research data will be stored in locked filing cabinets inaccessible to administrative and clinical CTP staff. Clinical staff will be able to access information only if a participant provides written consent authorizing the release of such information. No subject identifying information will be provided in reports, publications or presentations of study findings. A federal certificate of confidentiality will be obtained to further protect research subject confidentiality.

## 7.0 STATISTICAL ANALYSIS PLAN

### 7.1 Primary Outcome Measures

During study follow-up, we anticipate considerable heterogeneity in the nature and types of employment activities to be reported by study participants. After careful review, it was decided that only jobs meeting criteria for taxed income employment would be included in the primary outcome analyses. Taxed income employment is defined as “a job in which income tax is withheld by the employer.” In order to be consistent with the original research on the Job Seekers’ Workshop, we are also including in the definition of employment enrollment in a job-training program that requires an application and acceptance process.

In addition, however, data will be collected on individuals who are employed in positions that do not fall into the taxed income employment category. Non-taxed employment will be defined as “a job in which no income tax is withheld by the employer (e.g., pay is ‘under the table’ by cash or check).” These data will be analyzed separately (see secondary data analysis below), and will be used to complement primary analyses that focus on taxed income employment.

Two variables will serve as primary outcomes. Source of information will be the Timeline Follow Back Interview for Employment at 3 months. The 3-month timeframe is selected for primary analysis because that is the time period most likely to be influenced by the workshop intervention. Data from the longer-term 6-month outcome is expected to provide information primarily on job maintenance.

*1) Time (number of days) to either a new taxed job or enrollment in a job-training program during a 3-month follow-up period.*

Data are obtained from the TLFB-E and transferred to a study CRF. This measure is treated as a continuous variable.

*2) Total hours either working or enrolled in a job-training program within a 3-month follow-up period.*

Data are obtained from the TLFB-E. This measure is treated as a continuous variable.

## 7.2 Secondary Outcome Measures

### 7.2.1 Employment-related outcomes

Secondary data analyses described below will be performed using two definitions for employment outcome. These provide a more conservative (employment in a taxed income job or training program) versus a more liberal (employment in a taxed or non-taxed job) perspective on employment activities of study participants.

Secondary outcome measures will be examined over the entire 6-month follow-up. Cumulative information for the entire 6-month follow-up period will be available from the TLFB-E interviews.

*1) Time to first non-taxed or taxed employment or placement in a job skills training program during the 3-month follow-up period.*

*2) Total hours worked in a non-taxed or taxed income job and/or hours accumulated in job skills training during the 3-month follow-up.*

These measures are parallel to our primary outcome defined above, but incorporate non-taxed (under the table) work as well as taxed income work.

*3) Total hours worked in a taxed income job and/or hours accumulated in job skills training during the 6-month follow-up.*

*4) Total hours worked in a non-taxed or taxed income job and/or hours accumulated in job skills training during the 6-month follow-up.*

These measures provide the longitudinal perspective on job maintenance using more conservative versus liberal definitions of employment.

### 7.2.2 Job search related outcomes

Three variables will be examined as indicators of both the extent and efficiency of job-searching behavior. These data will provide information about the extent to which experimental (JSW) subjects are engaging in job search activities compared to control (ST) subjects. It will also provide information about the effectiveness of JSW, which aims to teach individuals how to obtain jobs quickly and efficiently. Thus, it is possible that control subjects will actually engage in more job search activities than those in the experimental group, but that this will result in fewer job offers. We will be collecting information about a variety of potential job search activities, both activities that are expected to be effective and those that are expected to be ineffective in actually obtaining employment. The following three outcomes are defined and will be considered most relevant as process outcomes:

1) *Number of job calls* over the 6-month follow-up period.*
   **Job calls are defined as telephone calls in which the participant speaks interactively with another person (e.g. not voice recording) about a specific ad or position.*

2) *Number of interviews* over the 6-month follow-up period.*
   **Interviews are defined as face-to-face meetings with one or more individuals from the company offering the position.*

3) *Number of job offers over the 6-month follow-up period.*
   **Job offers are verbal or written offers of employment*
   .

### 7.2.3 Drug use measures

Drug use during follow-up will be included as a secondary rather than a primary outcome because the majority of study participants are expected to be illicit drug-free upon enrollment in the protocol. Two specific outcomes are defined.

*Number of opiate or cocaine positive urine drug toxicology assays during follow-up*. This variable will be assessed through on-site urine drug assays completed at 1, 3, and 6-month follow-ups. Values can range from 0 (no positive urinalysis results) to 1 (1 of 3 urine results positive) to 2 (2 of 3 urine results positive) to 3 (all 3 follow-up urine specimens positive for illicit drug use).

*Self-report of illicit drug use during follow-up*. This item is coded "YES" if the participant reports one or more days of illicit opiate or cocaine use during 6-month follow-up. This item is coded "NO" if the participant denies any illicit drug use during 6-

month follow-up. Participants will be assessed using the ASI-Lite at 1, 3, and 6-month follow-ups. For each drug, the ASI-Lite queries about frequency of use (number of days participant used a particular drug) in the past 30 days as well as since the last follow-up assessment.

### 7.3 Sample Size Estimation

There are two primary outcomes: 1) time to either a new taxed job or enrollment in a job-training program during a 3-month follow-up period; and 2) the total hours either working and/or spent in a job-training program within a 3-month follow-up period. The follow-up period is defined from the point of randomization/baseline assessment.

From the literature, three studies were identified to provide reasonable parameter estimates. The definitions of employment varied in these studies. A summary of the three studies is as follows:

1. With a total sample of 55 subjects, Hall et al.* found a statistically significant difference in the 3-month employment rates of the treatment group compared to the control group (86% vs. 54%; p=.03).
2. With a smaller total sample of 49, Hall et al.* also found a statistically significant difference in the 3-month employment rates of the treatment group compared to the control group (50% vs. 14%; p<.05).
3. With 30 subjects in each of the treatment and control groups, Hall et al.* found a non-statistically significant difference of 52% vs. 30% employment rates at 3-months follow-up when comparing the two groups (p=. 09).

Based on these results, we believe that a difference of at least 20% in employment between the two groups looks feasible and is desirable in terms of the impact of the intervention. We will power both outcomes based on 20% differences in employment/training outcomes. We also have included power analysis based on a difference of 15%. While this difference is likely to be too conservative, it is included here for two reasons: 1) it provides us with the sample size needed to detect a difference in treatment groups that we believe would be the minimum that we are likely to see; and 2) if we are able to collapse across modalities (and enter modality as a covariate in analysis), we can estimate the sample size needed to observe a 15% difference. Our sample size calculations set Type I error at 0.05 and power at 0.80. The drop out rate for the drug free sample is likely to be higher than the methadone maintenance sample. While we have no data to project drop out rates, we estimate the upper bound of the drop out rate to be 25%. Where appropriate, projected sample sizes are adjusted for this drop out rate.

Tables 2 and 3 present the samples needed to achieve statistical significance for the first primary outcome, time to a new taxed job or training in the 3-month follow-up period. Since there is no available data in the literature, we found estimating parameters for Cox proportional hazards regression to be cumbersome. Since the log rank test produces comparable results in bi-variate analysis, we chose the log rank test to calculate sample

sizes. Use of the log rank test to estimate sample sizes requires only that we estimate the proportion surviving for each group and that we estimate dropout rates. The log rank test is closely related to tests for a difference between two groups that are performed within the framework of the Cox proportional hazard model. The PASS software was used for all sample size calculations.

**Table 2**

| Cumulative proportion of getting first taxed job (15% difference) treatment vs. control | Sample size for each group |
|---|---|
| 50% vs. 35% | 226 |
| 55% vs. 40% | 229 |
| 60% vs. 45% | 226 |
| 65% vs. 50% | 219 |
| 70% vs. 55% | 205 |
| 75% vs. 60% | 187 |
| 80% vs. 65% | 163 |

**Table 3**

| Cumulative proportion of getting first taxed job (20% difference) treatment vs. control | Sample size for each group |
|---|---|
| 50% vs. 30% | 128 |
| 55% vs. 35% | 130 |
| 60% vs. 40% | 130 |
| 65% vs. 45% | 127 |
| 70% vs. 50% | 121 |
| 75% vs. 55% | 112 |
| 80% vs. 60% | 100 |

Since there are no related research results for the second primary outcome, we estimated the mean and standard deviation of total working hours in a 3-month follow-up period. We used two sample t-tests for sample size calculations. To produce reasonable means and standard deviations, we made the following assumptions. First, we assume that full time employment for a week is 40 hours. Therefore, the total working hours equals 12 X 40=480 hours in 3 months. Second, we assume that people who obtain work in the 3-month period (the period used in all current literature) work half of the whole period due to the variability of finding jobs. This drops the total working hours 240 hours (480/2). Finally, we assume different employed rates for treatment and control groups based on the same rates presented above, all of which are in the range of the available literature. We present less fine gradations because the sample size numbers tended to be smaller. The samples needed for each group are listed in Tables 4 and 5 depending on different employed rates.

**Table 4**

| Treatment vs. Control (15% difference) | Projected mean (SD) Treatment | Control | Sample size for each group | Sample size for each group (adjusted for 25% drop-out) |
|---|---|---|---|---|
| 50% vs. 35% | 120 (73.5) | 84 (52.1) | 51 | 68 |
| 60% vs. 45% | 144 (75.7) | 108 (68.8) | 65 | 87 |
| 70% vs. 55% | 168 (96.1) | 132 (82.6) | 99 | 132 |
| 80% vs. 65% | 192 (96.0) | 156 (90.1) | 106 | 141 |

**Table 5**

| Treatment vs. Control (20% difference) | Projected mean (SD) Treatment | Control | Sample size for each group | Sample size for each group (adjusted for 25% drop-out) |
|---|---|---|---|---|
| 50% vs. 30% | 120 (73.5) | 72 (50.4) | 29 | 39 |
| 60% vs. 40% | 144 (75.7) | 96 (62.9) | 34 | 45 |
| 70% vs. 50% | 168 (96.1) | 120 (73.5) | 51 | 68 |
| 80% vs. 60% | 192 (96.0) | 144 (75.7) | 52 | 69 |

With a projected modest 20% difference in outcome success, the samples needed to reach statistical significance for the first primary outcome reach a maximum of 130 per group within each treatment modality (130 for each group for both MM and DF). The samples needed to achieve statistical significance for the second primary outcome range from 39 to 69.

While we currently have no data to estimate the effect of site variability in terms of a contribution to a reduction in power, we do expect some reduction. A very conservative approach would be to further increase the samples by 20%.

Since we intend to perform separate analysis for the MM and DF groups, we anticipate needing 156 subjects for each treatment and control group within each type of clinic. Thus, the total number of subjects needed is approximately 624. A sample size of 1052 would be needed for a very conservative difference of treatment success of 15% (Allison, 1995; NCSS, 2000).

### 7.4 Statistical Methods

#### 7.4.1 Evaluation of randomization success

The success of the randomization will be evaluated by comparing the treatment groups for basic demographic information and drug use history. Chi-square and t-tests will be used as appropriate to the level of measurement. The analysis methods that are described below assume that no adjustment for covariates is necessary.

### 7.4.2 Evaluation of sample representativeness

As discussed in Section 4.4.3 of this proposal, we propose using two methods to evaluate representativeness of our sample to the larger clinic population. Both methods are ultimately limited if refusal rates are high. However, we should be able to compare aggregated data on various study characteristics. The analysis will be stratified by site as well as compared collapsing over all sites**.** For the snapshot survey method, we will treat our enrolled sample and the surveyed sample (the snapshot sample) as independent samples for comparison purposes.

### 7.4.3 Intent-to-treat principle

All analysis will follow the intent-to-treat principle unless otherwise specified. Regardless of the extent of study completion, subjects will remain in the analysis unless otherwise specified in secondary analysis.

### 7.4.4 Analysis of primary outcomes

***Hypothesis #1: Subjects in the JSW group will be more likely to report either employment in a taxed income job or placement in job training during the 3-month follow-up than subjects in the ST group. (Primary measure #1)***

This hypothesis addresses our first primary outcome, *time to first taxed employment or placement in a job skills training program during the 3-month follow-up period*. For underemployed participants, as stated previously, time to taxed income employment will apply only to a job different from that described at baseline. We will perform survival analysis using Cox proportional hazards regression. Those not employed at the end of the 3-month follow-up period will be censored at three months.

A term representing a site effect (CTP) will be entered as a covariate. The analysis will be run separately for type of clinic (MM vs. DF). Results will be presented in terms of hazard ratios along with 95% confidence intervals as well as graphical displays. The SAS procedure PROC PHREG will be used for modeling. Residuals and influence statistics as provided in SAS will be produced and examined for effects of outliers and influential data points.

An important strength of the timeline follow-back methodology is it will allow us to identify when a subject gained employment or enrolled in a job-training program. This methodology allows for filling in employment history retrospectively. Further, we can safely anticipate some subjects will be missing data from the 1 and 3-month follow-ups but still have a 6-month follow-up. We will again use that history obtained at six months to fill in the 3-month history. We should be able to minimize the need for censoring due to loss to follow-up with a diligent 6-month follow-up.

We do anticipate some subjects will be completely lost to follow-up. A typical strategy in survival analysis is to censor those subjects lost to follow-up to the date of the last contact. This is our preferred strategy.

While it is often not possible to know why subjects are lost to follow-up, a potential problem that can threaten the validity of the results is informative censoring whereby those lost to follow-up and consequently censored are NOT representative of those censored at the end of the study. We propose to perform a sensitivity analysis by re-analyzing the data by employing two alternate assumptions about those subjects lost to follow-up. Our first alternate strategy is to censor all subjects lost to follow-up to the maximum length of the follow-up period which is set at 90 days. Our second alternate method is to treat those subjects who are lost to follow-up as having obtained a job (or job training). The number of days to obtaining a job will also be set at 90 days, the end of the follow-up period. This latter strategy represents the opposite extreme in terms of assumptions. We will then compare all three methods of treating those lost to follow-up: (1.) censoring to the date of last contact; (2.) censoring to the end of the follow-up period using 90 days; and (3.) treating those lost to follow-up as having obtained a job/job training at the end of follow-up period using 90 days. Ideally, the results of the three methods of analysis will be comparable in terms of the effect of treatment.

We also propose to include in the Cox regressions all covariates (basic demographic information, job history and addiction history) that can be expected to affect either event times or follow-up status. Along these lines, to better understand the potential biases due to lost to follow-up; we propose to compare those subjects for whom follow-up was obtained to those subjects for whom no follow-up was obtained in terms of baseline characteristics. Logistic regression will be used to model follow-up status.

***Hypothesis #2*: Subjects in the JSW group will report working or enrollment in job training for significantly more hours in the 3-month follow-up than subjects in the ST group. (Primary measure #2)**

We expect that the second primary outcome measure, *total hours worked in a taxed income job and/or hours accumulated in job skills training during the 3-month follow-up*, may be skewed. Thus, we anticipate that there could be a need to transform the data possibly using a log transformation as has been done in previous research (French, Dennis, McDougal, et al., 1992).

Again, separate analyses will be performed for the MM and DF groups. To control for site effects, mixed models (using the SAS procedure PROC MIXED) will be used to compare JSW and ST (Littell, Milliken, Stroup, et al., 1996). Again with the timeline follow back methodology, if we know 3-month follow-up was not obtained but we can obtain an interview at six months, we will use employment information collected at six months for the period up to the 3-month follow-up.

The most significant issue for this analysis is how to handle subjects for whom we have no follow-ups or only the 1-month follow-up. It will be important to first understand how

our results could be potentially biased with each method. We will compare the rate of lost follow-up for the JSW and ST groups using a simple test of proportions. We will compare further those who were lost to follow-up to those for whom follow-up data was obtained for baseline characteristics. Logistic regression will be used to model these differences.

For those with no follow-up data, two possible assumptions are proposed. First, we can assume that subjects who are missing at 3 and 6-months have no employment and therefore are assigned a value of zero. Alternately, we could exclude from analysis those subjects for whom no follow-up data is available.

For those with 1-month follow-up data only, we could assume that whatever status they had at 1-month should apply for the 3-month period. Whether this assumption is a valid one could be evaluated to some extent by comparing 1-month and 3-month status in those subjects for whom both data points exist. Our suspicion is this imputation could be too ambitious. A more conservative strategy is again to omit these subjects from subsequent analysis and follow the same procedure as discussed above. We currently have no experience to predict how large a problem missing data will be.

We propose that we will need to report the analysis using both methods (assuming a "zero" value vs. excluding the subject with missing data from the analysis). Our analysis of comparing those with missing data to those with data may help inform a decision regarding which method is most appropriate.

#### 7.4.5 Analysis of secondary outcomes

All analyses on secondary measures will be conducted on the intent-to-treat sample unless otherwise specified. A site term will be included in all modeling procedures proposed below. All proposed modeling procedures allow for adjustment for other covariates for secondary analysis. As with the primary variables, analysis will be conducted separately for type of modality. Additional secondary analysis may be conducted collapsing over modality. If we collapse, we will include modality as a covariate. Secondary outcome measures are categorized into several domains: employment-related measures, job-search related measures, and measures of drug use.

##### 7.4.5.1 Employment-related outcomes

*Time to first non-taxed or taxed employment or placement in a job skills training program during the 3-month follow-up period.*

This measure differs from our primary measure only in that it includes non-taxed employment. The method of analysis (Cox proportional hazards regression) is identical to the corresponding primary measure. (See Section 7.4.4.)

*Total hours worked in a non-taxed or taxed income job and/or hours accumulated in job skills training during the 3-month follow-up.*

This measure differs from our second primary measure only in that it includes non-taxed employment. The methods of analyses (PROC MIXED) and analytic issues are virtually identical to the corresponding primary measure. (See Section 7.4.4.)

*Total hours worked in a taxed income job and/or hours accumulated in job skills training during the 6-month follow-up.*

This measure differs from our second primary measure only in that it extends the follow-up period to six months. The methods of analyses (PROC MIXED) and analytic issues are virtually identical to the corresponding primary measure.

*Total hours worked in a non-taxed or taxed income job and/or hours accumulated in job skills training during the 6-month follow-up.*

This measure differs from our second primary measure only in that it extends the follow-up period to six months and now includes non-taxed income. Again, the methods of analyses (PROC MIXED) and the analytic issues are virtually identical to the corresponding primary measure.

#### 7.4.5.2 Job search related outcomes

Analyses for the secondary measures in this domain, as exemplified by the following three measures, are described below.

*Number of job calls over the 6-month follow-up period.*
*Number of interviews over the 6-month follow-up period.*
*Number of job offers over the 6-month follow-up period.*

These variables can be conceptualized as count data. Consequently, Poisson regression will be used. We will use the OBSTATS option in PROC GENMOD to produce regression diagnostics to assess potentially influential data points and evidence of poor model fit. Among the statistics to be evaluated include standardized residuals, likelihood residuals, and changes in the deviance, the model chi-square and the regression coefficients with the deletion of each subject. We will also evaluate the model for evidence of over-dispersion and, if observed, correct the model by using the PSCALE or DSCALE options in PROC GENMOD (Allison, 1999).

#### 7.4.5.3 Drug use measures

*Opiate or cocaine positive urine drug toxicology assays during follow-up.*

This variable will be assessed through on-site urine drug assays completed at 1, 3 and 6-month follow-up. The variable is scored as a dichotomous outcome (positive or negative) at each follow-up assessment. Missing assessments are likely to be a problem for this variable. Subjects can have between 0 and 3 assessments. To maximize the use of non-

missing data and to correct for within-subject correlation, we propose using generalized estimated equations (GEE) using PROC GENMOD. The effect of the Job Seekers' Workshop will be represented as odds ratios (Zeger, Liang, and Albert, 1988).

*Self-report of illicit drug use during follow-up.*

Since self-reported drug use can also be obtained at multiple time points, we will again use GEE to analyze this outcome.

# 8.0 MEDICAL SAFETY PLAN

The protocol attempts to make the study available to as many patients as possible. While patients with a physical or psychiatric disability that precludes them from seeking vocational skills training or full-time employment will be ineligible for study participation, we believe the number of such persons will be low. That is, since the vocational skills training program is one that can be tailored to meet the unique needs of someone with a physical or psychiatric disability, every effort will be made to include such persons in the study.

If a participant develops a serious medical or psychiatric problem, or has an existing condition that is exacerbated during study participation, he/she may be withdrawn from the study to minimize health risks to the research participant. The participant will also be referred for appropriate medical or psychiatric care as needed. In such cases, participating CTPs will follow their existing policy and procedure manual guidelines for management of such issues.

## 8.1 Concomitant Medications

The current protocol has no medication component. Participants may, however, be taking prescribed medications, including antidepressants and anti-anxiety agents. Given that this is a relatively low risk, psychosocial intervention, use of such medications will not be routinely documented and monitored in the research database.

# 9.0 CLINICAL AND LABORATORY EVALUATIONS

Urine samples will be collected in drug test cups with temperature controlled monitoring. On-site assays will be completed using test cups and other laboratory materials supplied by a NIDA-approved contractual supplier. Urine toxicology will test for the presence of: cocaine metabolites, opiates/morphine, methadone, THC, PCP, amphetamines, barbiturates, tricyclic antidepressants, methamphetamines and benzodiazepines.

An alcohol breathalyzer will be used to assess blood alcohol level (BAL) for recent alcohol consumption.

Urine and breath samples will be obtained and assayed at baseline/randomization, and at 1, 3 and 6-month follow-up.

# 10.0 DATA MANAGEMENT PROCEDURES

The Oregon Data Management Center (DMC) will coordinate data management activities and provide ongoing consultation and assistance to participating nodes throughout the study. All procedures will be in accordance with the Standard Operating Procedures (SOPs) developed by the CTN Data Management & Analysis Subcommittee (DMAS). The DMAS SOPs are in accordance with the Food & Drug Administration regulations, which NIDA has adopted as the data collection and management standards for all CTN studies.

## 10.1. Lead DMC Responsibilities

The Oregon DMC will provide final Case Report Form (CRF) specifications for the collection of all data required by the study. While the study data content of the CRFs cannot be changed, it is understood that CRFs may be modified for incorporation into each participating node data management system as appropriate. The Oregon DMC will also provide data dictionaries for each CRF that will comprehensively define each data element. The data dictionary will specify missing, illogical, out of range, and inconsistent value checks for each data element as well as within-CRF logic checks and across-CRF logic checks. The data dictionaries provide the specifications necessary for each node to develop an automated data acquisition and management system that will be designed in accordance with standards established by DMAS. The Oregon DMC will also provide specifications necessary to conduct data monitoring activities and meet the requirements of all other DMAS SOPs.

## 10.2 Data Collection

Data will be collected at the study sites on either electronic (paperless) or paper case report forms (CRFs). Forms completion instructions will also be provided for each CRF. Each participating node DMC will coordinate the preparation of paper CRFs and the distribution of these CRFs to participating CTPs within their node. These forms are to be completed on an ongoing basis during the study. Forms should be completed according to the instructions provided. Each node is responsible for maintaining accurate, complete and up-to-date records and for tracking CRFs for each participant. Paper CRFs must be completed legibly with black ballpoint pen. Any corrections must be made by striking through the incorrect entry with a single line using a red ballpoint pen and entering the correct information adjacent to the incorrect entry. Corrections to paper CRFs must be initialed and dated by the person making the correction.

### 10.3 Data Submission, Editing and Monitoring

Completed forms/electronic data will be submitted to each participating node DMC in accordance with Data Timeliness and Completeness SOP established by the DMAS. Only authorized individuals, in accordance with each participating node's DMC policies, shall perform data entry into electronic CRFs. Corrections to electronic CRFs must be tracked electronically with time, date, individual making the change, both the old data value and new data value, and the reason for the correction. Each node DMC will implement comprehensive error checking and data management procedures as per the Error Tracking SOP established the by DMAS. Data monitoring will be the responsibility of the DMC at each node. Data monitoring will be performed as specified in the Data Timeliness and Completeness SOP, Data Accuracy and Auditing SOP, Participant Recruitment Progress and Retention SOP, and other data monitoring SOPs as approved by DMAS.

### 10.4 Automated Data Acquisition and Management Systems

Each node is responsible for the development of a comprehensive automated data acquisition and management system in accordance with guidelines and SOPs published by NIDA and DMAS. The Oregon DMC is willing to discuss the use of the Oregon automated data acquisition and management system if it is not desirable or cost effective for a node to develop its own independent data acquisition and management system for this protocol.

### 10.5 Data Validation

Data Validation will occur at the site or CTP in accordance with the DMC and will involve those personnel directly involved with the protocol's implementation.

In addition, data will be verified following the DMAS Data Accuracy and Auditing SOP (DMM 005) by performing a CRF to database review. All data errors and inconsistencies identified will be tracked and resolved. Data errors will be identified routinely and additional error queries will be periodically generated from the lead DMC. The data manager at the node will correspond with the person entering the data to resolve these data queries promptly. Additionally, any deviation from the protocol should be documented in accordance with procedures set forth by the lead node regarding protocol deviations and violations. In this way, the protocol team at the CTP plays a vital part in the collaborative effort to ensure clinical trials at their site are conducted in accordance with GCP guidelines.

### 10.6 Central Data Repository

Data will be transmitted by the participating node DMC to the NIDA central data repository monthly, in accordance with the DMAS Data Transmission SOP. The Oregon DMC will receive aggregated data from the NIDA central data repository on a monthly basis for data completeness, timeliness and accuracy quality assurance review. At the completion of the study, all data will be transmitted from the NIDA central data repository to the Oregon DMC for the development of the final study database. The Oregon DMC will conduct final data quality assurance checks and "lock" the study database from further modification in accordance with the Lead DMC Protocol Closeout SOP developed by the DMAS. The Oregon DMC will send the final analysis dataset back to the lead node for data analysis and development of the final study report. A copy of the final database will also be sent to NIDA for storage and archive.

# 11.0 QUALITY ASSURANCE PROCEDURES

## Clinical Monitoring Guidelines

Node Quality Assurance (QA) personnel are responsible for monitoring CTN clinical trials implemented at CTPs within the node and for ensuring trials are conducted in accordance with Good Clinical Practice (GCP) guidelines. Moreover, QA personnel are responsible for seeing that site visits are conducted in a consistent and timely manner, and that site reports are generated in a timely manner and are distributed to the appropriate personnel. All investigators will allow local node and/or lead node QA representatives to periodically monitor their site, at mutually convenient times before during and after the study. The purpose of these visits is to ensure that protocol procedures are being followed, verify that participant consent for study participation has been properly obtained and documented, confirm that research participants entered into the study meet inclusion and exclusion criteria, and assure that all essential documentation required by Good Clinical Practice guidelines and federal regulations is appropriately filed. In order to complete the required monitoring, these periodic monitoring visits will occur more frequently at the beginning of the study and per QA Plan guidelines for the duration.

Monitors will conduct a site initiation visit prior to the start of the study. At this visit, they will assure that proper study related documentation exists, confirm receipt of study supplies, and ensure that acceptable facilities are available to conduct the study.

Routine monitoring visits by the sponsor's representatives will be scheduled at appropriate intervals, more frequently at the beginning of the study. At these visits, the monitors will verify that study procedures are being conducted according to the protocol guidelines. At the end of the study they will advise on storage of study records and study closeout procedures. All sites should anticipate visits by NIDA independent clinical monitors. These monitoring visits provide the sponsor with the opportunity to evaluate

the progress of the study and to inform the sponsor of potential problems at the study sites.

The Quality Assurance procedures to be covered at monitoring visits and a checklist of activities are provided in the Lead Node QA Plan.

# 12.0 DATA AND SAFETY MONITORING PLAN

The following paragraphs outline how we intend to protect the safety of study participants and maintain the integrity of the research.

## 12.1 Safety Monitoring

The study LI has ultimate responsibility for safety monitoring and protocol adherence. She reviews all safety monitoring and study performance reports and plans for appropriate action to address any problems noted. The LI is assisted by regulatory and QA staff as well as node study coordinators and the Study Medical Monitor. The regulatory staff member designated by each site will prepare the SAE summary report and forward to all relevant parties, including the LI, the Lead Node QA/Regulatory specialist, NIDA, and the local IRB as required.

Information regarding adverse events will be routinely collected by RAs at baseline and during 1,3, and 6 month follow-up interviews. Additionally, during the baseline and follow-up interviews, all participants will be urged to contact study staff if an adverse event occurs at any time during the study period.

### 12.1.1 Subject characteristics

Subjects will consist of individuals who have been in treatment for at least 30 days, who are also interested in obtaining a job; thus representing a fairly stable population of drug users. Recruitment is intended to be as inclusive as possible, seeking individuals via flyers, clinic-wide surveys, and counselor referrals. Individuals will be eligible if they: are at least 18 years old, meet criteria for drug or alcohol abuse or dependence, have been enrolled in outpatient methadone maintenance or drug-free treatment for at least 30 days, are unemployed or underemployed, and report an interest in obtaining a job (see section 3.3 for definitions). Individuals will be excluded from study participation if they are unable to provide informed consent (for example due to cognitive impairment, psychiatric instability, or language barriers).

### 12.1.2 Subject protection

The purpose of this protocol is to help drug abusers obtain employment using a low-risk behavioral intervention. Subjects might experience psychological distress due to assessment or training procedures, failures encountered in the real world job search process, physical injuries related to the job search process (e.g. transportation accidents),

or to the employment situation (i.e. job-related injuries). There is also a risk of violation of confidentiality. These risks are thought to be minimal and similar to risks present in everyday living.

It is not anticipated that serious psychiatric problems (including suicidality) will develop while participating in the intervention sessions. If such an event occurs (whether or not it is thought to be related to the intervention), the counselor running the intervention will use his or her clinical judgment to manage the situation, referring the individual out of the session if appropriate. Similarly, if an individual becomes particularly distressed related to an intervention session (for example due to feedback from role playing), or exhibits violent or disruptive behavior during training sessions, the counselor will again manage this in a way that is in the best interest of the participant and the group (for example referring to a private counselor, crisis intervention, or working through the issues). If these types of events occur outside of the intervention, while the participant is working with the research assistant, he or she will be referred to a member of the clinical staff. The participant will be referred for appropriate medical or psychiatric care as needed. Every effort will be made to continue engaging the individual in the JSW intervention.

It is more likely that during the workshop and/or interview sessions, participants may experience some degree of emotional discomfort or fatigue. However, these risks are equivalent to those experienced during a treatment session or clinical interview. The use of these procedures has not been shown to be harmful to psychiatric/substance abusing patients. In an effort to minimize the risk of distress and/or fatigue experienced by participants, breaks will be given at regular intervals and as needed. Additionally, all interviewers and workshop leaders will be trained to assess for level of distress and will be attentive to the participant's needs. In the event that any subject is determined to be in need of additional support, appropriate services will be made available.

The only event that will result in administrative withdrawal from the study would be a case in which the participant is dismissed from the treatment program and prohibited from the returning (for example due to violence or threats).

Confidentiality of patient records is maintained by assigning subject ID numbers and using these rather than subject names on all study records. Research data are kept in a locked filing cabinet; signed consent forms and subject ID keys are kept in a separate location in a locked cabinet. A certificate of confidentiality will be obtained for this study.

### 12.1.3 Adverse event monitoring and reporting

An adverse event (AE) is defined as any untoward medical occurrence in a participant that *may* or *may not* have a causal relationship with the study treatment. RAs will be trained to inquire about AEs at each study visit. Any mention of an untoward event will trigger an entry onto the AE log, inclusion in progress notes, and a determination of whether the AE is serious, study-related, or unrelated to the study. All SAEs and study-

related AEs will be tracked to resolution, stability, or through the last follow-up contact (see Figure 1- AE/SAE flowchart). The study site coordinators will monitor the AE log, and consult with the Lead Node QA monitor, Lead Node Project Manager and/or Lead Investigator as necessary to determine study-relatedness.

Due to the nature of the intervention in the current study, it is anticipated that a low number of study-related adverse events will occur. However, potential adverse events may include: psychological distress due to assessment or training procedures, or physical injuries related to the job search process (e.g. transportation accidents) or to the employment situation (i.e. job-related injuries). Relapse to substances requiring hospitalization, drug overdose, and suicidality may also occur.

When a determination is made that an AE is related to the study, it will be recorded on the AE CRF.

### 12.1.4 Serious adverse event monitoring and reporting

A serious adverse event (SAE) is defined as any event that is fatal or life threatening, that is permanently disabling, requires or extends hospitalization of the subject, is a congenital anomaly, or requires intervention to prevent any of the above. This could include hospitalizations related to drug overdose or suicidality. The study site coordinators will monitor all SAEs (including deaths), and consult with the Lead Node QA monitor, Lead Node Project Coordinator and/or Lead Investigator as necessary to determine study relatedness.

All deaths will be reported within 24 hours of detection to both the NIDA Medical Safety Monitor @ 301-443-6697 (phone) or 301-443-2317 (fax) and either the Lead Investigator (Dace Svikis, Ph.D., 804-827-1184 (phone); 804-827-1502 (fax) or Protocol Coordinator (Lori Keyser-Marcus, Ph.D., 804-827-1727 (phone); 804-827-1502 (fax).

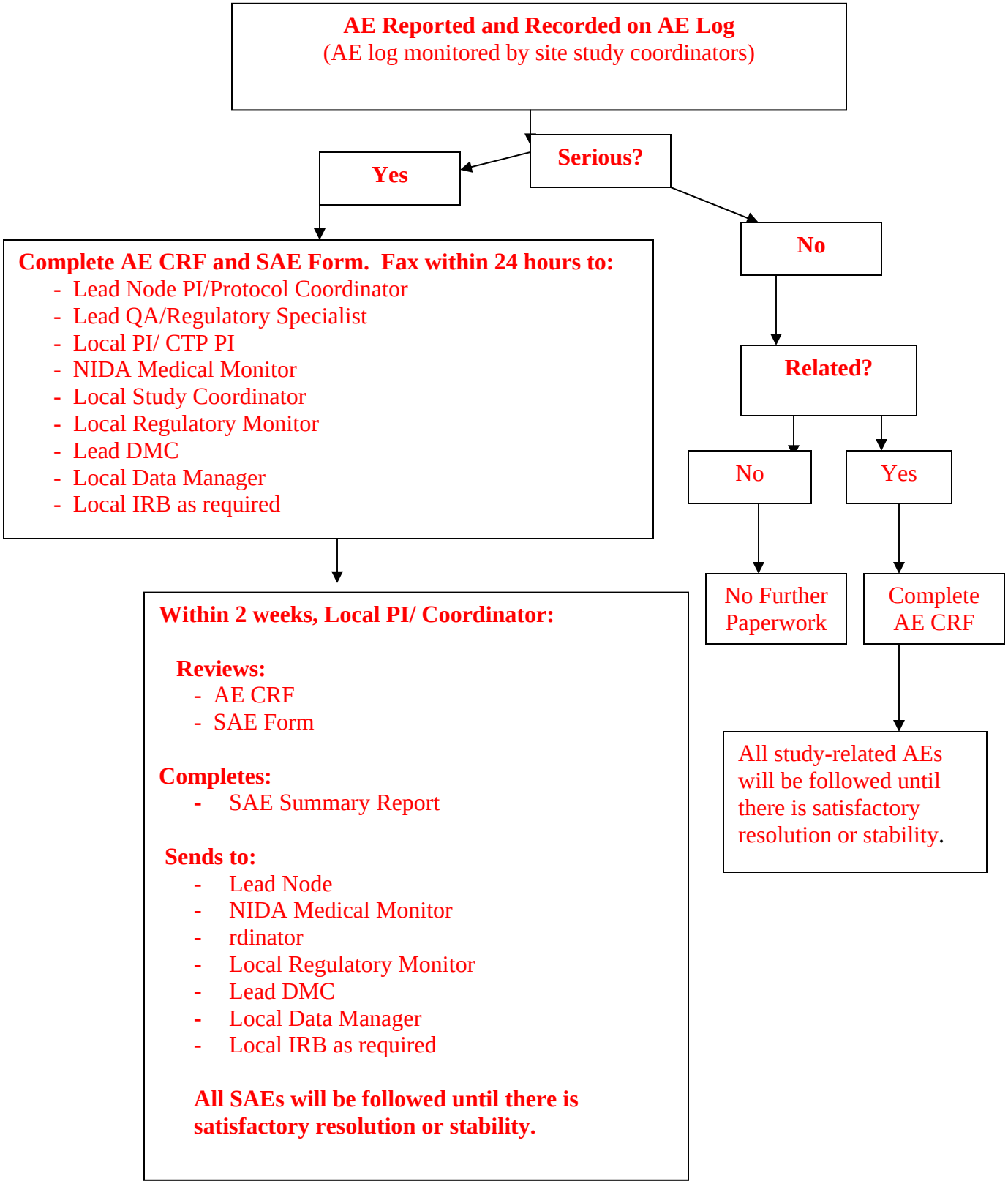
Once an AE has been determined to be serious, it will be noted as such on the AE CRF (destined for data entry into the clinical safety database). In addition, the SAE Form and the SAE Summary Report (narrative) will be completed. Full information regarding the SAE (including deaths) should be submitted within 2 weeks to the NIDA medical monitor and appropriate study personnel, as well as IRBs, per local requirements (see Figure 1).

Participants for whom SAEs are detected will be monitored until the SAE resolves, stabilizes (no further change expected), or results in death. This monitoring will take place for individuals who are active in the study, in follow up, or who have withdrawn from or discontinued study participation.

Cumulative documentation of SAEs will be kept at the project site for the duration of the study and reported to the IRB periodically, as required. The lead node will keep a record of all reported SAEs that have occurred across all CTPs participating in the protocol. The CCTN DSMB will provide independent monitoring of trial conduct, including the overall

safety of study participants, including a review of the accumulated SAEs. Summary reports from the DSMB will be sent to the LI, for distribution to all study sites and their IRBs.

Figure 1. Adverse Event (AE) and Serious Adverse Event (SAE) Reporting Process



## 12.2 Performance Monitoring

Performance monitoring addresses three critical aspects of the Data and Safety Monitoring Plan: 1) internal validity of the study procedures, 2) accuracy and timeliness of study performance and 3) interim assessment of efficacy or futility of the study.

### 12.2.1 Internal validity

One purpose of performance monitoring is to guarantee internal validity in execution of the clinical trial. Primary threats to internal validity in the present trial include 1) randomization, 2) attrition, 3) treatment fidelity, 4) carry-over effects and 5) reliability of primary endpoints.

1) Randomization bias will be addressed by having the DMC assume responsibility for centralized URN randomization. This precludes site personnel from exerting any influence on randomization and thus eliminates any potential bias. Further, the use of stratification on appropriate employment-related variables will ensure that groups are unbiased with regard to those variables potentially related to outcome. QA checks will include verification that participants were stratified correctly (the correct information for each subject was entered), that any instances of "un-randomization" or forced randomization are adequately explained and legitimated (for example, an individual who was ineligible was inadvertently enrolled), and that participants actually engaged in the arm of treatment to which they were randomized.

2) Attrition biases can be a large threat to internal validity, particularly in transient populations such as drug abusers. To encourage follow-up participation by both JSW and ST subjects, follow-up assessments will be arranged either on-site at the program or in the community at a site agreed upon by both the research assistant and study participant. In addition, all participants will be compensated for their time and effort during follow-up. Attrition will be minimized by use of an escalating payment scale for follow-up interview completion (i.e., later follow-ups are worth more than early follow-ups) as well as offer of a follow-up completion bonus. The RAs will collect locator and tracking information on each participant, so that they can follow-up and maintain contact with those who discontinue treatment. Participants in both study groups will be contacted regularly, by phone, letter or in person to maintain rapport and encourage continued research study participation. An adequate window (4 weeks) will be allowed for follow-up completion. Finally, use of a time-line follow-back method for collection of primary outcome data will greatly minimize data loss, since data from missed follow-up visits can be recovered at a later contact.

QA checks will include review of records of contact to assure that participants are being contacted according to SOPs, that payment was provided as indicated in the protocol, and that follow ups are conducted within the specified window. In the event one or more of these are not occurring according to the set standards, feedback will be provided to manage the infractions.

3) Treatment fidelity will be addressed in several ways. First, initial training will incorporate methods to ensure that workshop leaders are adequately prepared and competent to deliver the Job Seekers' Workshop. Initial training will include mock sessions in which training skills can be judged. Workshop leaders will subsequently be required to co-lead a workshop with the node JSW trainer, and conduct a subsequent practice workshop. Workshop leaders are also required to participate in follow-up phone calls with the node trainers, national training consultants, and/or lead node LI or national protocol coordinator, and corrective feedback will be given as needed. Workshop leaders will be required to pass competency criteria before beginning the study. Ongoing adherence checking of workshop leaders will also be conducted, as described in the Training Plan. This is a procedure that can prevent drift over time. Ongoing feedback will be given to workshop leaders as part of this procedure and re-training will be conducted, as needed.

4) Potential carry-over effects are addressed by collection of data from control subjects about any exposure they have had to vocational training experiences during the time of the study assessment. The Job Seekers' Workshop involves extensive video feedback training of subjects who are preparing for job interviews, as well as intensive and focused instruction in job search procedures. It is highly unlikely that control subjects will be exposed to these key aspects of the Job Seekers' training.

5) Reliability of the primary endpoint is an issue in this study, which relies on self-report to obtain employment information. Research Assistants will be carefully trained in assessment of the specific employment information desired (e.g. taxed versus non-taxed employment). The time-line follow-back method will be used to structure the assessment. Many research studies assess for alcohol and/or illicit drug use on a daily basis with instruments such as the time-line follow-back interview. Outcomes have generally been favorable with respect to data reliability and validity using such measures (Fals-Stewart, 2003; Sobell & Sobell, 1996)**.** We considered including an objective verification procedure (e.g., paycheck stub, telephone call to employer) in the employment assessment. This was rejected because it could result in an underestimate of employment and work behavior and/or impact on the number of clinic patients willing to participate in the study. These problems arise because clients fear inappropriate disclosure of their drug abuse status may lead to discriminatory actions. In other cases, there may be fear of losing welfare benefits.

Annual boosters sessions will be conducted to enhance consistent administration of the TLFB-E. In addition, each person certified to complete the TLFB-E will be observed and recorded at least twice per year. An independent rater will score this observation or recording and the scores will be compared to determine if there are discrepancies in the scoring. Feedback will be provided to enhance consistent scoring.

### 12.2.2 Trial performance monitoring

Trial performance monitoring will be an ongoing activity carried out by site investigators with oversight from the CTN DSMB. Research Assistants will enter data daily from paper case report forms that will constitute source documentation. Each DMC will produce monthly administrative reports that describe study progress including accrual by site, demographics in aggregate and by site, as well as subjects' status in aggregate and by site. Reports will describe outstanding study forms and error rates by site and in aggregate. These reports will be reviewed internally by each DMC for ongoing quality control, by the study LI to identify any corrective action needed, and will also be presented to the DSMB, as requested.

Additional reports will be produced every other month from QA site-visits. These reports will summarize adequacy of informed consent documentation, adherence to both study inclusion/exclusion criteria and study protocol, and finally documentation of adherence to SOPs regarding regulatory requirements, staff training, and reporting of serious adverse events. These reports will be reviewed by study investigators and forwarded to DSMB upon request.

Regular meetings will be held with both local and national implementation teams. These meetings will be attended by all personnel with protocol responsibilities including Lead Investigator, Lead Node PI, study coordinators, study regulatory and QA monitors and representatives from the lead node DMC. Primary activity of lead node meetings will be creating task lists and timelines, assigning responsibilities, reviewing progress reports and planning for any corrective action needed should study timelines or accuracy rates fall below expectations. Primary activity of national implementation meetings will be clarification of protocol procedures, review of progress reports and planning for any corrective action needed should study timelines or accuracy rates fall below expectations.

## 12.3 Monitoring of Treatment Efficacy: Interim Analysis

Interim analysis can be utilized to obtain during-trial evidence for either overwhelming efficacy or futility of the trial. Stopping rules can be developed that can result in early trial termination based on results of interim analysis. There are no plans for an interim analysis in the Job Seekers' study. This is primarily because a relatively modest sample size is proposed, with power carefully calculated to detect clinically meaningful effects. Thus, early stopping would not appear to be either necessary or beneficial. Further, this is a low-risk behavior therapy study that is expected to be of significant benefit to CTPs and their patients.

As noted in the DSMB review, however, study attrition could pose a threat to the internal validity of the study. The LI and protocol coordinator will be monitoring recruitment, enrollment, and participation status vigilantly throughout the trial. Enrollment and attrition rates for each site will be discussed on the weekly calls. Additionally, rates of

attrition will be tracked at each participating CTP site and summarized monthly using operational definitions of treatment drop out and completion. Specifically, a treatment drop out will be defined as someone attending 0 or 1 JSW session(s). A treatment completer will be defined as someone attending 2 or more JSW sessions.

The Lead DMC will use these data to generate monthly reports for the LI, summarizing attrition rates by site and by modality. Individual CTP data will be summarized monthly and forwarded to the Data Management Center (DMC). From there, the DMC will provide monthly reports to the L.I., who will be responsible for monitoring these reports along with other CTP summaries (e.g., number of JSW groups held, attendance per group). If negative trends are noted, such as one or more CTPs reporting consistently high rates of attrition or a significant increase in rate of attrition, action plans will immediately be initiated. Action steps may include LI-led conference calls with participating CTPs to review varying rates of attrition and identifying those strategies associated with more effective participant engagement; more careful monitoring of the conduct of JSW sessions through on-site supervision or videotape review, etc.

### 12.4 Summary

Overall, this Data and Safety Monitoring Plan is expected to address all the relevant aspects of subject protection, safety monitoring, study integrity and performance tracking required by the DSMB. Adherence to the procedures outlined in this plan will ensure a safe and valid clinical trial that will provide important information regarding the effectiveness of Job Seekers' training in helping a community treatment sample of drug abusers to obtain employment.

# 13.0 REFERENCES

Allison, PD (1995). Survival analysis using the SAS system. SAS Institute, Cary, NC.

Allison, PD (1999). Logistic Regression. Using the SAS system: Theory and Application. Cary, NC: SAS Institute Inc**.**

Buck, M. (2000) Getting Back to Work: Employment Programs for Ex-offenders. Public Private Ventures website (PPV.org).

Caetano R, Schafer J, Cunradi CB. (2001). Alcohol-related intimate partner violence among white, black, and Hispanic couples in the United States .Alcohol Res Health 25, 58-65

Dennis, ML, Karuntzos, GT, McDougal, GL, et al. (1993). Developing training and employment programs to meet the needs of methadone treatment clients. Evaluation and Program Planning, 16, 73-86.

Fals-Stewart, W. (2003). The occurrence of partner physical aggression: A longitudinal diary study. Journal of Consulting and Clinical Psychology, 71, 41-52.

French, MT, Dennis, ML, McDougal, GL, et al. (1992). Training and employment programs in methadone treatment. Journal of Substance Abuse Treatment, 9, 293-303

Hall, SM, Loeb, P, Coyne, K, et al. (1981). Increasing employment in ex-heroin addicts I: Criminal justice sample. Behavior Therapy, 12, 443-452.

Hall, SM, Loeb, P, LeVois, M, et al. (1981). Increasing employment in ex-heroin addicts II: Methadone maintenance sample. Behavior Therapy, 12, 453-460.

Hall, SM, Loeb, P, and Norton, J. (1977). Improving vocational placement in drug treatment clients: A pilot study. Addictive Behaviors, 2, 227-234.

Hubbard, RL, Craddock, SG, Flynn, PM, et al. (1997). Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). Psychology of Addictive Behaviors, 11, 261- 278.

Kidorf, M, Hollander, JR, King, VL, et al. (1998). Increasing employment of opioid dependent outpatients: an intensive behavioral intervention. Drug and Alcohol Dependence, 50, 73-80.

Lamb, RJ, Kriby, KC, Platt, JJ. (1996). Treatment retention, occupational role, and cocaine use in methadone maintenance. The American Journal on Addictions, 5, 12-17.

Lehman, AF, Goldberg, R, Dixon, L, et al. (2002). Improving employment outcomes for persons with severe mental illnesses. Archives of General Psychiatry, 59, 165-172

Littell, RC, Milliken, GA, Stroup, WW, and Wolfinger, RD (1996). SAS System for Mixed Models. Cary, NC: SAS Institute, Inc.

Loeb, P. LeVois, M, Hall, SM (1982). Leader's Manual: Job Seekers' Workshop. NIDA Treatment Research Administrative Report.

McLellan, AT, (1983) Patient characteristics associated with outcome. In: Research on the Treatment of Narcotic Addiction. DHHS Pub. No. ADM 87-1281, pp. 500-540. US Government Printing Office, Washington, DC.

NCSS, PASS (2000). Power Analysis and Sample Size Software, Kaysville, UT.

Platt, JJ (1995). Vocational rehabilitation of drug abusers. Psychological Bulletin, 117, 416-433.

Schottenfeld, RS, Pascale, R, Sokolowski, S (1992). Matching services to needs. Vocational services for substance abusers. Journal of Substance Abuse Treatment, 9, 3-8.

Sobell, LC, Brown J, Leo GI, and Sobell MB. (1996). The reliability of the Alcohol Timeline Follow Back when administered by telephone and by computer. Drug Alcohol Depend.42, 49-54.

Sobell, L.C., & Sobell, M.B. (1996). Timeline Follow Back: A calendar method for assessing alcohol and druq use (User's Guide). Toronto: Addiction Research Foundation.

Sorensen, JL, Hall, SM, Loeb, P, et al. (1988). Dissemination of a job seekers' workshop to drug treatment programs. Behavior Therapy, 19, 143-155.

Zeger, SL, Liang, KY, and Albert, PS (1988). Longitudinal data analysis for discrete and continuous outcomes, *Biometrics*, 44, 1049-1060.)

# 14.0 ESTIMATED BUDGET

The following is a budget estimate per CTP. It does not include core costs for research staffing and other core-related expenses (e.g., QA monitoring, data management, etc).

| **Estimated Budget for Job Seekers** | | | | | |
|---|---|---|---|---|---|
| | YEAR 1 | | YEAR 2 | | TOTAL JS BUDGET |
| | CTP Costs | Node Costs | CTP Costs | Node Costs | |
| Study Coordinator (Based on $50k salary for Year 1 @ 50%) * | | $25,000 | | $26,000 | $51,000 |
| Research Assistant (Based on $35k salary for Year 1 @ 100%) * | | $35,000 | | $36,400 | $71,400 |
| CTP Therapist (Workshop Leader) (Based on $35k salary for Year 1 @ 30%) * | $10,500 | | $10,500 | | $21,000 |
| CTP Therapist (Workshop Leaders) (Based on $35k salary for Year 1 @ 20%) * | $7,000 | | $7,000 | | $14,000 |
| **Total Salaries** | **$17,500** | **$60,000** | **$17,500** | **$62,400** | **$157,400** |
| | | | | | |
| Computer & Internet Access | $3,500 | | $500 | | $4,000 |
| Video Recorder Camera & Monitor | $1,500 | | | | $1,500 |
| Maintenance of VC & Monitor | $300 | | $300 | | $600 |
| Telephone Line Installation | $800 | | | | $800 |
| Telephone usage and conference calls | $500 | | $500 | | $1,000 |
| Travel (Local and National) | $3,000 | | $3,000 | | $6,000 |
| Supplies | $1,500 | | $1,500 | | $3,000 |
| Urine Testing Supplies (Paid by NIDA) | | | | | |
| Subject Payment | | | | | |
| Initial Assessment $20 per person/52 clients | $780 | | $260 | | $1040 |
| Follow-ups ($20 per person 1st follow-up, $30 per person 2nd follow-up, $40 for 3rd follow-up) | $3,510 | | $1,170 | | $4680 |
| Bonus for completing assessments ($40 per person for completing all assessments) | $1,560 | | $520 | | $2080 |
| Copying & Printing | $1,800 | | $1,200 | | $3,000 |
| **Total Budget for 2 Years (EXCLUDING any Indirect Costs)** | **$36,250** | **$60,000** | **$26,450** | **$62,400** | **$185,100** |

**Notes**

* Does not include Benefit Rate, varies across institutions
Includes a 4% salary increase for Year 2 for node staff

**Indirect Cost are not included, varies across institutions

***All subject payments are broken down, estimating 75% of the payment will be made in year 1 and the remainder 25% in Year 2

## 15.0 Signatures

### SPONSOR

NIDA will conduct the trial in compliance with the protocol and all necessary regulatory authorities.

Cynthia Kleppinger (NIDA protocol liaison) Date

### INVESTIGATOR (S)

- I agree to conduct this clinical study in accordance with the design and specific provisions of this protocol and will only make changes in the protocol after notifying the sponsor except when necessary to protect the safety, rights, or welfare of subjects.
- I will ensure that the requirements relating to obtaining informed consent and institutional review board (IRB) review and approval in 45 CFR 46 are met.
- I agree to report to the sponsor adverse experiences that occur in the course of the investigation, and to provide annual reports and a final report in accordance with 45 CFR 46.
- I agree to maintain adequate and accurate records and to make those records available for inspection in accordance with 45 CFR 46.
- I will ensure that an IRB that complies with the requirements of 45 CFR 46 will be responsible for the initial and continuing review and approval of the clinical investigation. I also agree to promptly report to the IRB all changes in the research activity and all unanticipated problems involving risks to human subjects or others. Additionally, I will not make any changes in the research without IRB approval, except where necessary to eliminate apparent immediate hazards to human subjects.
- I agree to personally conduct or supervise this investigation and to ensure that all associates, colleagues, and employees assisting in the conduct of this study are informed about their obligations in meeting these commitments.
- I agree to comply with all the applicable federal, state and local regulations regarding the obligations of clinical investigators as required by DHSS, the state and the IRB.

Dace Svikis

Lead Investigator- Printed Name Signature Date

Site Investigator- Printed Name Signature Date

Sub-Investigator- Printed Name Signature Date

Sub- Investigator- Printed Name Signature Date