

The Effectiveness of Substance Abuse Treatment in Illinois: Results of the Illinois Statewide Treatment Outcomes Project

September, 2001

Maria Bruni, Ph.D., *Director of Research and Evaluation*
Beth-Anne Jacob, M.S.W., *Research Associate*
Sylvan Robb, M.A., *Research Associate*

This study was supported by the Substance Abuse Prevention and Treatment federal block grant.

OASA grants full permission to reproduce and distribute any part of this document. Citation of the source is appreciated.

Illinois Department of Human Services
Office of Alcoholism and Substance Abuse (OASA),
Melanie Whitter, Associate Director
100 West Randolph, Suite 5-600
Chicago, Illinois 60601
(312) 814-3840

ACKNOWLEDGMENTS

The Illinois Department of Human Services, Office of Alcoholism and Substance Abuse would like to express its appreciation to the following alcohol and drug treatment providers who participated in this study:

| | |
|--|--|
| C4 - Recovery Point Chicago | Family Guidance Center Des Plaines |
| CEAD Council Charleston | Family Service and CMHC for McHenry County McHenry |
| Center for Alcohol & Drug Services Rock Island | Garfield Counseling Center Chicago |
| Center for Alcohol & Drug Services Country Oaks Facility Davenport, Iowa | Gateway Foundation Caseyville |
| Community Counseling of Fox Valley Aurora | Gateway Foundation Springfield |
| Comprehensive MHC of St. Clair County ARTS East St. Louis | Healthcare Alternative Systems, Inc. Chicago |
| Comprehensive MHC of St. Clair County SMARTS East St. Louis | Heritage Behavioral Health Geoghegan Recovery Decatur |
| Cornell Interventions Lifeworks Program Bolingbrook | Human Resources Development Institute, Inc. (Methadone Maintenance) Chicago |
| Cornell Interventions North Side Chicago | Human Resources Development Institute, Inc. (Residential) Chicago |
| Family Guidance Center Aurora | Human Service Center CICTA Peoria |
| Family Guidance Center Chicago | Human Service Center (Outpatient) Peoria |

| | |
|--|--|
| Human Service Center White Oaks Knolls for Men Peoria | Riverside Resolve Center Manteno |
| Human Service Center (Women's Residential) Peoria | Rosecrance on Harrison Rockford |
| Lake County Health Department & Community Health Center Women's Residential Services Vernon Hills | Rosecrance on State Rockford |
| Lutheran Social Services of Illinois Chicago | Sojourn House Freeport |
| PEER Services, Inc. Evanston | South East Alcohol and Drug Abuse Center Chicago |
| Prairie Center Health Systems, Inc. Champaign | St. Anthony's Health Center St. Clair Hospital Alton |
| Prairie Center Health Systems, Inc. Urbana | Stepping Stones Joliet |
| Recovery Resources, Inc. Quincy | Triangle Center Springfield |
| Renz Addiction Counseling Center Elgin | Triangle Center Taylorville |

This project was a joint effort between staff at DeltaMetrics and the Illinois Department of Human Services, Office of Alcoholism and Substance Abuse. DeltaMetrics is a nationally recognized research firm specializing in the evaluation of substance abuse treatment programs. DeltaMetrics was founded by Jack Durell, M.D. and A. Thomas McLellan, Ph.D., who have long-standing affiliations with the University of Pennsylvania and over 25 years experience in the treatment field. Appreciation is expressed to the following staff of DeltaMetrics who coordinated the collection and analysis of the data and who contributed to the writing of the final report: James McKay, Ph.D., A. Thomas McLellan, Ph.D., Carol Foltz, Ph.D., Kathy Geary, Jared Cecere, John Champion, Larry Cohen, Robert Gocong, Bonnie Hinrichsen, Debbie Martinez, Debra Markovitz, Fadwa Rashid, and Karen Yarbrough.

Finally, grateful appreciation is expressed to all the Illinois citizens who consented to participate in the interviews.

Contents

| | page |
|---|------|
| Executive Summary | 1 |
| Introduction | 4 |
| Overview of Report | 6 |
| Section 1: Description of Clients in Treatment | 7 |
| Demographic and social characteristics | 7 |
| Physical and mental health histories | 10 |
| Treatment histories | 12 |
| Substance abuse in the family | 13 |
| Abuse histories | 14 |
| Relationships with family and friends | 15 |
| Involvement in the criminal justice system | 16 |
| Section highlights | 18 |
| Section 2: Description of Treatment | 19 |
| Length of stay in treatment | 22 |
| Treatment completion | 24 |
| Treatment completion and DUI status | 26 |
| Section highlights | 27 |
| Section 3: Treatment Outcomes | 28 |
| Alcohol and other drug use | 28 |
| Physical health | 35 |
| Mental health | 38 |
| Employment | 42 |
| Family and social relationships | 46 |
| Predictors of outcomes at follow-up | 48 |
| Impact of treatment on the use of public assistance | 52 |
| Cost savings associated with treatment | 55 |
| Section highlights | 57 |
| Section 4: Implications and Recommendations | 58 |
| Technical Notes | 62 |
| Appendix | 71 |
| References | 76 |

Executive Summary

Responding to an increased need to demonstrate effectiveness of social services, the State of Illinois conducted the Illinois Statewide Treatment Outcomes Project (ISTOP). It is the largest, most comprehensive study of treatment outcomes conducted by the State to date. Nearly two thousand (1,890) adult clients were recruited from 40 treatment programs across the state. Those clients came from three levels of care: residential rehabilitation (RR), intensive outpatient (IOP), and outpatient (OP); the study also included clients in methadone maintenance (MM) therapy. Data collection for the study started in the fall of 1998 and ended in August of 2000. Baseline data were collected by staff at participating programs who had received training on the data collection instruments. Follow-up data were collected by phone six months after clients were assessed and accepted into treatment. Roughly 65% of clients participated in the follow-up interviews for a sample of 1,210 clients.

Summary of Client Demographic Profile:

- ◆ More than half (63%) of clients in the sample were male, and almost half (47%) of ISTOP clients were Black. Clients' average age was 34.7.
- ◆ Most (70%) of the clients who entered treatment in ISTOP were in treatment before; clients, on average, had 2.1 prior treatment episodes.
- ◆ Clients entered treatment with physical and mental health problems. Over one fifth (21%) had been hospitalized within a year of entering treatment. More than one quarter (27%) reported a chronic health problem.
- ◆ Mental health problems were prevalent among ISTOP clients. In their lives, over half (53%) experienced serious depression; 48% experienced serious anxiety; and 28% had thoughts of suicide. One fifth (20%) of clients who entered treatment had received services (inpatient or outpatient) for their mental health problems.
- ◆ Clients also brought problems in their interpersonal lives with them when they entered treatment. Most clients (70%) had at least one immediate family member with an alcohol and/or drug problem. On average, more than one third (36%) of clients had experienced abuse of an emotional, physical or sexual nature. Abuse was far more common among women in the sample. On average, 57% of women experienced abuse of an emotional, physical or sexual nature compared to 23% of men.
- ◆ Some ISTOP clients reported histories of involvement with the criminal justice system. Approximately 80% of clients were convicted of a crime at some point in their lives. More than one third (39%) of clients reported that their admission to treatment was prompted by the criminal justice system. One quarter (25%) of the outpatient clients were charged with DUI (driving under the influence), and of those clients, 86% were male.

Summary of Client Length of Stay/Completion Rates:

- ◆ Clients in RR received an average of 37.1 hours of services per week, clients in IOP received an average of 10.0 hours of services per week, OP clients received an average of 3.8 hours of services per week, and clients in MM received an average of 3.9 hours of services per week.
- ◆ The overall no-show rate of the ISTOP sample was 9%. No-show rates for each level of care and for methadone clients are as follows: 4.3% of RR clients, 13.9% of IOP clients, 8.4% of OP clients, and 9.9% of MM clients.
- ◆ This study identified windows of vulnerability, when clients who begin their programs are at highest risk of dropping out of treatment. The risk of dropping out for IOP clients is greatest during weeks 4-6 of treatment. The risk of dropping out for OP clients is greatest during weeks 2-4 of treatment.
- ◆ Analysis indicates that 51.3% of IOP clients, 47.0% of OP clients and 84.0% of MM clients were still in treatment at three months (12 weeks).
- ◆ The percentage of clients who either completed treatment or who were still in treatment at six months (when the study stopped following clients) was 44.7% for the overall sample. The combined completed treatment/still in treatment percentage by level of care and MM was: 63.7% for MM clients, 53.8% for RR clients, 24.4% for IOP clients and 37.7% for OP clients.
- ◆ DUI clients were less likely to be no-shows for their first treatment appointment than non-DUI clients (in RR, IOP or OP), less likely to drop out of treatment than non-DUI clients, more likely to complete their programs and more likely to still be in treatment after six months than non-DUI clients.

Summary of Client Outcomes:

Among the 1,210 clients who participated in baseline and follow-up interviews, positive outcomes were identified in a number of life domains:

- ◆ Drug and alcohol use decreased markedly from baseline to follow-up. Alcohol use declined from 59% to 30% from baseline to follow-up. Marijuana use decreased from 30% to 6% from baseline to follow-up. Those using cocaine decreased from 37% to 6% from baseline to follow-up. Heroin use also declined from 24% to 6% from baseline to follow-up. For clients in methadone maintenance (MM), the percent of those who used heroin in the past month decreased from 92% to 25%.
- ◆ The overall occurrence of medical problems and mental health problems decreased for ISTOP clients from baseline to follow-up. On average, the number of days having medical problems in the past 30 days decreased from 13.2 at baseline to 12.6 at follow-up. The average number of days having psychological problems in the past 30 days decreased from 14.9 at baseline to 13.2 at follow-up.

- ◆ ISTOP clients experienced improvements in employment from baseline to follow-up. The average number of days in the month where clients earned income increased from 7.1 at baseline to 10.7 at follow-up. The amount of monthly income earned from employment by clients increased from \$405 at baseline to \$600 at follow-up.
- ◆ The percent of clients engaging in illegal activities for profit decreased from baseline to follow-up from 16% to 2%.
- ◆ Overall improvements in family and social relationships occurred from baseline to follow-up. The percent of clients reporting recent serious conflict with family decreased from 29% to 22%, and the percent of clients reporting recent serious conflict with others decreased from 23% to 7%.
- ◆ Factors found to predict abstinence at follow-up for clients in RR, IOP, and OP include the following: *less drug/alcohol use in the 30 days prior to entering treatment, being in residential treatment, having fewer lifetime overdoses, not living with anyone who has an alcohol problem, and not having problems with immediate family members.*
- ◆ Factors found to predict abstinence at follow-up for methadone clients include the following: *being younger, living outside of Cook County, not having an arrest history, having more years of methadone use throughout lifetime, and not having immediate family members with drug problems.*
- ◆ For ISTOP clients in all levels of care, the factors found to predict employment at follow-up include the following: *being male, being younger, having higher years of education, earning income from employment in the thirty days prior to treatment, and not having psychiatric problems.*
- ◆ The percent of clients receiving any public assistance declined, yielding a monthly cost savings from ISTOP clients of over \$53,000. The potential savings from the whole treatment population yields a projected annual savings in public assistance costs of slightly over \$33,000,000.

Based on the results of the ISTOP study, it is clear that clients participating in treatment services in Illinois experienced substantial reductions in alcohol and other drug use as well as a reduction in criminal activity. In addition, clients also experienced dramatic improvements in employment, physical and mental health, and relationships with family and others. The study also found specific areas of client histories and problems that may have important implications for treatment programs. *Specifically, we must continue to seek out effective, innovative approaches for treating individuals who have mental health histories and experiences with emotional, physical or sexual abuse. Interventions must also be tailored to meet the needs of clients who are at risk of dropping out of treatment and who are mandated into treatment.* Changes to the system in these areas will serve to improve upon services that are apparently already effectively serving substance abuse clients across Illinois.

Introduction

The field of alcohol and other drug (AOD) treatment is moving into an era of increased emphasis on measuring outcomes and evaluating the effectiveness of service (CSAT, Treatment Improvement Protocol Series #14, 1995). This movement is reflective of what is happening in the larger health care delivery system in the United States, which has become outcomes-based in response to increased costs of health care and simultaneous concern for establishing best practice models. A clear indicator of this change in the Illinois AOD treatment system is found in mission statement of the Department of Human Services (DHS) Plan. The State of Illinois DHS Plan of 1997 states that "...emphasis is placed on integration of programs to better serve clients and families holistically, the importance of prevention, the efficiency of problem early identification and intervention, and commitment to an outcome-based system of performance management (Illinois Department of Human Services, 1997, p. 7)."

Decisions about the best care for clients is now driven by evaluations that demonstrate effectiveness in a number of key areas, including but not limited to: reduction/elimination of alcohol and drug use, improvement in family and social relationships, increased access to educational opportunities, and improvements in employment. Recognizing that there is no one 'best' type of treatment for all, evaluation of services has progressed to the point of asking 'What works for whom under which conditions?' With this re-framed question, it becomes possible to explain much about the complexity of substance abuse, and in turn, meet the service needs of more individuals than ever before.

Despite extensive research substantiating the effectiveness and cost benefits of AOD treatment, it appears that this treatment continues to be scrutinized by some. Belief systems about addiction, morality, and personal responsibility are hard to overcome, and the social stigma of alcohol and other drug use is reinforced through the very visible societal effects of use, namely, criminal activity and unhealthy social and familial functioning. As we learn more about the complexity of alcohol and drug abuse through continued research and evaluation, we gain the tools to combat scrutiny. Evaluation of treatment helps us to understand the individuals in the treatment system, their personal characteristics, and the nature and severity of their problems. It also heightens awareness about the social and environmental context of individuals seeking treatment, and the importance of truly understanding the connections between individual and systemic factors.

With a commitment to this outcome-based system of service delivery, the Department of Human Services initiated a large-scale statewide outcomes study. Early in 1998, the Office of Alcoholism and Substance Abuse (OASA) began to plan what became the Illinois Statewide Treatment Outcomes Project (ISTOP). ISTOP is, to date, the largest treatment outcome evaluation conducted by the State of Illinois.

A total of 1,890 clients were recruited from forty (40) treatment providers across all DHS regions in Illinois. The use of multiple sites yielded a representative sample - shown by past research to be methodological beneficial (Dunn, Ferri, and Laranjeira, 2001). Represented in this project are three distinct levels of care – ASAM Level III.5 Residential Rehabilitation (RR), ASAM Level II Intensive Outpatient (IOP), ASAM Level I Outpatient (OP) – in addition to methadone maintenance (MM) therapy and treatment.

Recruitment and data collection for ISTOP began in August of 1998 and ended in February of 2000. Recruitment/data collection was staggered, occurring in four phases. Each phase had a training period and active data collection period. Staff at provider sites who were designated to recruit clients participated in a two day training where they learned about ISTOP and how to administer the data collection instruments. Data collection began approximately two weeks after training in each phase. Recruitment continued until each site met its target number of clients to recruit.

Participation in ISTOP was voluntary for clients who sought treatment at any of the provider sites selected for this project. Any individual - at least 18 years old and not living in a controlled environment (hospital, psychiatric facility, etc.) - who was eligible to receive treatment at the level of care specified for the recruitment site was eligible to participate in ISTOP. For clients, participation in the study entailed agreeing to participate in a baseline interview approximately 90 minutes in length, and agreeing to be called approximately six months after the baseline interview for a telephone follow-up interview. Follow-up contact began in February 1999 and ended in August 2000. A total of 1,210 clients participated in the follow-up interview (For a complete description of study design and data collection, please refer to the Technical Notes at the end of this report).

This report is the culmination of the planning and implementation of the Illinois Statewide Treatment Outcomes Project. In it, we present profiles of those in treatment across the state, discuss the key components of treatment, describe outcomes of treatment in detail, and make recommendations for improving the treatment delivery system in the State of Illinois.

Overview of this Report

Section 1 of this report provides a profile of Illinois residents in publicly funded drug and alcohol treatment participating in the Illinois Statewide Treatment Outcomes Project (ISTOP).

Section 2 describes the treatment services received by clients in ISTOP. In addition, length of stay and rates of treatment completion are described.

Section 3 summarizes treatment outcomes for clients in ISTOP. Outcomes specific to key life domains are addressed including alcohol and drug use, physical and mental health, employment, and family and social relationships. This section also examines predictors of drug/alcohol use and employment at follow-up.

Section 4 provides a summary of the study findings and makes recommendations about treatment improvement and use of existing resources.

Technical Notes provides a detailed explanation of select topics regarding study design and data collection. Included in this section are descriptions of recruitment and follow-up procedures, data collection instruments, and data analysis techniques. Also included are discussions regarding follow-up rates and other issues related to the implementation of the study.

Section 1. Description of Clients in Treatment

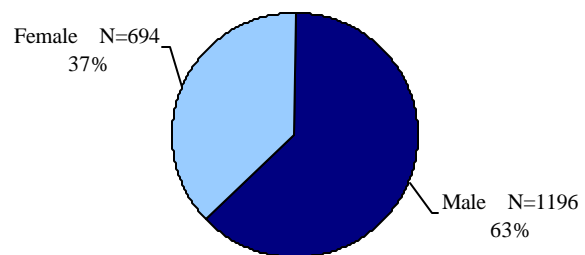
A total of 1,890 clients participated in the Illinois Statewide Treatment Outcomes Project (ISTOP). Enrollment into the ISTOP study occurred from September 1998 to February 2000. Clients were enrolled upon assessment and acceptance into treatment. Clients in ISTOP received treatment in one of three levels of care: Residential Rehabilitation (RR), Intensive Outpatient (IOP), and Outpatient (OP). Clients who received Methadone Maintenance (MM) therapy were also included in this study and examined as a distinct treatment group.

Demographic and Social Characteristics

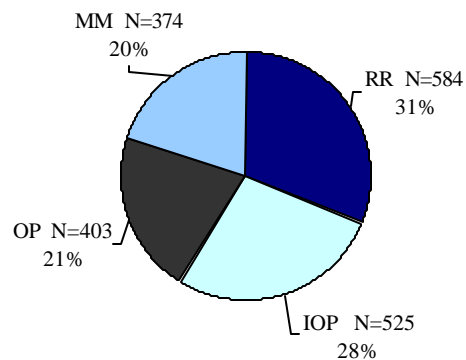
The ISTOP sample is 63% male and 37% female. By level of care, the sample is 31% RR, 28% IOP, 21% OP, and 20% MM. With regard to level of care, gender distinctions are evident. Males comprise 76% of those receiving outpatient services (OP). Further, a quarter (25%) of the OP sample consisted of DUI clients, and of these DUI clients, nearly all of them are male (86%). Female clients constitute an unusually large portion of the methadone sample. While women comprise less than 40% of the sample in RR, OP, and IOP, they comprise nearly half (49%) of the clients in MM.

Almost half of the ISTOP sample is Black (47%). White clients make up 41% of the sample; Hispanic clients make up 10% of the sample, while the remaining 2% of the sample include mostly Asian/Pacific and Native American clients. By level of care (and MM), racial/ethnic percentage breakdowns remain roughly the same as those of the total sample with the exception of MM. Although 41% of the total sample is White, only 20% of MM clients are White, and while 47% of the total sample is Black, Black clients account for 74% of the MM sample.

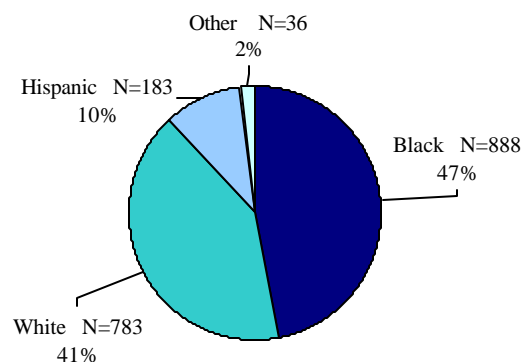
Gender



Level of Care and MM Clients



Race/Ethnicity



Clients in the sample range in age from 18 to 67 years old. The average age in this sample is 34.7 years. With regard to level of care, clients in MM are, on average, slightly older (37.5 years) than those in the other levels (RR=34.0, IOP=34.4, and OP=33.5).

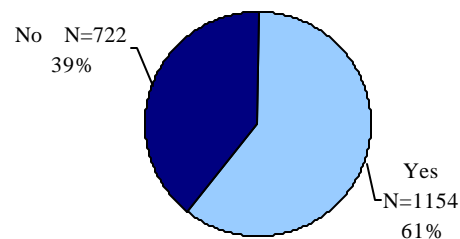
Clients in the sample have completed, on average, 11.6 years of education. This average remains roughly the same in all levels of care. Approximately 61% of the sample have received a high school diploma, while 39% have not received a high school diploma.

Nearly half of the clients in the sample have never been married (49%). Approximately one fifth (19%) of the sample is married or remarried, almost one third of the sample (30%) is separated or divorced, and the remaining portion (2%) of the sample is widowed.

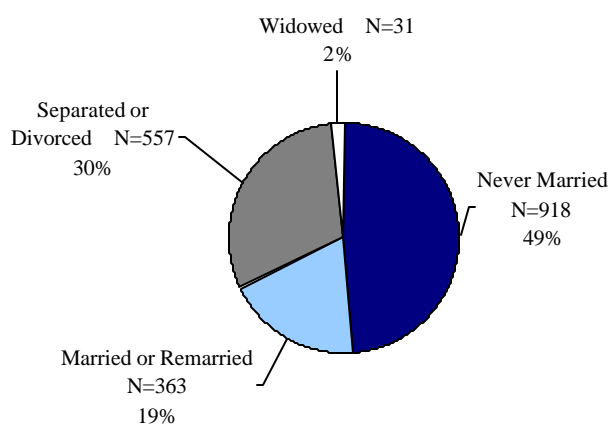
Clients in ISTOP maintain a number of different living arrangements. The most common living arrangement reported is *with a sexual partner* (36%), followed by *with family* (30%), *alone/alone with children* (21%), *in no stable living environment* (5%), *with friends* (4%), and *in a controlled environment* (4%).

On average, clients in the study lived at their current address for 4.7 years. By level of care, the averages are slightly more varied, with MM clients averaging 5.9 years in residence, RR clients averaging years, IOP averaging 4.2 years and OP clients averaging 3.9 years.

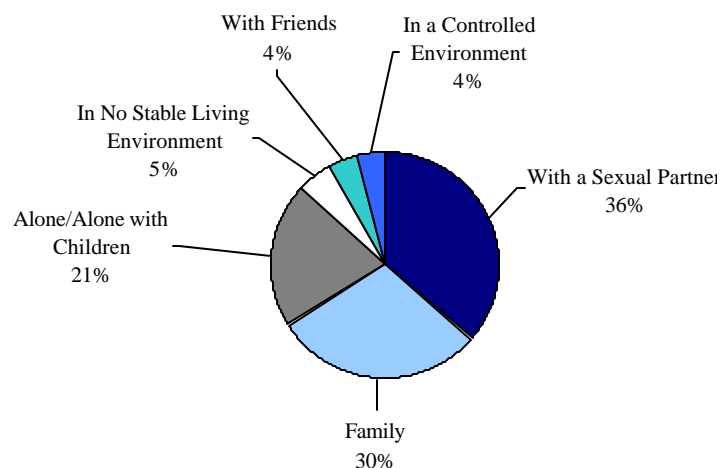
High School Diploma



Marital Status

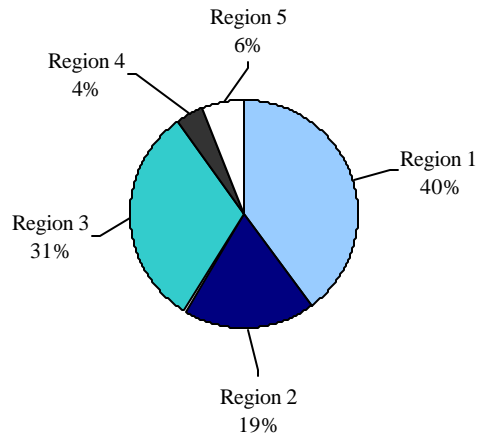


Usual Living Arrangement



DHS Region

Clients in ISTOP were recruited from treatment programs across the state of Illinois. Four out of ten - or 40% - of clients in the sample are from DHS Region 1 (Cook County),¹ 31% are from Region 3, 19% are from Region 2, 6% are from Region 5, and 4% are from Region 4 (for specific details on DHS regions, please refer to the DHS region map in the Appendix).



¹ According to FY2000 DARTS data, 49.6% of clients served in the publicly funded system were from Cook County. Efforts were made to sample enough programs from each DHS region in order to approximate actual service delivery patterns.

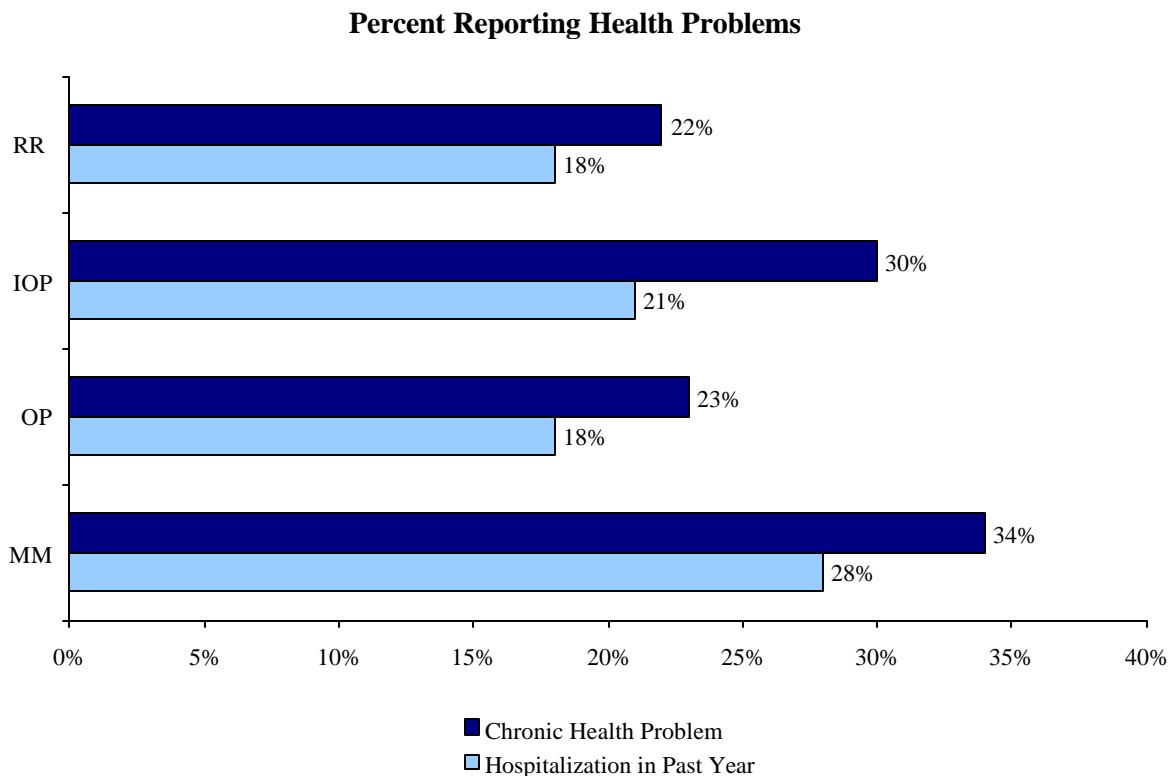
Physical and Mental Health Histories

Physical and mental health concerns often accompany clients into alcohol and drug treatment. Upon admission, ISTOP clients provided histories of both physical and mental health problems.

Overall, clients in ISTOP reported being in good physical health. Only one fifth (21%) of individuals in the sample reported a hospitalization within the past year. By level of care and MM, MM clients have the highest rates of hospitalization within the past year (28%), followed by IOP (21%), RR and OP (18% each). With regard to chronic health problems, 27% of individuals in the sample reported having a chronic health problem. By level of care and MM, MM clients have the highest rates of chronic problems (34%), followed by IOP (30%), OP (23%) and RR (22%).

Twenty one percent (21%) of individuals in ISTOP reported receiving some type of outpatient services for a psychological or emotional problem during their lifetime. Of those receiving outpatient psychological services, the average number of times services were received was 2.5. Broken down by level of care and methadone, the average number of times treated is as follows: RR 2.9, IOP 2.2, OP 1.7, and MM 2.9.

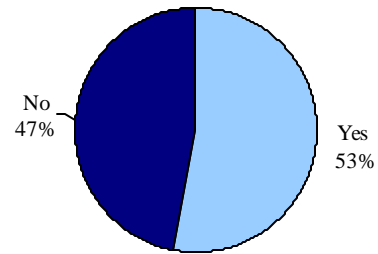
Nineteen percent (19%) of individuals in ISTOP reported receiving inpatient or hospitalized care for an emotional problem during their lifetime. Of those receiving inpatient psychological services, the average number of times services were received was 2.9. Broken down by level of care, the average number of times treated is as follows: RR 3.5, IOP 2.5, OP 2.5, and MM 2.1.



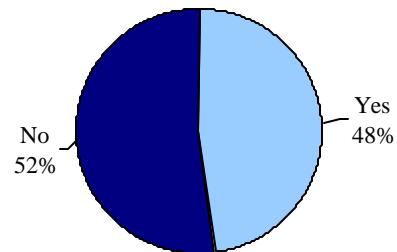
Serious Depression in Lifetime

Whether or not they received mental health services, a large number of clients in ISTOP reported lifetime experiences with serious depression, serious anxiety and thoughts pertaining to suicide. Approximately 53% of clients in ISTOP reported experiencing serious depression at some point in their life. Just over 48% of clients reported serious anxiety during their lifetime. More than one quarter (28%) of the clients in ISTOP reported having had thoughts of suicide at some time in their life.

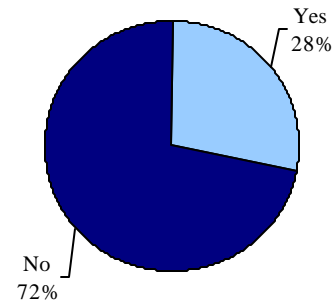
Individuals in RR were the most likely to report serious depression, serious anxiety and thoughts of suicide, followed by individuals in IOP, by those in MM, and finally, by those in OP. Examining these psychological problems by gender, women were more likely than men to report depression, anxiety and thoughts of suicide.



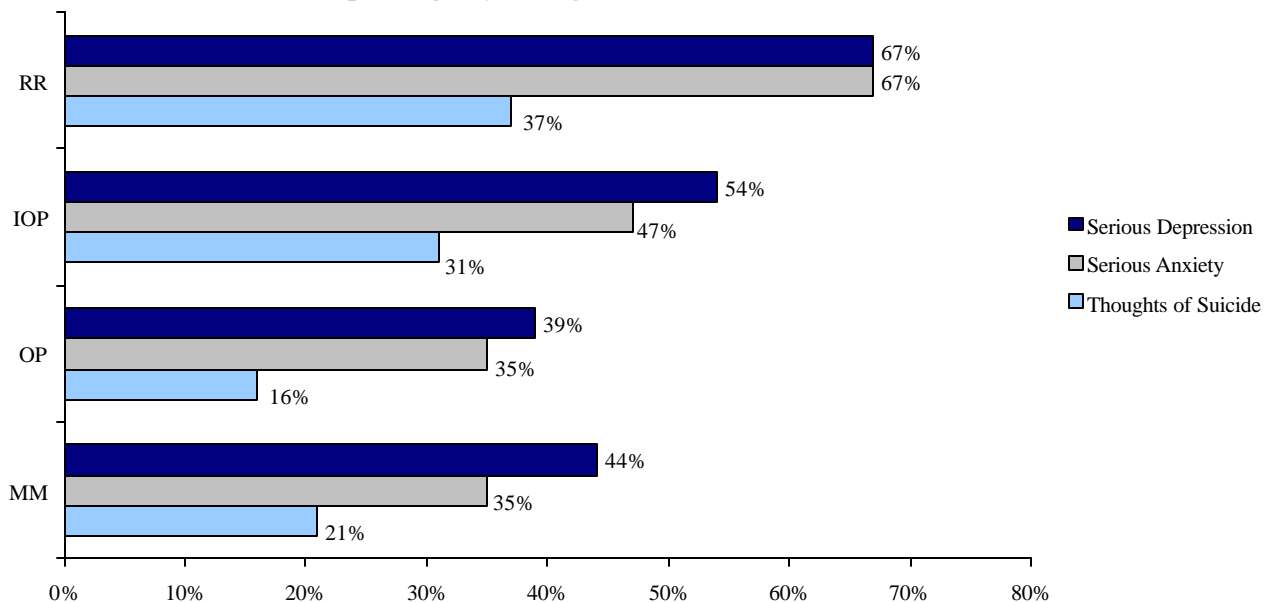
Serious Anxiety in Lifetime



Thoughts of Suicide in Lifetime



Percent Reporting Psychological or Emotional Problems in Lifetime

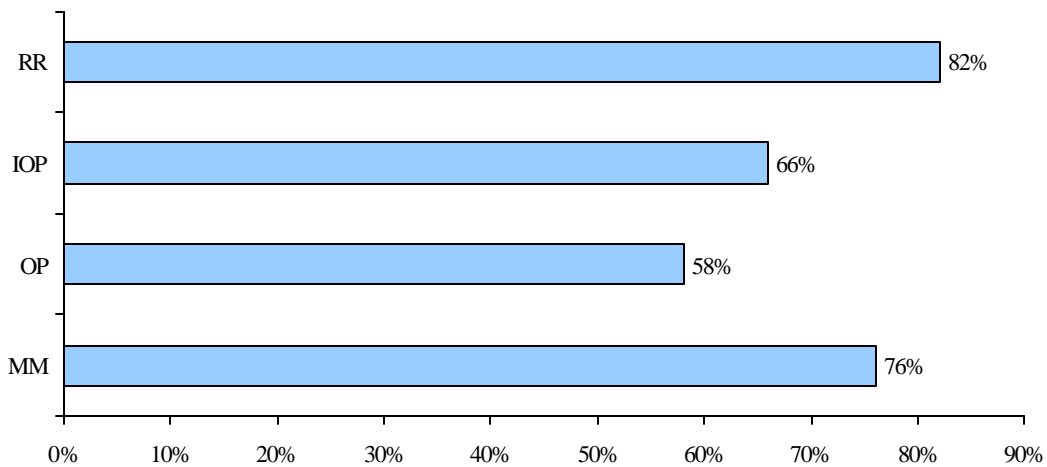


Treatment Histories

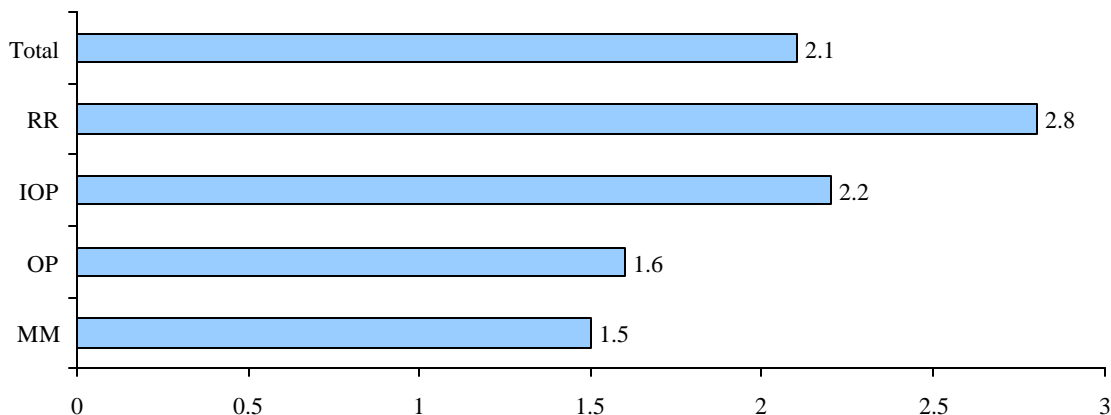
Many clients entering treatment reported prior exposure to alcohol and other drug treatment services. Just over 70% of clients in the ISTOP sample had received some type of alcohol and other drug treatment services in the past. This percentage of prior treatment experience is comparable to that of a statewide study conducted in Minnesota which found that 66% of clients had prior treatment experience (Harrison and Asche, 2000). Clients entering residential treatment were the most likely to report past treatment experiences (82%), followed by methadone clients (76%), intensive outpatient clients (66%) and outpatient clients (58%). Male and female clients in the sample were similar with regard to past treatment experience, with 70% of men and 73% of women entering treatment having had past alcohol and other drug treatment experience.

Clients, on average, had 2.1 prior treatment episodes, excluding those that were only for detoxification. By level of care and MM, the average number of past treatment episodes decreased with the intensity of treatment: RR=2.8, IOP=2.2, OP=1.6, and MM=1.5. The number of past treatment episodes was similar for men and women (approximately 2.1).

Percent Reporting Past Treatment Experiences



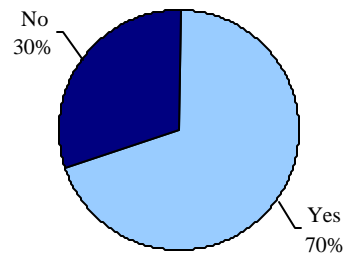
Average Number of Past Treatment Episodes



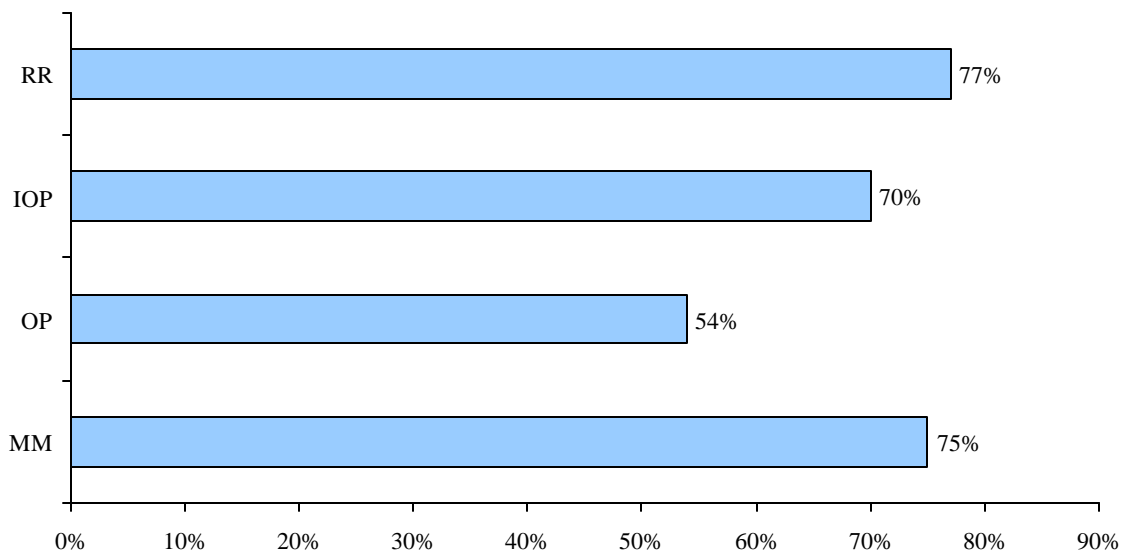
Substance Abuse in the Family

Most clients (70%) had at least one immediate family member with an alcohol and/or drug problem. Other AOD treatment research found that, on average, clients had at least one family member who used drugs (Grella et al., 1999). Clients entering RR were the most likely to report having a family member with an alcohol or drug problem (77%), followed by MM clients (75%), IOP clients (70%) and OP clients (54%). More women than men in the sample had family members with problems (77% vs. 59%).

Family Member with Alcohol and/or Drug Problem



Percent Reporting a Family Member with Alcohol and/or Drug Problem

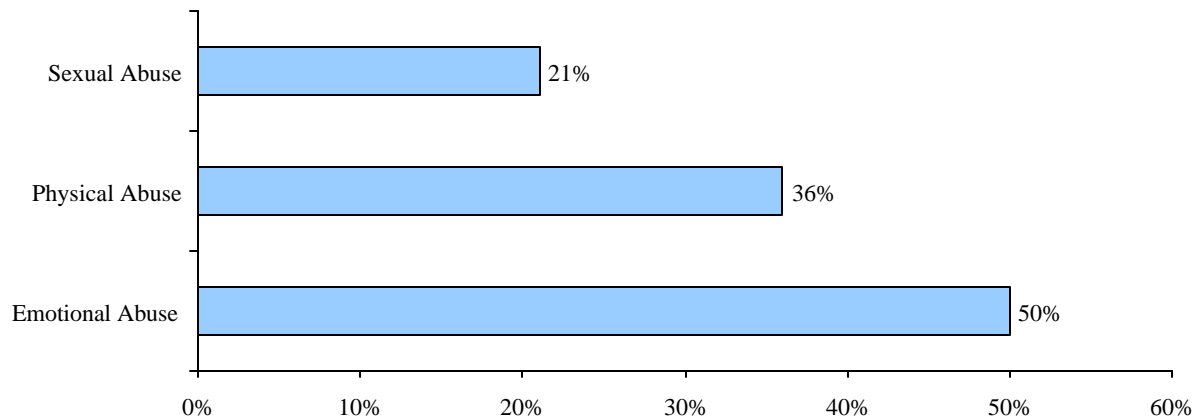


Abuse Histories

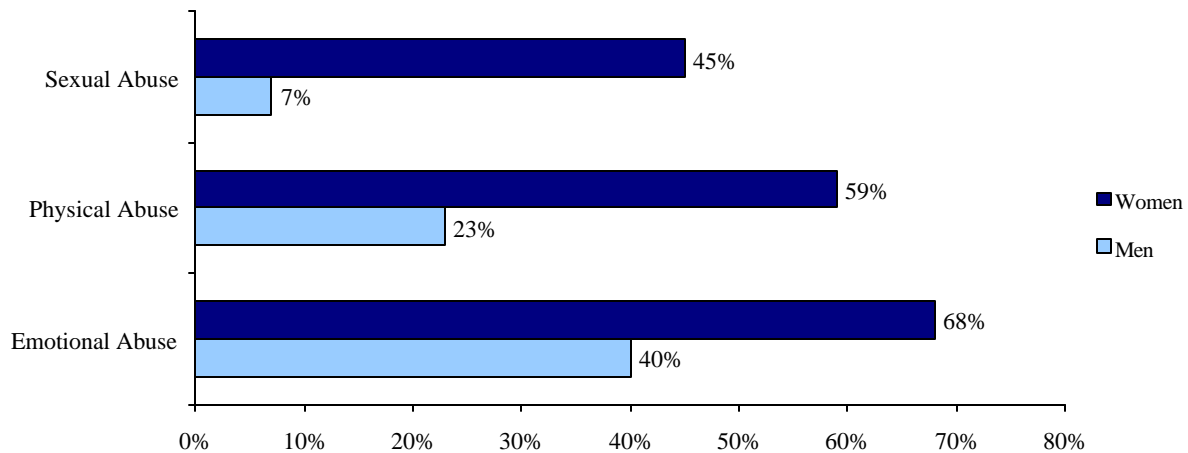
A considerable number of clients in the ISTOP sample have experienced some type of abuse. Slightly more than one fifth (21%) of the sample reported having been sexually abused at some time in their life, while more than one third (36%) reported lifetime physical abuse and half (50%) reported lifetime emotional abuse. Similar research in Minnesota found that 19% of clients had experienced sexual abuse, and 38% had experienced physical abuse (Harrison and Asche, 2000).

Abuse is more common among women entering AOD treatment in Illinois than men. Sexual abuse was reported by 45% of the females in ISTOP compared to 7% of the males. Physical abuse was reported by 59% of the females in ISTOP compared to 23% of the males. Finally, emotional abuse was reported by 68% of the females in ISTOP compared to 40% on the males.

Abuse Histories



Lifetime Abuse



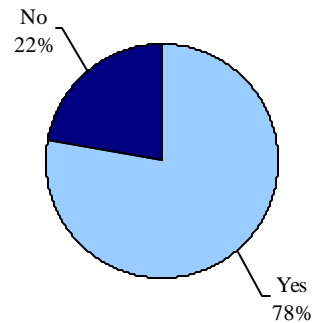
Relationships with Family and Friends

Relationships with others (family members and close friends) was assessed among clients upon entry into treatment. Seventy-eight percent of the clients in the sample indicated that they have a close, reciprocal relationship with their mother. When asked whether they had problems getting along with their mother in the past 30 days, approximately 16% indicated that they had.

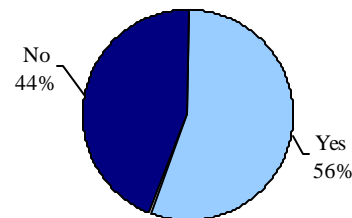
Relatively fewer clients (56%) reported having a close, reciprocal relationship with their father. When asked whether they had problems getting along with their father in the past 30 days, 12% said that they had.

When asked about friendships, 29% of ISTOP clients reported having no close friends, while 71% said that they did have close friends. On average, clients reported having 2.2 close friends.

Close, Reciprocal Relationship with Mother



Close, Reciprocal Relationship with Father

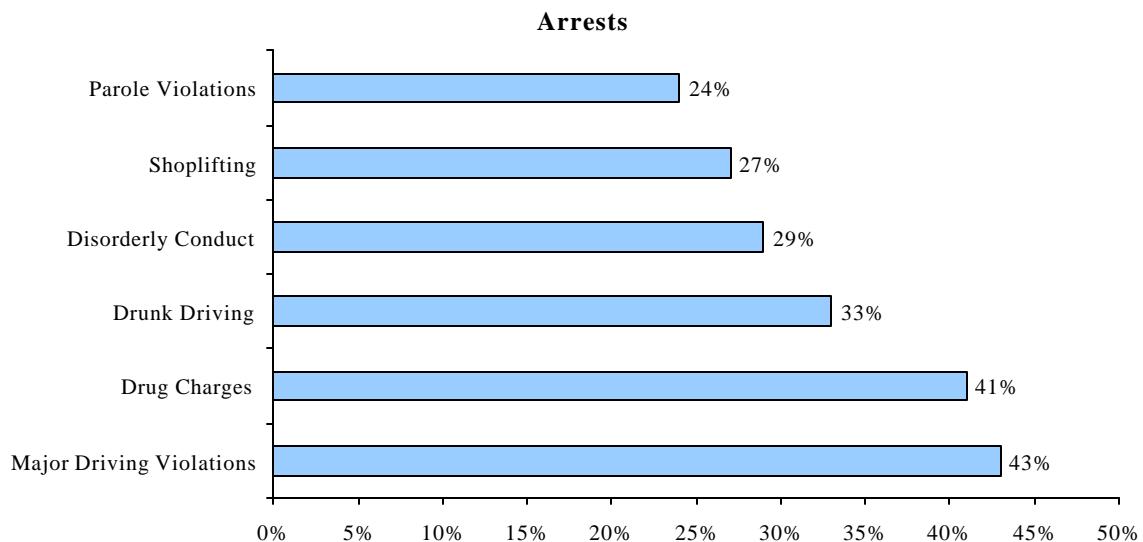


Involvement in the Criminal Justice System

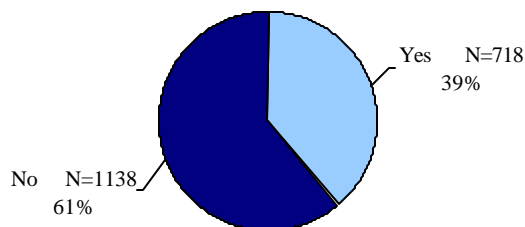
The majority of clients in the ISTOP sample have had some involvement with the criminal justice system throughout their lives. Approximately 80% of clients in the sample were convicted of a crime at some point in their lives. Of those convicted, the average number of convictions is 3.8. The percentage of clients in the sample ever arrested for various criminal activities is presented in the figure below.

Many of the clients in ISTOP entered treatment via their involvement with the criminal justice system. In fact, 39% of those in the sample stated that their admission to treatment was prompted by the criminal justice system. Men were more likely than women (46% vs. 25%) to describe their admission as prompted by the courts.

Findings from a recent national AOD research study sponsored by SAMHSA of ninety-nine treatment programs were remarkably similar to ISTOP in terms of the overall percentage of clients entering treatment as a result of their involvement with the criminal justice system. The SAMHSA study (Schildhaus et al., 2000a) found that 35% of clients entering treatment were prompted by the courts, while ISTOP identified 39% of clients entering treatment through involvement with criminal justice.

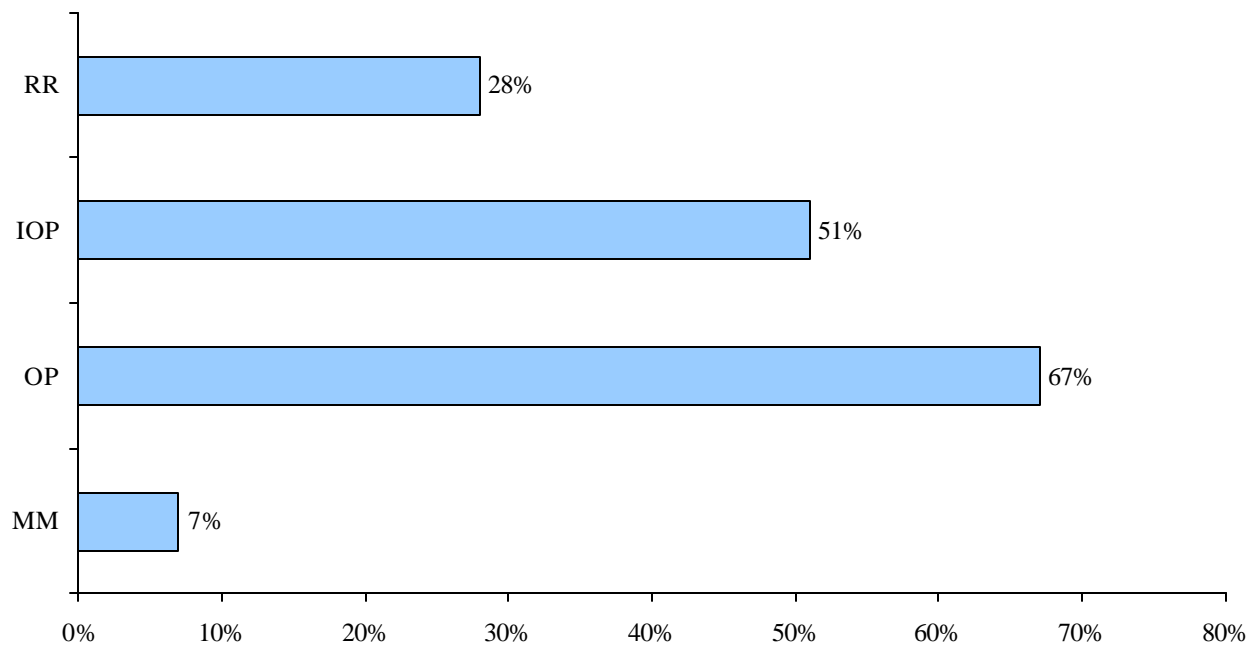


Clients with Admissions Prompted by Criminal Justice System



By level of care and MM, a higher percentage of those receiving OP (67%) compared to IOP, RR and MM (51%, 28%, and 7% respectively) reported that their admission was prompted by the courts. Overall, of the 718 individuals whose admissions were prompted by the criminal justice system, 23% were prompted because of a DUI. The difference between levels of care, with regard to being prompted, is largely due to DUI cases. One quarter (25%) of OP clients were charged with a DUI, and of those clients, 86% were male.

Admission Prompted by Criminal Justice System



Section Highlights

- ◆ From September 1998 to February 2000, a total of 1,890 clients in three levels of care (residential rehabilitation, intensive outpatient, and outpatient,) and methadone maintenance therapy were enrolled in the Illinois Statewide Treatment Outcomes Project (ISTOP).
- ◆ Most (70%) of the clients entering treatment in ISTOP had been in treatment before; clients, on average, had 2.1 prior treatment episodes.
- ◆ More the half (63%) of clients in the sample were male.
- ◆ Almost half (47%) of ISTOP clients were Black.
- ◆ Clients entered treatment with health problems: 21% were hospitalized within a year of entering treatment; 27% reported a chronic health problem.
- ◆ Mental health problems were found among ISTOP clients: 53% experienced serious depression during their lifetime; 48% experienced serious anxiety during their lifetime; 28% had thoughts of suicide at some point in their life.
- ◆ One fifth (20%) of clients entered treatment with a mental health service history. Approximately 21% of clients received outpatient services for their psychological problems, and 19% received inpatient or hospitalized care for their psychological problems.
- ◆ Most clients (70%) had at least one immediate family member with an alcohol and/or drug problem.
- ◆ On average, more than one third (36%) of clients experienced abuse of an emotional, physical or sexual nature.
- ◆ Abuse was far more common among women in the sample. On average, 57% of women experienced abuse of an emotional, physical or sexual nature compared to 23% of men in the study.
- ◆ Approximately 80% of clients had been convicted of a crime at some point in their lives. More than one third (39%) of clients reported that their admission to treatment was prompted by the criminal justice system. Of those prompted by the criminal justice system, 23% were referred because of a DUI.
- ◆ One quarter (25%) of the clients in outpatient treatment were charged with DUI (driving under the influence), and of those clients, 86% were male.

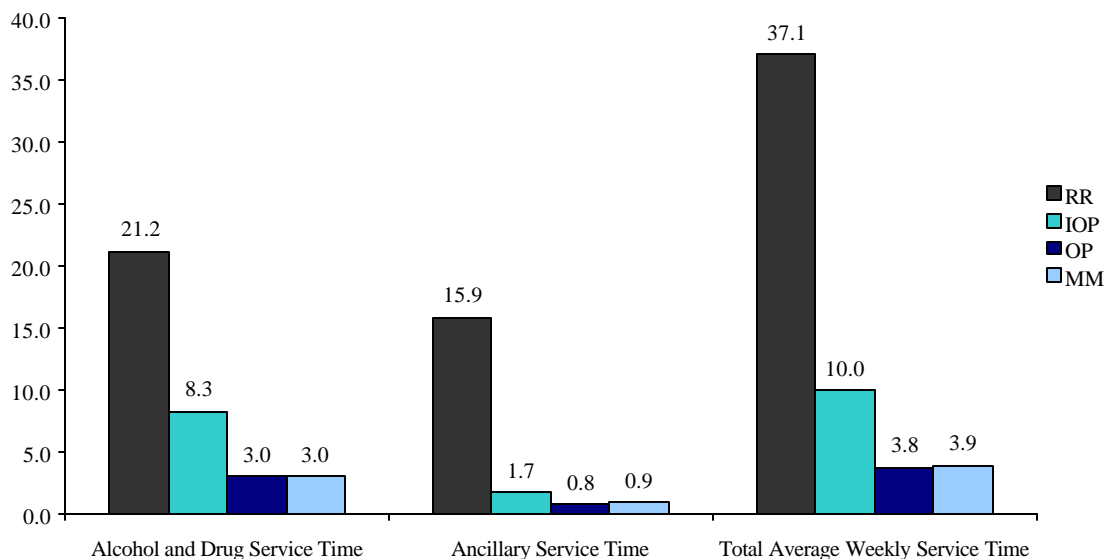
Section 2. Description of Treatment

In Illinois, the treatment system is designed to provide a network of services for screening, assessment, intervention and referral of individuals with a range of alcohol and other drug abuse problems. As mentioned earlier, the state-funded services selected for evaluation in the ISTOP study include Residential Rehabilitation (RR, ASAM Level III.5), Intensive Outpatient (IOP, ASAM Level II), Outpatient (OP, ASAM Level I), and Methadone Maintenance therapy (MM). According to OASA licensure rules, residential treatment includes a planned regimen of clinical services for a minimum of 25 hours per week, and for IOP, this minimum is nine hours per week. For outpatient treatment, licensure rules require that services average less than nine hours per week (77 ILL. Adm. Code Part 2060: 401b, 401c, 401d).

In addition to measuring client outcomes, another goal of ISTOP was to measure clients' exposure to different types of service activities. Substance abuse counselors at each of the selected programs completed a weekly log for each client enrolled in the study. This log detailed the amount of time spent on alcohol and drug treatment counseling as well as a variety of ancillary services, including the following: psychiatric services, family/social services, basic needs/financial services, medical services, employment services, educational services, and legal services (for a complete description of these categories, please refer to the Technical Notes).

Figure 1 illustrates the average amount of time spent per week on alcohol and drug services, ancillary services and the total average weekly service time by level of care and MM. Overall, clients in RR received an average of 37.1 hours of services per week, with alcohol and drug services averaging 21.2 hours and ancillary services averaging 15.9 hours. IOP clients received an average of 10.0 hours of services per week, with 8.3 hours of alcohol and drug counseling and 1.7 hours of ancillary services. OP and MM clients averaged total service hours of 3.8 and 3.9

Figure 1
Average Weekly Service Time



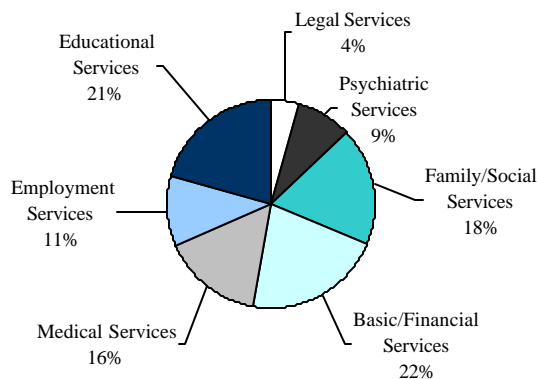
3.9, respectively, with both groups averaging 3.0 hours of alcohol and other drug services per week. OP clients averaged .8 and MM clients averaged .9 hours of ancillary service time per week.

Table 1 and Figures 2-5 detail the breakdown of the reported worker time spent on ancillary services by level of care. For instance, among RR clients, 21.7% of their reported ancillary service time was spent on basic needs/financial services, and 20.5% of their ancillary service time was spent on educational services. Services receiving the least amount of time for RR clients were legal services (4.1% of total ancillary time) and psychiatric services (9.0% of ancillary time).

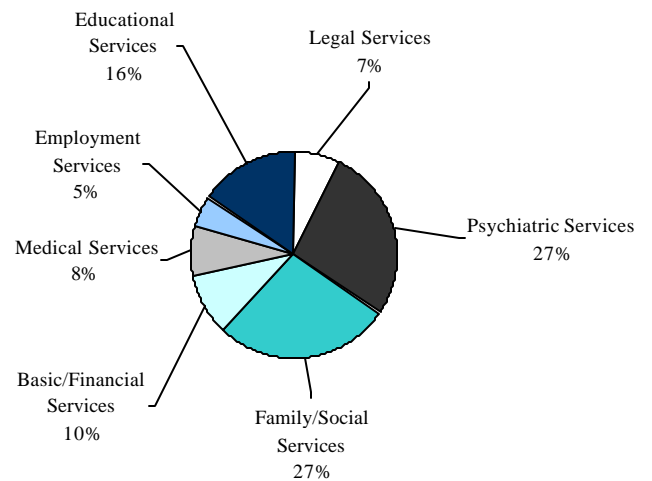
**Table 1
Breakdown of Ancillary Service Time by Specific Service Categories**

| <u>Ancillary Service Package</u> | <u>Residential</u> | <u>Intensive Outpatient</u> | <u>Outpatient</u> | <u>Methadone Maintenance</u> |
|----------------------------------|--------------------|---------------------------------|-------------------|----------------------------------|
| Psychiatric Services | 9.0% | 27.6% | 35.0% | 17.3% |
| Family/Social Services | 18.0% | 27.6% | 28.6% | 4.9% |
| Basic/Financial Services | 21.7% | 9.8% | 4.1% | 3.8% |
| Medical Services | 15.6% | 7.9% | 7.1% | 56.7% |
| Employment Services | 11.1% | 4.7% | 6.4% | 6.3% |
| Educational Services | 20.5% | 15.5% | 11.3% | 7.9% |
| Legal Services | 4.1% | 6.9% | 7.5% | 3.1% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

**Figure 2
Ancillary Service Time
Residential**



**Figure 3
Ancillary Service Time
Intensive Outpatient**



For IOP and OP clients, ancillary services receiving the most amount of time were psychiatric services and family/social services. Among IOP clients these services each represented 27.6% of the total ancillary service time received, while among OP clients psychiatric services represented 35.0% and family/social services represented 28.6% of the total ancillary service time received. The breakdown of ancillary service time is quite different for methadone clients, with 56.7% of MM clients' ancillary service time reportedly allocated to medical services. Given the severity of medical problems found among this group of clients (see Section 1 for discussion), the greater emphasis on medical services compared to the other levels of care appears to be responsive to methadone clients' medical needs.

Figure 4
Ancillary Service Time
Outpatient

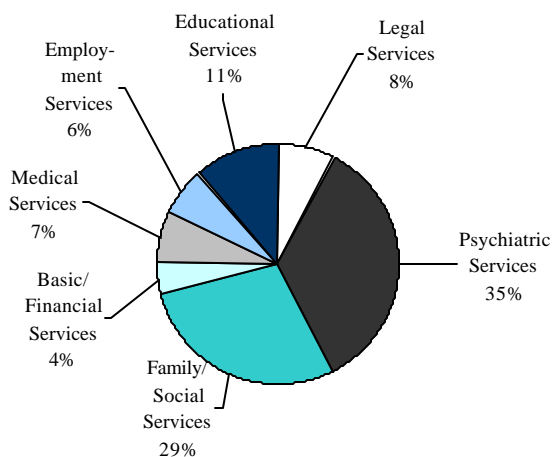
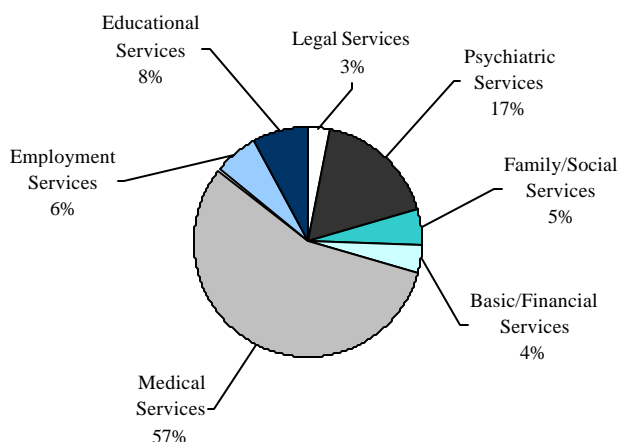


Figure 5
Ancillary Service Time
Methadone



Length of Stay

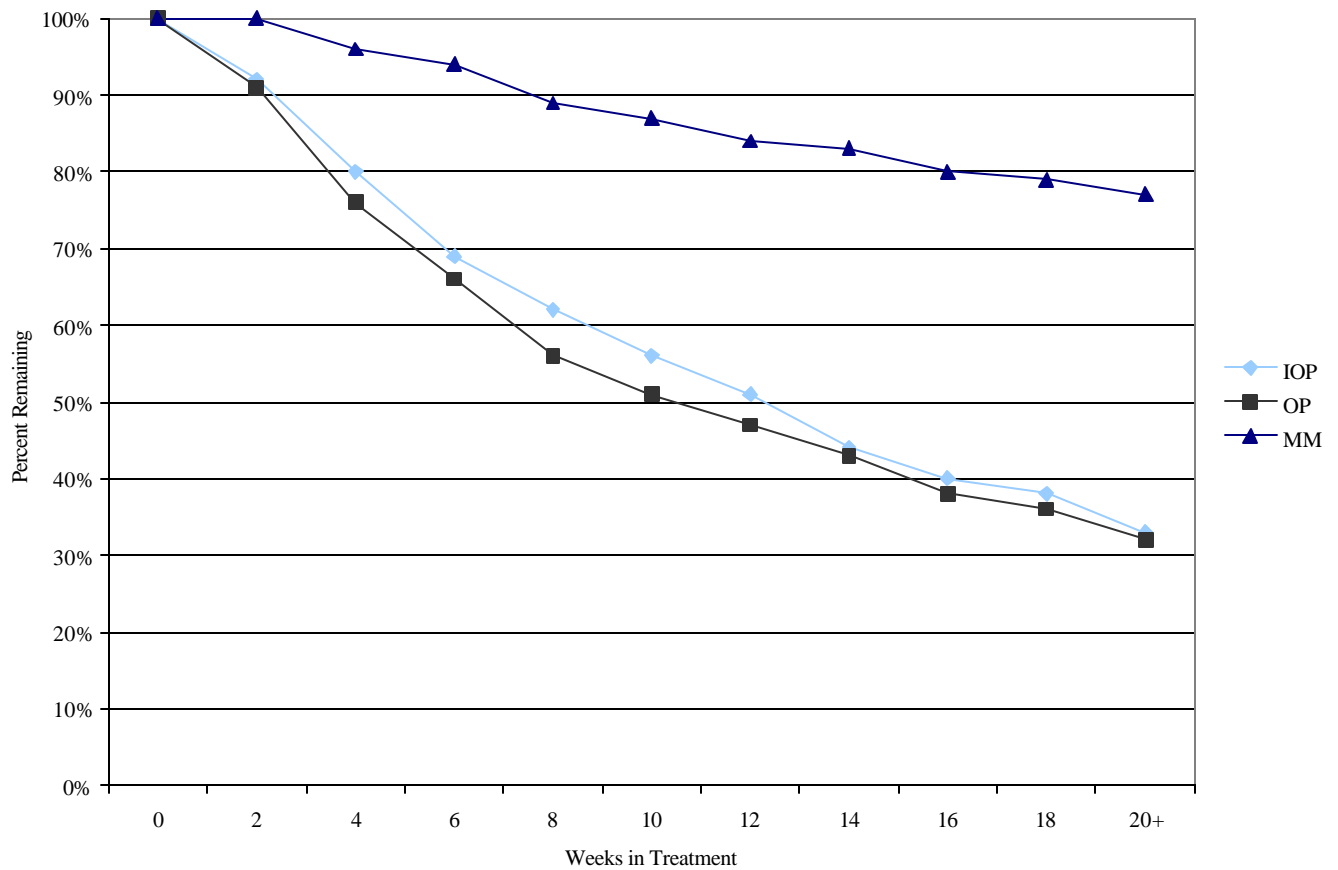
Research studies have consistently found that clients having longer lengths of stay in substance abuse treatment have better outcomes in terms of reduced alcohol and other drug use. Such research indicates that there is a “floor” or a minimum amount of time, ideally three months, that clients must spend in an alcohol or drug program in order to expect long-term positive outcomes (DeLeon, 1986; Goldapple and Montgomery, 1993; Hubbard et al., 1997; Simpson, Joe, and Brown, 1997). Given the link between longer lengths of stay and positive outcomes, one goal of the study was to thoroughly examine clients’ length of stay, using advanced statistical methods, including survival analysis, by level of care and for those in methadone maintenance programs. (For a complete discussion of the methods used to analyze treatment drop-out, please refer to the Technical Notes at the end of the report.)

Using information collected from the weekly service logs, clients’ opening date was set as the day of first recorded service activity (for clients with any service activity) and the closing date was the last day of recorded service activity. Information is also available for clients who completed the intake process, but never returned for services. No-show rates for each level of care and for methadone clients are as follows: 4.3% of RR clients, 13.9% of IOP clients, 8.4% of OP clients and 9.9% of MM clients.

Results of analyses examining the rates of dropping out over time for each level of care and for methadone clients are presented in Figure 6. Because service information was collected on a weekly basis and subjects were not followed after they completed (or left) their initial level of care, the results of the survival analysis are only available for IOP, OP and MM clients. As shown in the survival curves in Figure 6, for IOP clients the curve is steepest during weeks 4-6, meaning that survivorship in treatment is falling fastest during this time period. That is, the risk of dropping out for IOP clients is greatest during weeks 4-6. For OP clients, the curve is steepest during weeks 2-4, which means that the risk of dropping out for OP clients is greatest during weeks 2-4. For both IOP and OP clients, after the 8-week point both curves begin to flatten out, indicating that the rates of leaving are lower for the remainder of the program. These results suggest that the longer individuals remain in services, the greater their chances of staying even longer.

In terms of examining the number of clients remaining in treatment at the three-month (12 week) threshold, we find that 51.3% of IOP clients, 47.0% of OP clients and 84.0% of MM clients were still in treatment at three months. These retention figures are consistent with other research in this area. In particular, the ISTOP estimates may be compared to those found in The Drug Abuse Treatment Outcome Studies (DATOS) project, which included over 10,000 clients in 96 programs. This project found that among outpatient programs, the program with lowest retention rate had only 16% of clients staying for three months or longer. The program with the best retention rate had 76% of clients staying for three months or longer (Simpson et al., 1997).

Figure 6
Percent of Clients Remaining in Treatment - IOP, OP and MM



Treatment Completion

Figure 7 presents the results of analyses examining ISTOP clients' discharge status as reported through the weekly service logs. The four categories shown in the figure include the following: 1) Completed intake process but never showed up for treatment, 2) Transferred to a different program or to a different level of care within the same program, 3) Dropped out/Left AMA, 4) Completed treatment or were still in treatment at follow-up (after six months). Overall, for the 1,890 clients entered in the study, 9.0% completed the intake process but never began receiving services, 13.0% transferred to a different level of care or program, 33.3% dropped out of treatment, and 44.7% either completed or were still in treatment after six months.

Figure 7

Treatment Completion - Total ISTOP Sample

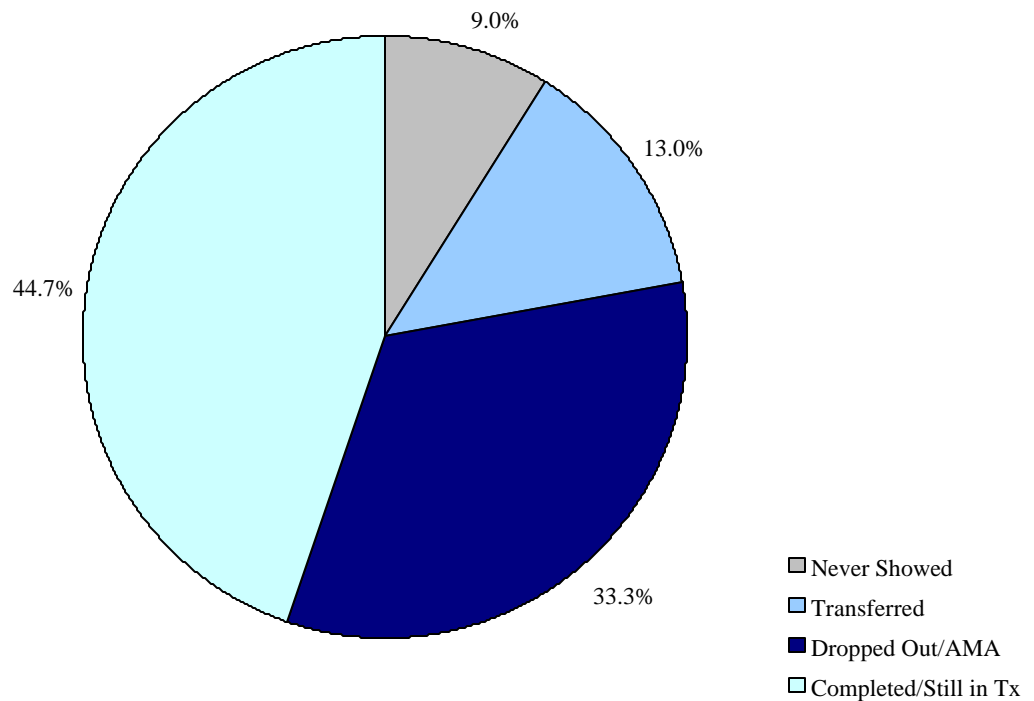
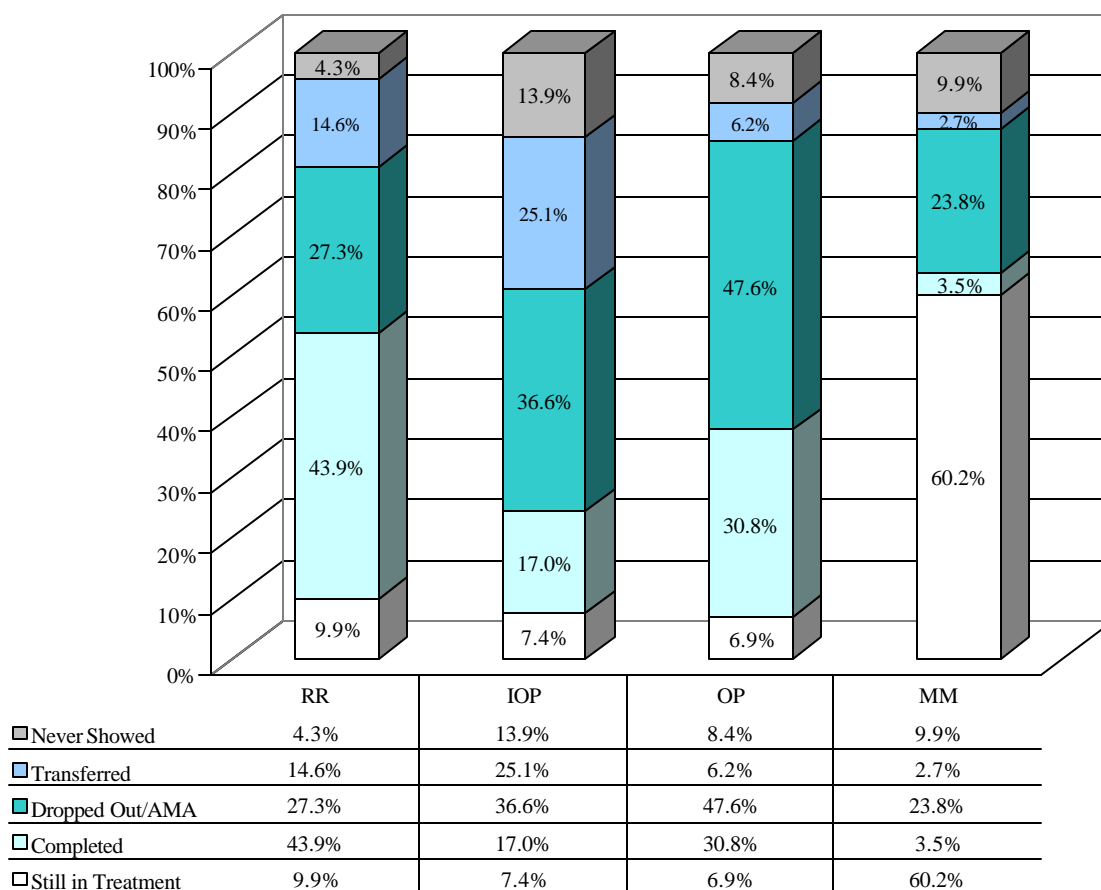


Table 2 breaks down the overall treatment completion figures by level of care and MM. As shown in the table, RR clients had the highest rate of treatment completion (43.9%), followed by OP clients (30.8%). While IOP clients were found to have a lower rate of treatment completion (17.0%), a much larger percentage of these clients were transferred to a different level of care/program than was found among the other client groups. Therefore, with more clients leaving this level of care, fewer remained that were able to complete their IOP program. Similarly, very few MM clients (3.5%) completed their treatment program during the study period. While nearly one-fourth (23.8%) of methadone clients did drop-out, the main reason for the low completion rates was that the majority of clients (60.2%) were still receiving services six months after intake, when the study stopped collecting service data. In fact, the combined completed treatment/still in treatment percentage, which may be a more accurate measure of treatment success, was 63.7% for methadone clients, 53.8% for RR clients, 24.4% for IOP clients and 37.7% for OP clients.

In terms of comparing the ISTOP completion rates with those found in other studies, some work reports completion rates in outpatient programs of 15-20% and completion rates for therapeutic communities of up to 24% (Sosin et al., 1994; Stark, 1990). Even using our conservative estimate of treatment completion that excludes those still in treatment at six months, Illinois' outpatient (OP) programs appear to be well above average in successfully helping clients to achieve completion of their programs.

Table 2

Treatment Completion

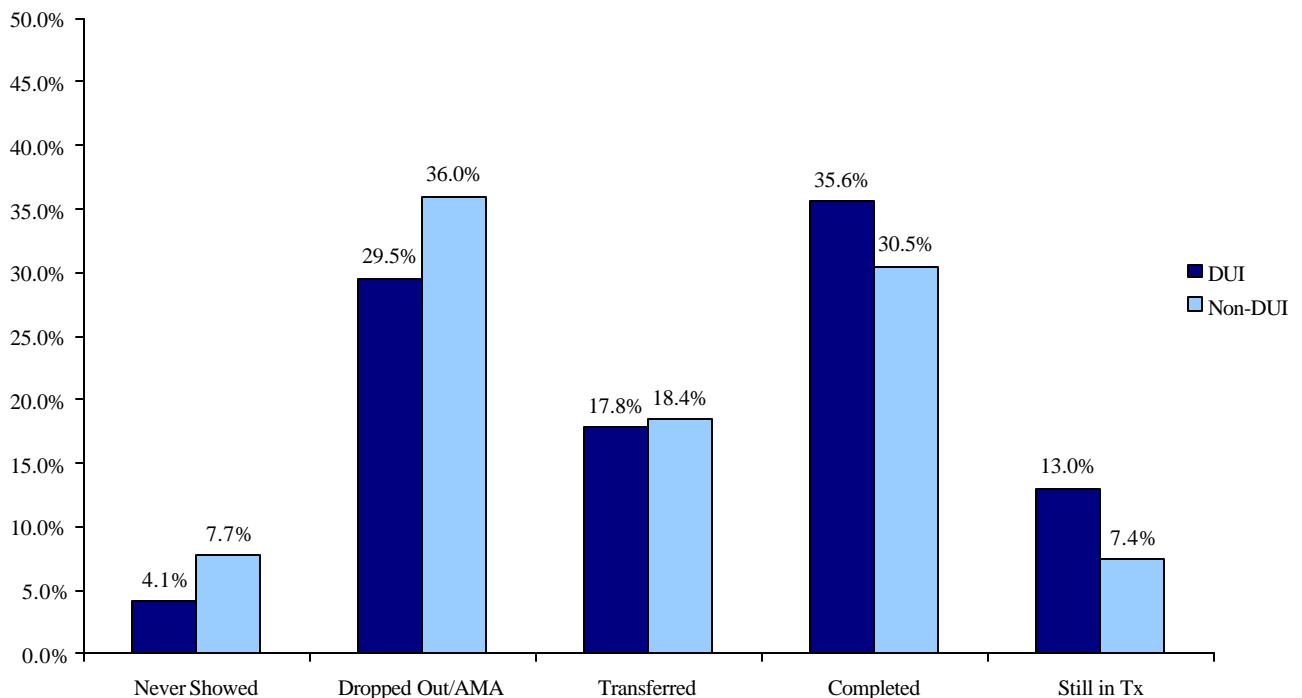


Treatment Completion and DUI Status

In looking at the rates of treatment completion, we were also interested in examining any potential differences between DUI clients and non-DUI clients. Despite some long-held perceptions that clients coerced into treatment are less likely to succeed, past research indicates that mandated clients may be just as likely or even more likely to comply with treatment than those who voluntarily enter services (Schmidt and Weisner, 1993). Figure 8 compares the discharge status for DUI and non-DUI clients in the ISTOP study who entered RR, IOP and OP services (methadone clients were excluded since only 2 DUI clients received these services). As shown in the figure, DUI clients were less likely to be no-shows for their first treatment appointment than non-DUI clients (4.1% vs. 7.7%). DUI clients were also less likely to drop out of treatment than non-DUI clients (29.5% vs. 36.0%). A greater percentage of DUI clients were found to complete their program (35.6% vs. 30.5%) and still be in treatment after six months (13.0% vs. 7.4%) than non-DUI clients in RR, IOP and OP services.

Figure 8

Treatment Completion for DUI and Non-DUI Clients



Section Highlights

- ◆ Clients in residential treatment received an average of 37.1 hours of services per week, with alcohol and drug services averaging 21.2 hours and ancillary services averaging 15.9 hours.
- ◆ Clients in IOP received an average of 10.0 hours of services per week, with 8.3 hours of alcohol and drug services and 1.7 hours of ancillary services.
- ◆ Clients in OP received an average of 3.8 hours of services per week, with 3.0 hours of alcohol and drug services and .8 hours of ancillary services.
- ◆ Clients in MM received an average of 3.9 hours of services per week, with 3.0 hours of alcohol and drug services and .9 hours of ancillary services.
- ◆ The overall no-show rate of the ISTOP sample was 9.0%. No show rates for each level of care and for methadone clients are as follows: 4.3% of RR clients, 13.9% of IOP clients, 8.4% of OP clients, and 9.9% of MM clients.
- ◆ Analysis indicates that 51.3% of IOP clients, 47.0% of OP clients and 84.0% of MM clients were still in treatment at three months (12 weeks).
- ◆ The risk of dropping out for IOP clients who begin services is greatest during weeks 4-6 of treatment.
- ◆ The risk of dropping out for OP clients who begin services is greatest during weeks 2-4 of treatment.
- ◆ Overall, clients' discharge status was as follows: 9.0% completed the intake process but failed to show up for treatment, 13.0% transferred to a different level of care or program, 33.3% dropped out, and 44.7% either completed or were still in treatment after six months (when the study conducted follow-up).
- ◆ The combined completed treatment/still in treatment percentage for ISTOP clients was 53.8% for RR clients, 24.4% for IOP clients, 37.7% for OP clients, and 63.7% for MM clients.
- ◆ DUI clients were less likely to be no-shows for their first treatment appointment than non-DUI clients (in RR, IOP or OP), less likely to drop out of treatment and more likely to complete their programs and to still be in treatment after six months than non-DUI clients.

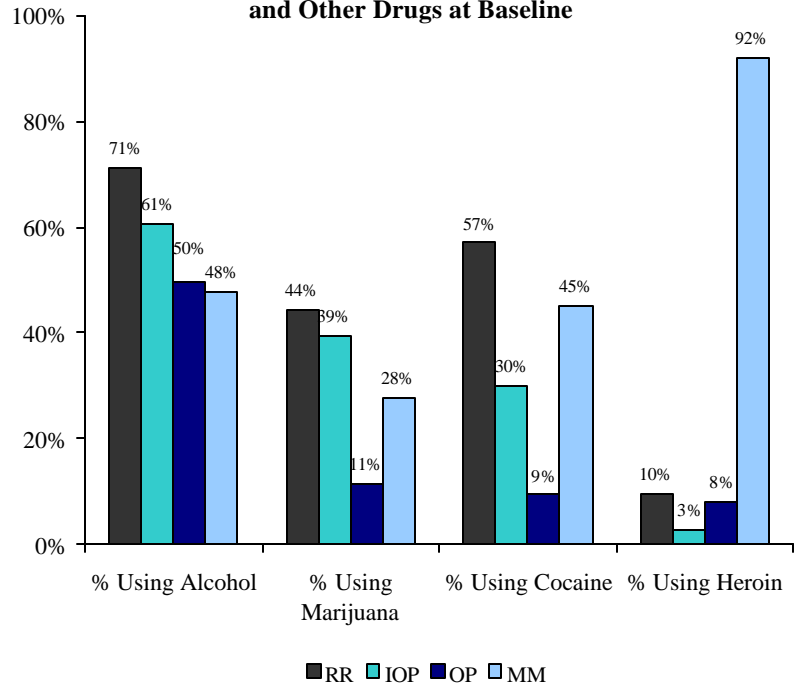
Section 3. Treatment Outcomes

For most people, thinking about outcome measures in drug and alcohol treatment research means an examination of:

1) the extent to which people stopped using alcohol and other drugs, and/or
 2) the degree to which use was reduced among those who still report some use at follow-up. In fact, these two measures are central to outcome analyses. However, there are a number of additional measures that, analyzed together with drug/alcohol use, facilitate a more holistic assessment of how individuals fared as a result of receiving drug and alcohol treatment services. This discussion of outcomes will therefore also focus on describing primary outcomes in the following areas:

- ◆ Physical Health
- ◆ Psychological/Emotional Health
- ◆ Employment
- ◆ Family and Social Relationships

Figure 1
Percent of Clients Using Alcohol and Other Drugs at Baseline

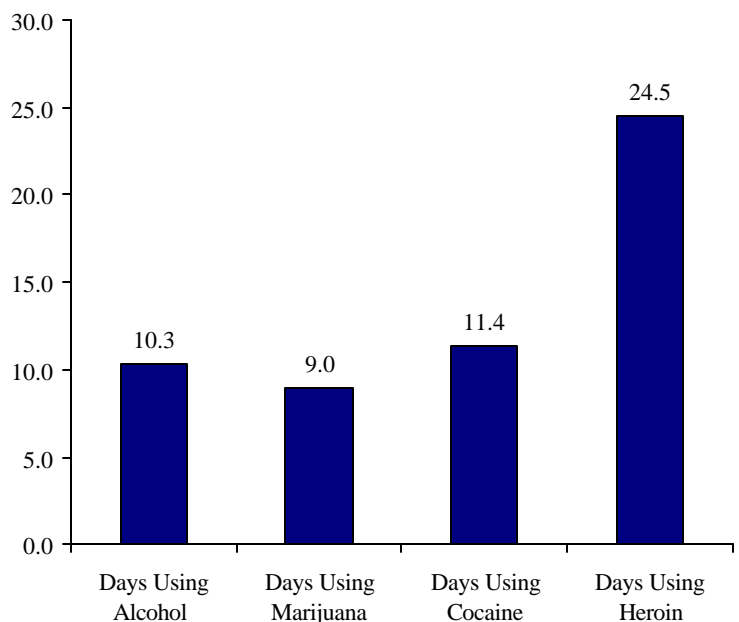


Alcohol and Other Drug Use

Baseline Information

Information related to clients' alcohol and other drug problems at the time of the baseline interview is presented in Figure 1. Analyses of the baseline data indicate that clients entering residential treatment were more likely to have used alcohol, marijuana and cocaine in the past 30 days than those entering IOP, OP or MM programs. Not surprisingly, methadone clients were more likely than clients in the other three levels of care to have used heroin in the month preceding treatment. Nearly all (92%) those entering methadone programs used heroin in the past 30 days. Results presented in Figure 2 are for clients with at least some use in the prior 30 days.

Figure 2
Days Using Alcohol and Other Drugs in the Past 30 at Baseline for Total Sample



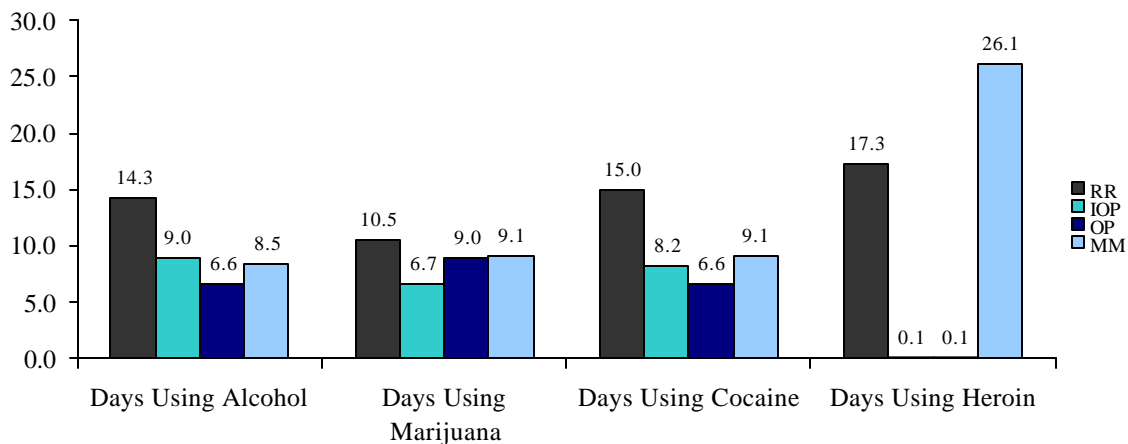
Overall, among clients who used any alcohol in the month prior to entering treatment, the average number of days of use was 10.3. Similarly, among clients who used marijuana, the average number of days of use in the past month was 9.0 and for cocaine the average number of days of use was 11.4. The typical heroin user in the sample reported using heroin on approximately 25 days in the month prior to the intake interview. Heroin users, then, used this drug with much greater frequency than those who used alcohol, marijuana or cocaine.

As shown in Figure 3, across level of care and MM, clients entering RR used alcohol, marijuana and cocaine on a greater number of days than those entering IOP, OP or MM programs. Methadone clients reported using heroin on a greater number of days (26.1) than clients in the other levels of care.

Analyses comparing alcohol and other drug problem severity by gender for ISTOP clients were conducted at baseline and at follow-up. While not presented in a chart, at baseline, males in the sample were more likely than females to have used alcohol in the past 30 days (61% vs. 55%). Males were also slightly more likely than females to have used marijuana in the month prior to intake (31% vs. 27%). Use of cocaine and heroin, on the other hand, were more prevalent among females entering treatment. Cocaine use in the month prior to intake was reported by 46% of the women in the sample, as compared to 31% of men, while heroin use in the month prior to intake was reported by 29% of the women in the sample compared to 21% of men. (For additional results, please refer to Tables A2 and A3 in the Appendix.)

Figure 3

Reported Days Using Alcohol and Other Drugs in the Past 30 at Baseline



Alcohol and Other Drug Problems - Baseline/Follow-up Comparisons

Patterns of drug and alcohol use among ISTOP clients changed in desirable ways; the percentage of clients reporting use of four primary substances substantially decreased from baseline to follow-up. Specifically, alcohol use was 59% at baseline and 30% at follow-up, marijuana use was 30% at baseline and 6% at follow-up, cocaine use was 37% at baseline and 6% at follow-up, and heroin use was 24% at baseline and 6% at follow-up (See Figure 4).

As shown in Figure 4, the rates of abstinence from alcohol and other drugs dramatically decreased between baseline and follow-up. In addition, we found that even among those who reported some use following treatment, the frequency of their use was reduced. Among those using alcohol at follow-up, the average days of use decreased from 10.3 to 7.2. A similar level of alcohol use was discovered in a recent study which looked at use among those not abstinent at follow-up. This study found that those still using at follow-up reported an average of 8.0 days of alcohol use in the past 30 (Miller, Walters, and Bennett, 2001).

Figure 4
Percent Using in Past 30 Days

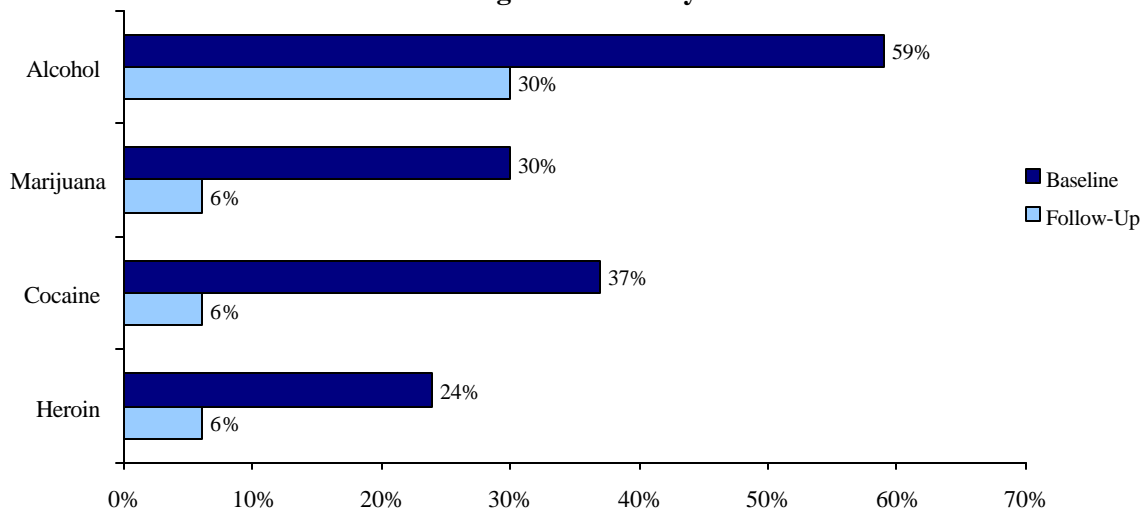
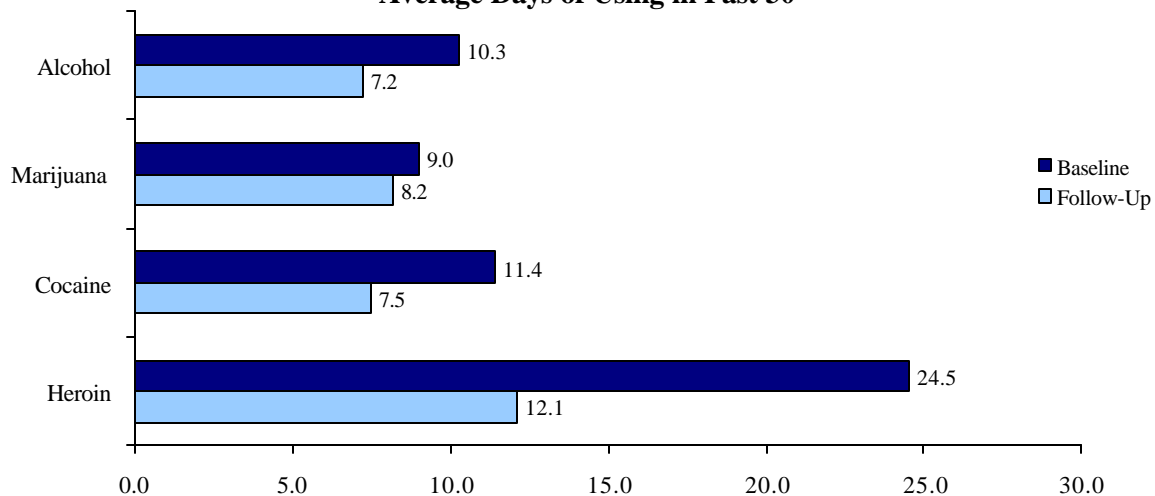


Figure 5
Average Days of Using in Past 30



Among ISTOP clients who reported some marijuana use at follow-up, the average days of use decreased from 9.0 to 8.2. Average days of cocaine use decreased from 11.4 to 7.5. Finally, average days of heroin use decreased from 24.5 to 12.1 among those who still reported some heroin use at follow-up (See Figure 5).

Decreases in alcohol and other drug use appear to follow similar patterns for men and women in the sample, as shown in Figures 6-9. Worthy of note are the large decreases in percent of men and women reporting marijuana, cocaine and heroin use at follow-up. Especially encouraging is the percent change of women reporting cocaine and heroin use from baseline to follow-up (46% to 8% for cocaine, 29% to 5% for heroin) in light of the fact that use of these drugs was more prevalent among women entering treatment.

Figure 6
Percent Using Alcohol in Past 30 Days

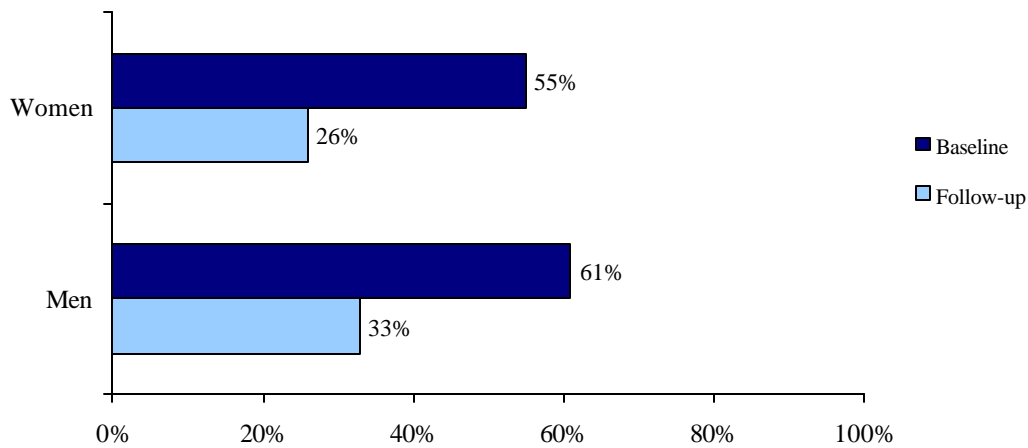


Figure 7
Percent Using Marijuana in Past 30 Days

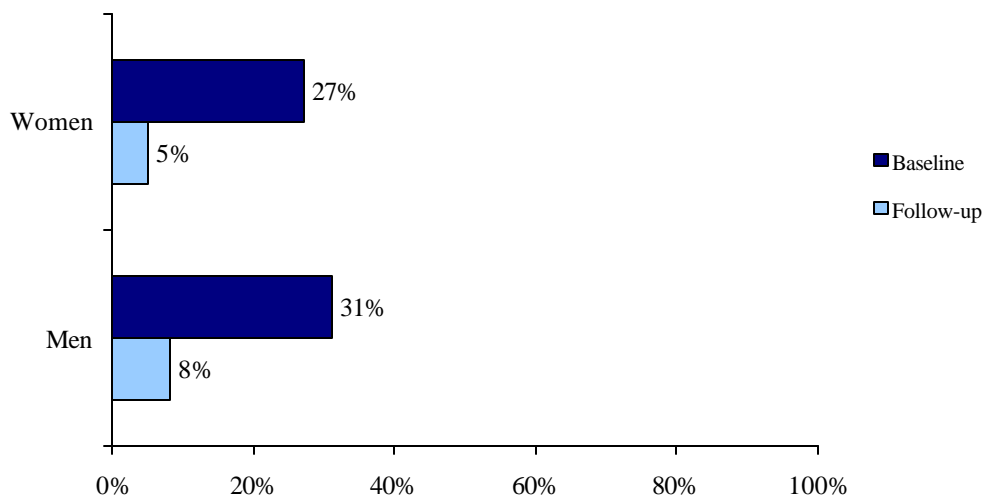


Figure 8
Percent Using Cocaine in Past 30 Days

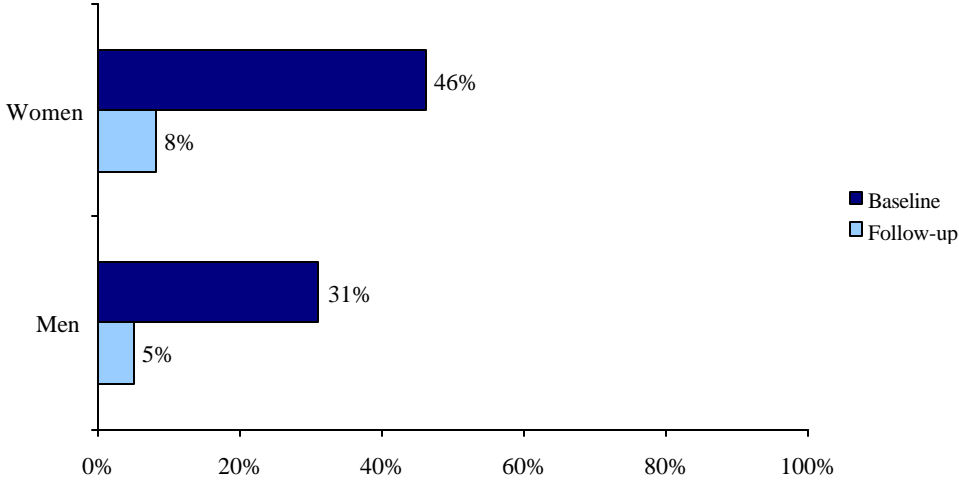
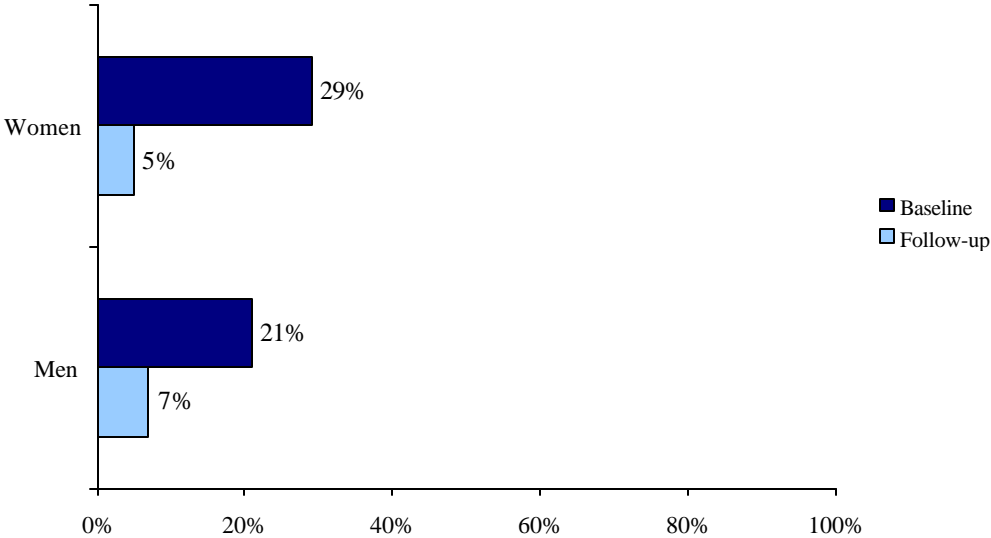


Figure 9
Percent Using Heroin in Past 30 Days



Results of analyses looking at reductions in alcohol and other drug use by level of care and MM are presented in Figures 10 through 13. As shown in Figures 10, 11, and 12, clients in residential treatment experienced the greatest reductions in alcohol, marijuana, and cocaine use compared to ISTOP clients in the other levels of care examined.

Figure 10
Percent Using Alcohol in Past 30 Days

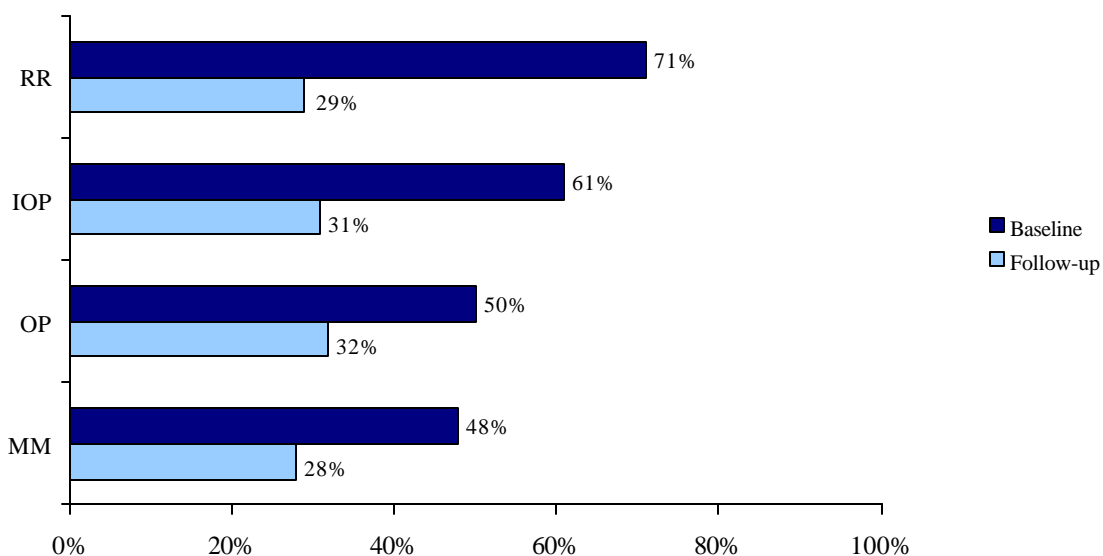


Figure 11
Percent Using Marijuana in Past 30 Days

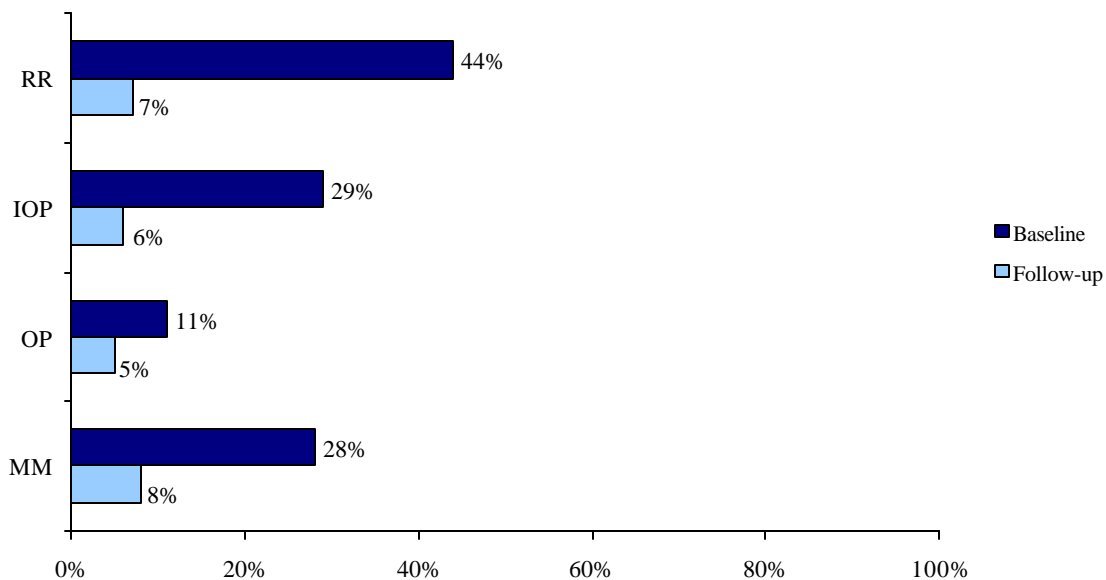
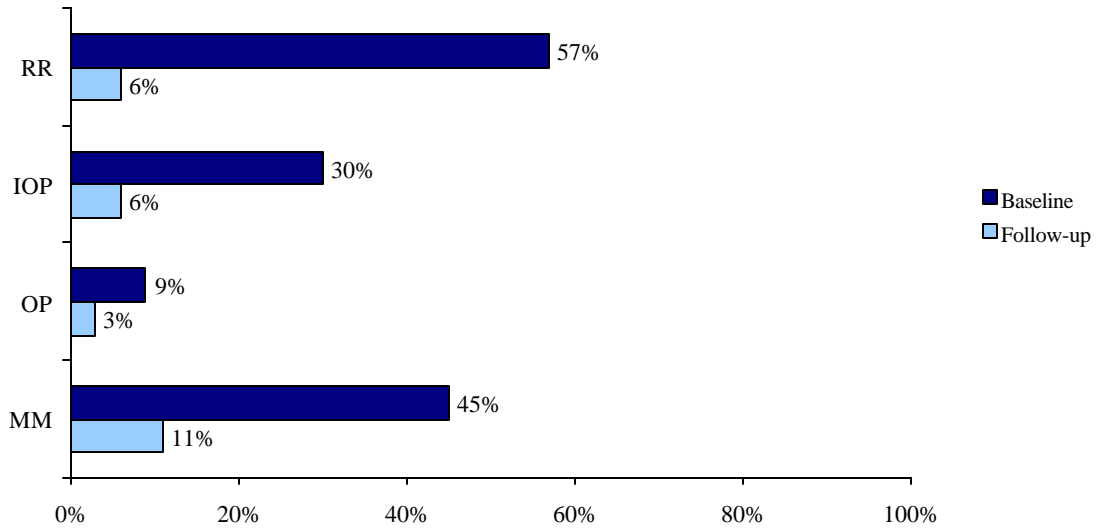
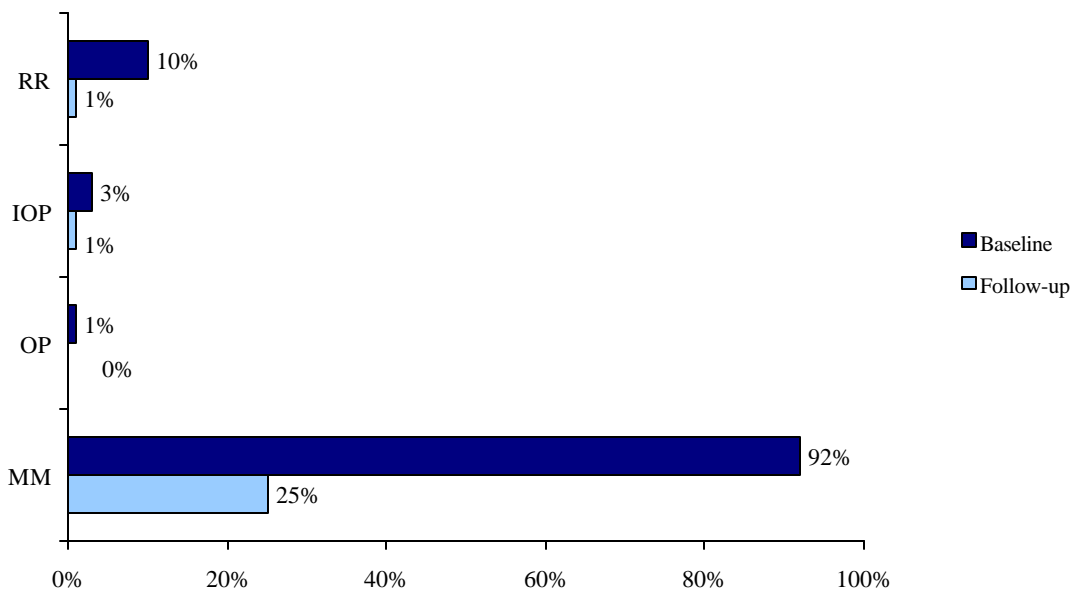


Figure 12
Percent Using Cocaine in Past 30 Days



Residential clients and methadone clients also both reported substantial reductions in heroin use from baseline to follow-up (see Figure 13). In looking at improvements in outcomes across levels of care, it is clear that residential clients experienced the greatest change, but it is true that they also began treatment with the overall greatest problem severity. Therefore, advanced analyses presented at the end of this section test to see if residential treatment improves clients outcomes controlling for baseline problem severity as well as for other key factors.

Figure 13
Percent Using Heroin in Past 30 Days



Physical Health

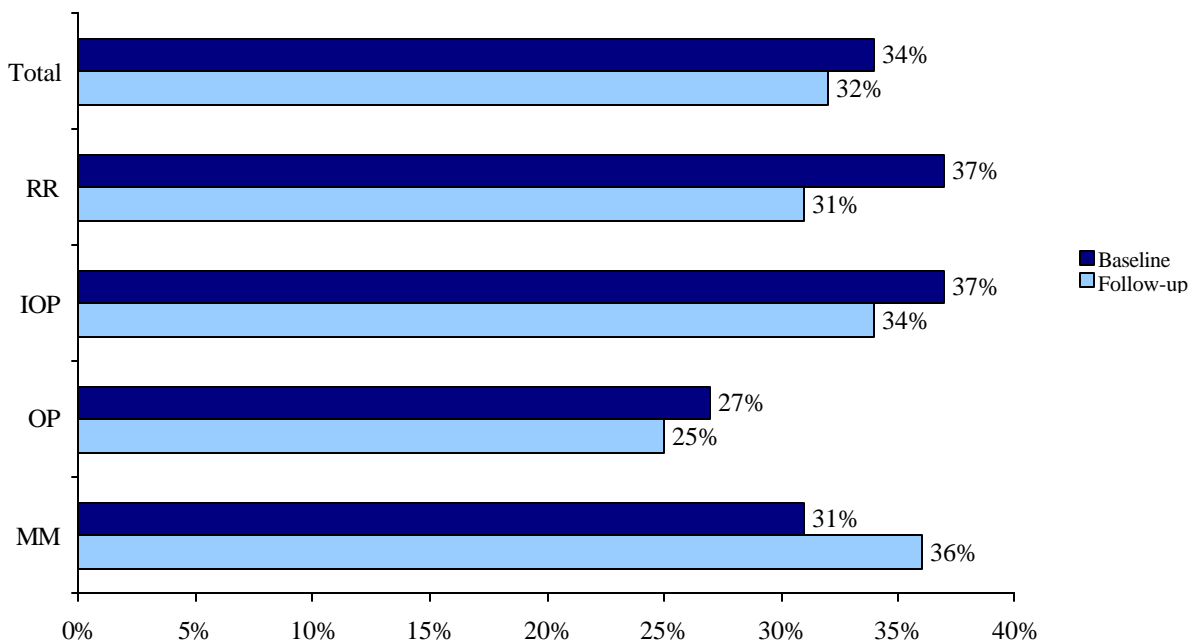
Baseline/Follow-up Comparisons

Overall, post-treatment assessment for physical health indicates that a lower percentage of individuals reported recent (past thirty days) medical problems at follow-up than at baseline.

Across the total ISTOP sample, the percentage of clients experiencing recent medical problems was slightly reduced from 34% at baseline to 32% at follow-up. By level of care, methadone maintenance are the exception to the general pattern of reduced medical problems. Of the clients in MM, 31% reported recent medical problems at baseline while 36% reported recent problems during their follow-up interview (See Figure 14). Feedback from program staff suggest that the medical examinations methadone clients received at the beginning of treatment often uncovered previously unknown medical conditions

Figure 14

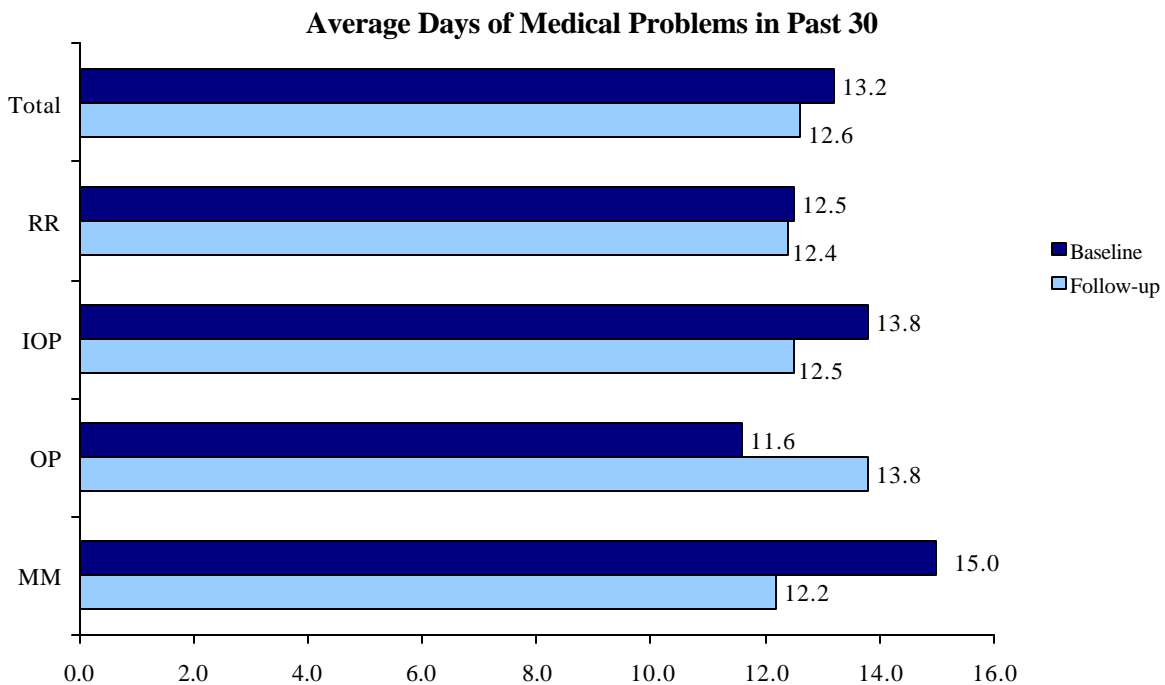
Percent Reporting Medical Problems in Past 30 Days



(i.e. hypertension, diabetes, etc.). Therefore, some MM clients may have reported more serious problems at follow-up due to greater knowledge regarding their previously undiagnosed medical problems.

A second encouraging outcome is the time (measured in days in the prior thirty) that people were bothered by their medical problems. The average days of problems in the past thirty among those experiencing any problems was reduced for clients in IOP (13.8 to 12.5) and MM (15.0 to 12.2). Days bothered by medical problems remained nearly the same for RR clients (12.5 to 12.4), and increased for OP clients (11.6 to 13.8) (See Figure 15).

Figure 15



Medical outcomes were also examined by gender. Women were more likely than men to report experiencing medical problems. The percentage of women reporting recent medical problems was reduced from baseline to follow-up, while the percentage of men reporting recent medical problems remained the same from baseline to follow-up. Further, of those reporting recent medical problems, the average days experiencing problems decreased for both men and women (See Figures 16-17).

Figure 16

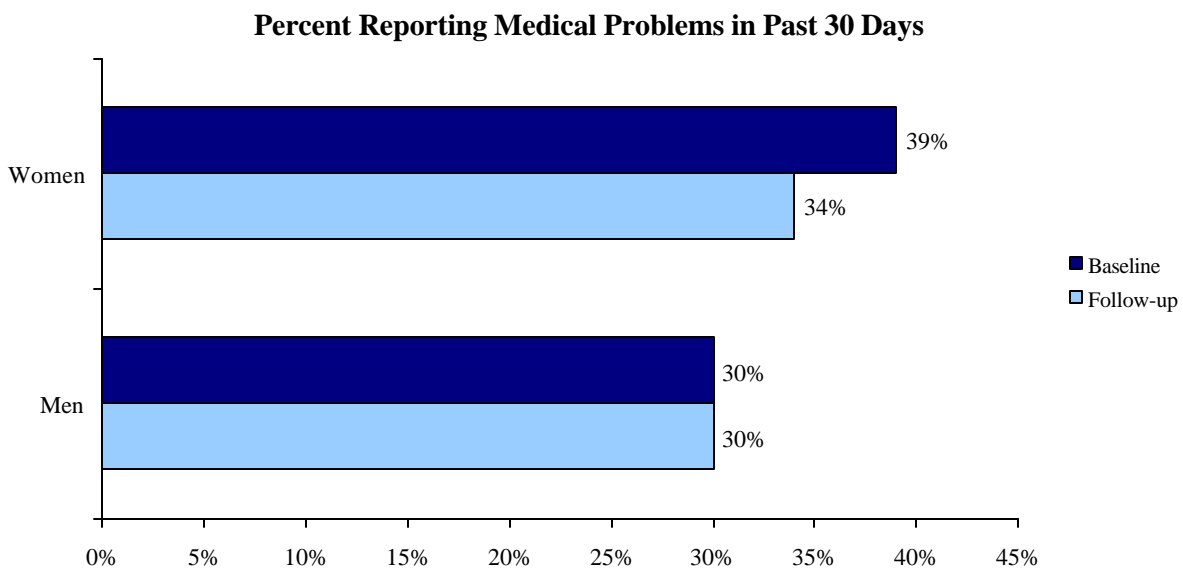
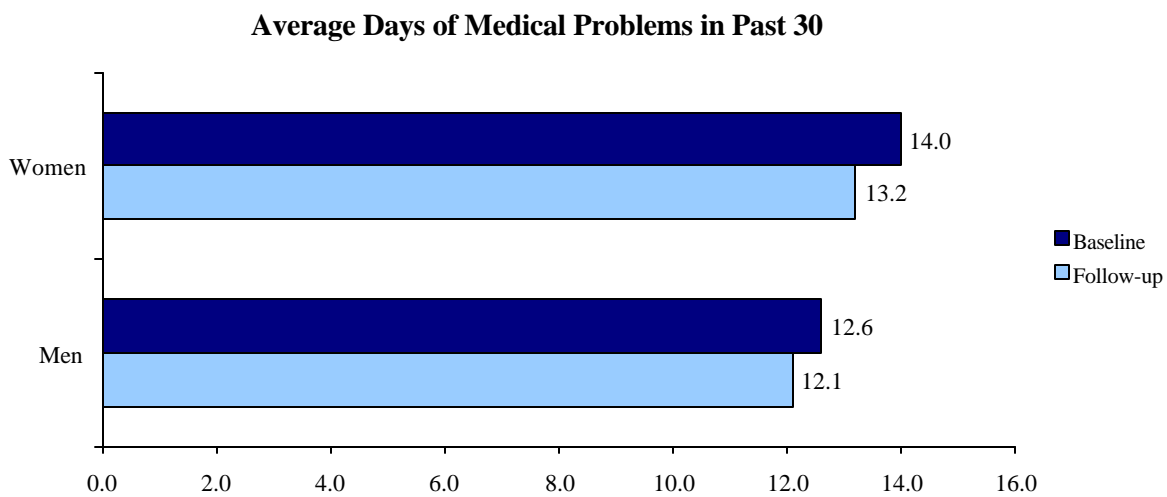


Figure 17



Mental Health

Baseline/Follow-up Comparisons

Using information provided by clients about their experiences with various mental health symptoms, we found an overall reduction in these symptoms between baseline and follow-up. Three indicators of psychological status – recent serious depression, recent serious anxiety, and recent thoughts of suicide – reveal decreased symptoms at follow-up. As Figure 18 shows, clients were less likely to report serious depression, serious anxiety and thoughts of suicide at follow-up compared to baseline.

By level of care and MM, clients in residential treatment experienced the largest percent reduction in depression compared to other levels of care and MM (See Figure 19).

Figure 18

Percent Experiencing Serious Depression, Anxiety and Suicidality in Past 30 Days

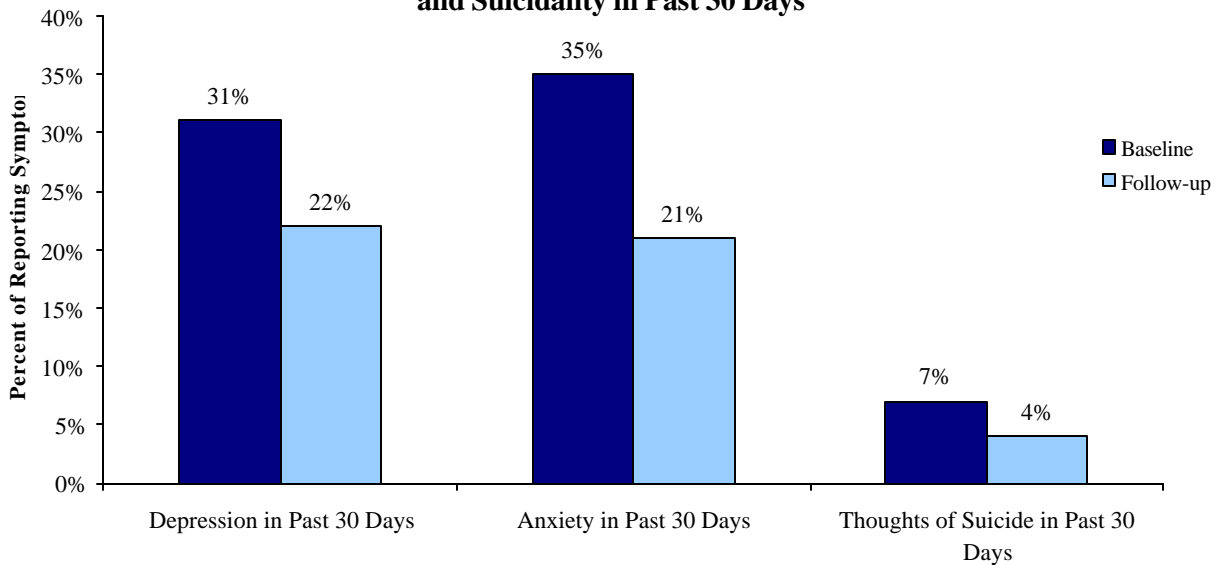
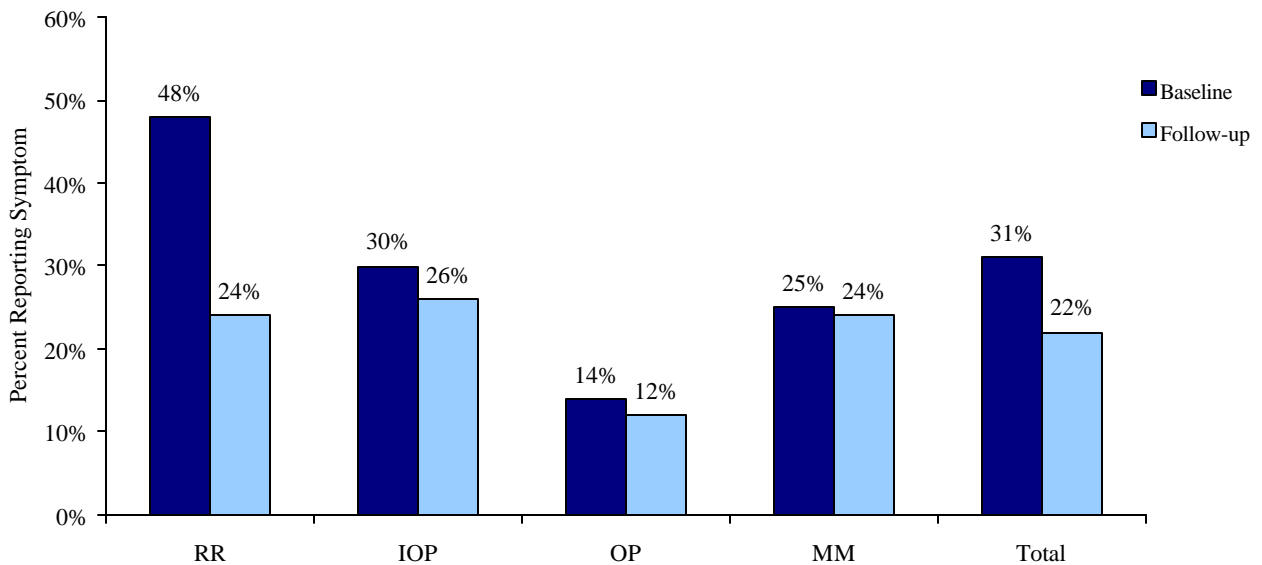


Figure 19

Percent Experiencing Serious Depression in Past 30 Days



Clients in residential treatment also experienced the largest percent reduction in anxiety and thoughts of suicide compared to other levels of care and methadone clients (See Figures 20-21).

Figure 20

Percent Experiencing Serious Anxiety in Past 30 Days

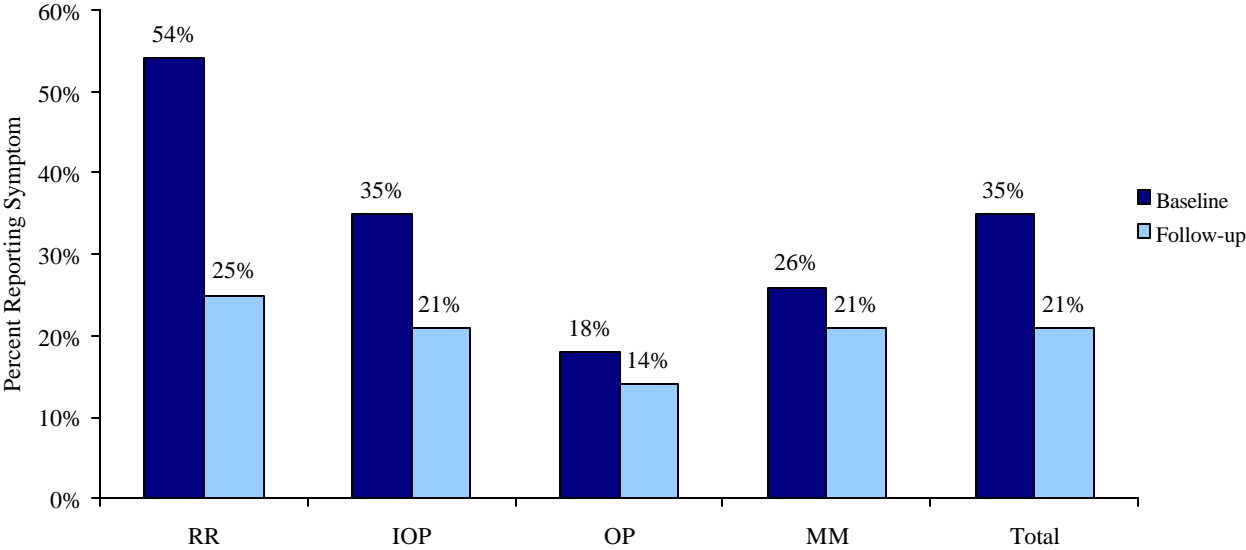
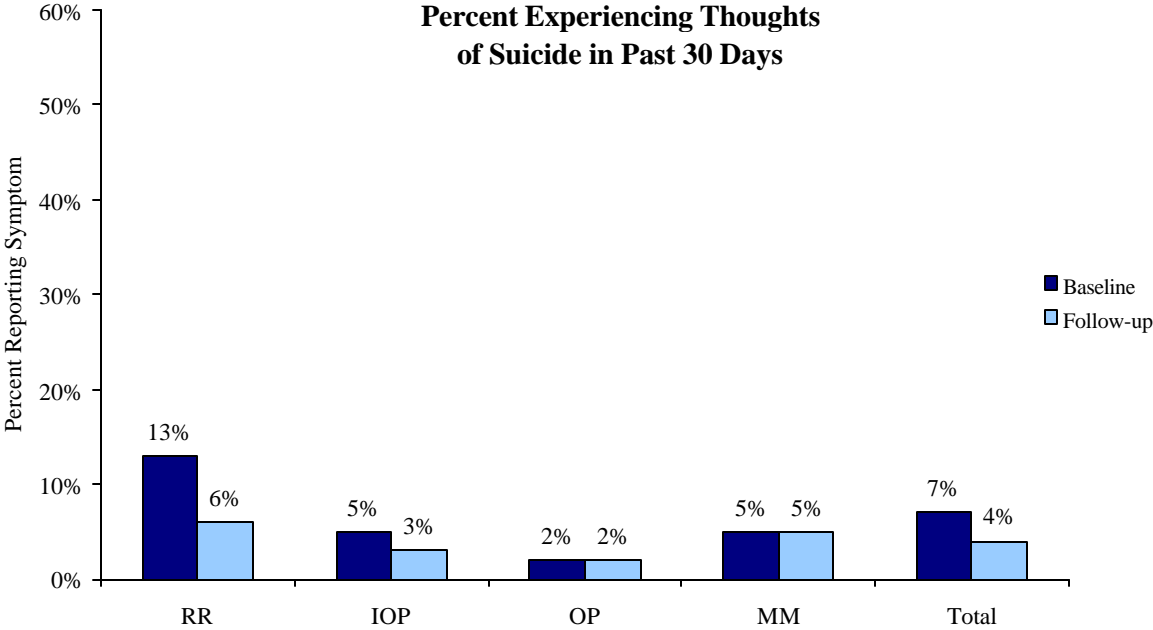


Figure 21

Percent Experiencing Thoughts of Suicide in Past 30 Days



At baseline and follow-up, clients were asked on how many days out of the past thirty they experienced *psychological problems* (including but not limited to depression, anxiety and suicidal thoughts). Of those who reported having one or more symptoms, the average number of days with psychological problems was 14.9 at baseline and 13.2 at follow-up (See Figure 22).

Figure 22
Average Days of Psychological or Emotional Problems in Past 30

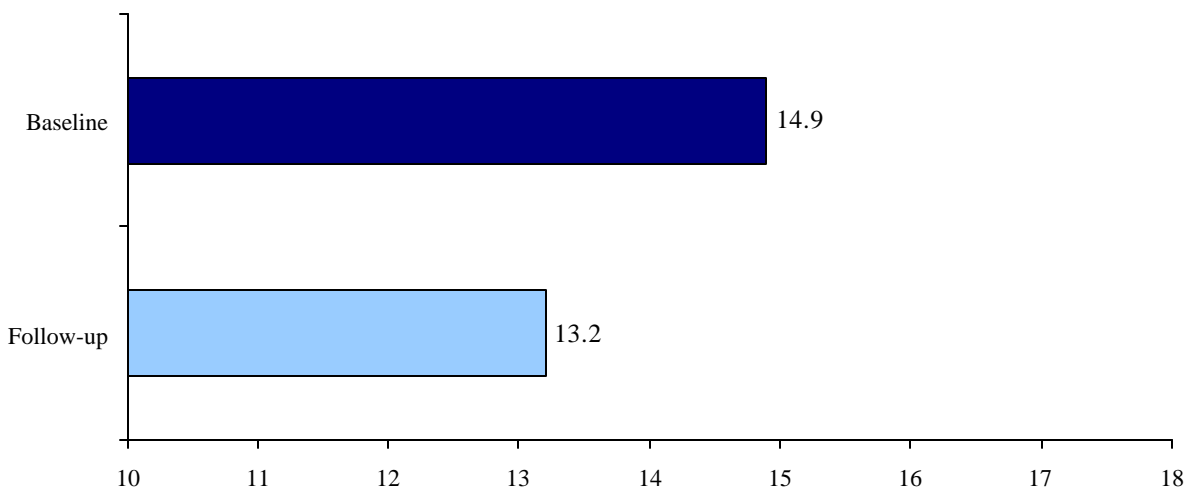
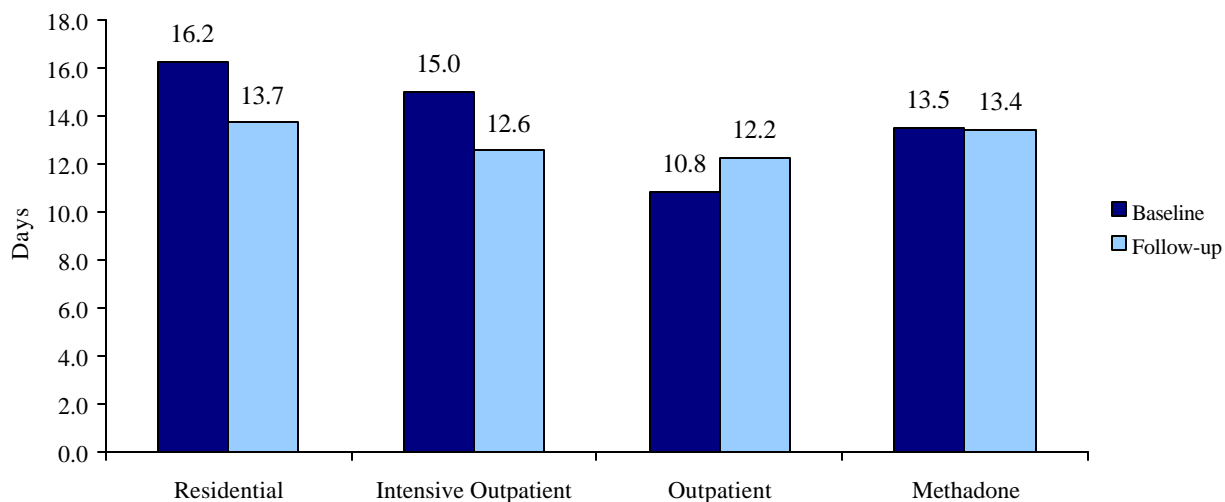


Figure 23 displays the average days with psychological problems, broken down by level of care and methadone.

Figure 23
Average Days of Psychological or Emotional Problems in Past 30



Mental Health and Gender

Although not displayed in any figures, psychological symptoms and problems were examined by gender to assess possible gender differences. The data revealed very few distinctions between men and women with regard to their mental health outcomes. In general, men and women experienced similar reductions in depression, anxiety, and suicidal thoughts between baseline and follow-up. Among those who still experienced symptoms at follow-up, both men and women reported fewer average days of these symptoms at follow-up than at baseline. Women's reported days of psychological or emotional problems decreased from 16.3 at baseline to 13.2 at follow-up, while men's days of symptoms were reduced from 13.9 to 12.7. Overall, then, women experienced a slightly greater proportionate decrease in days of symptoms than was found among men in the sample.

Employment

Baseline/Follow-up Comparisons
Clients in ISTOP experienced improvements in functioning with regard to employment. Upon entering treatment, the average days clients were paid for working in the past 30 days was 7.1 days, and at follow-up, the average days paid for working was 10.7 days. At baseline, 47% of clients in the sample reported having employment problems in the past month. Of those clients having problems, the average number of days with problems was 19.0 days. At follow-up, only 30% of clients in the sample reported employment problems, and of those individuals, the average number of days with problems was 11.6 days (See Figures 24-26).

Figure 24

Average Days Paid for Working in Past 30

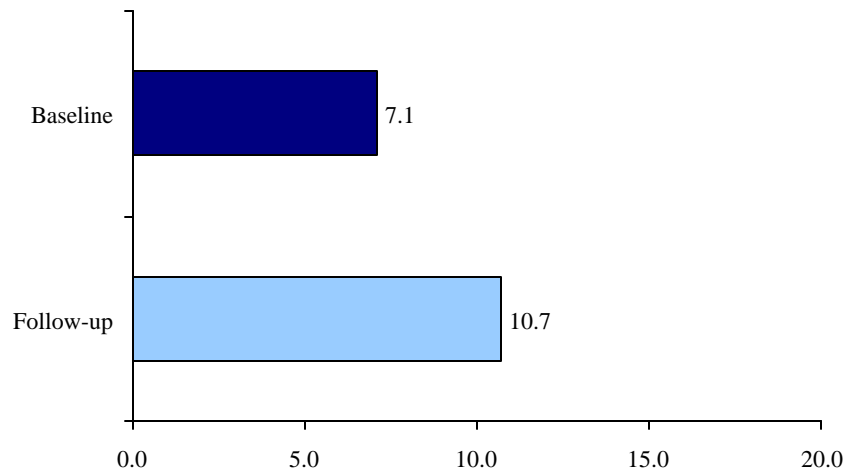


Figure 25

Percent with Employment Problems in Past 30 Days

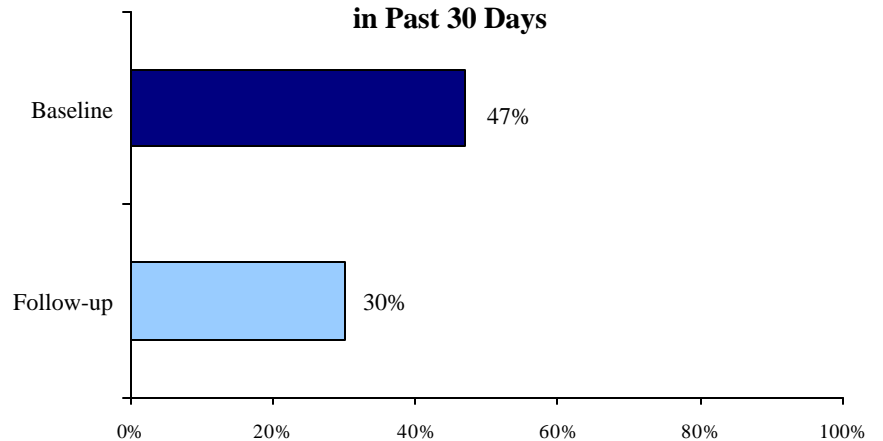
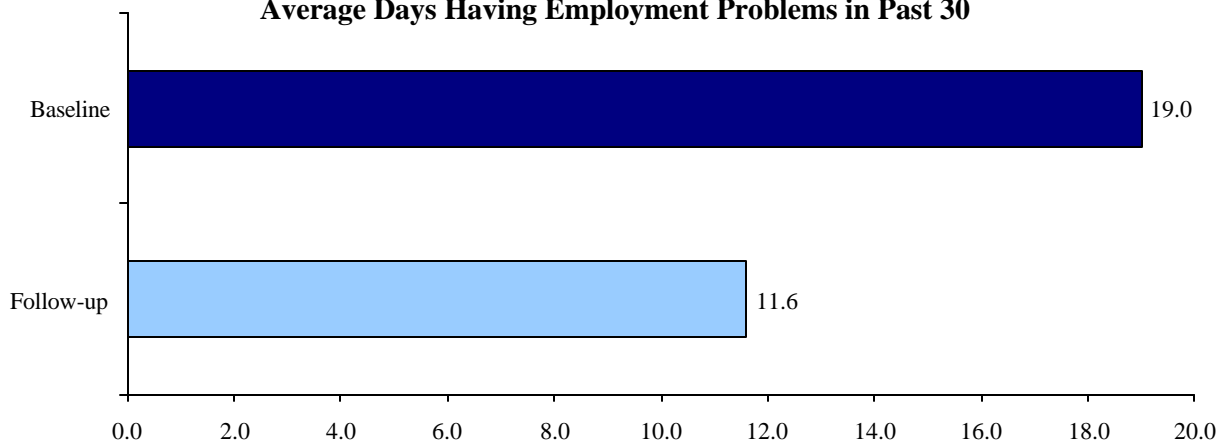


Figure 26

Average Days Having Employment Problems in Past 30



With regard to level of care and methadone clients, both the percentage of those reporting recent employment problems and the average days of problems decreased across all levels of care (See Figures 27-28).

Figure 27

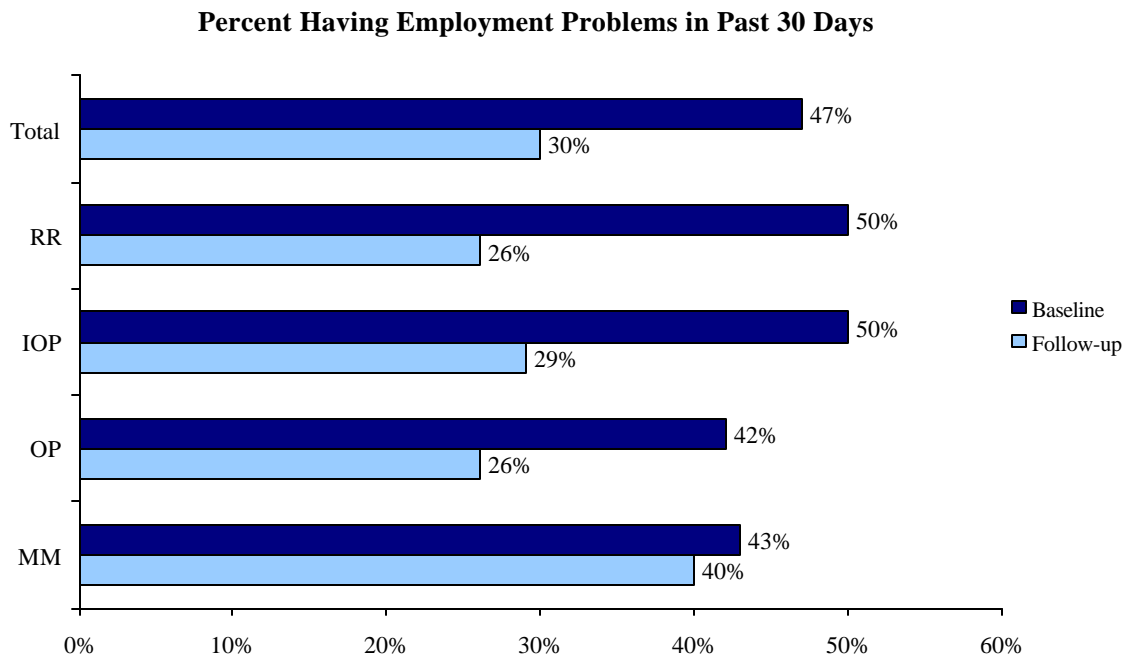


Figure 28

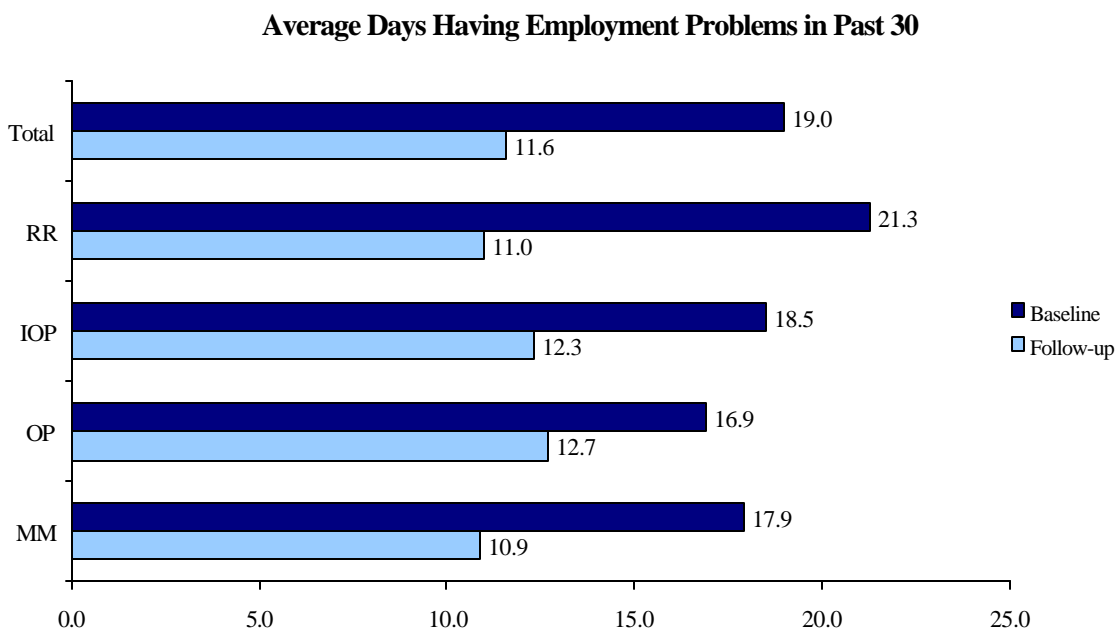


Table 1 displays baseline and follow-up information regarding the average monthly income of clients from 1) all possible sources, and 2) employment only. Although clients' combined monthly income was less, on average, at follow-up compared to baseline (\$789 vs. \$891), follow-up income was derived proportionately more from employment than other sources (receiving from others, illegal activities, etc.). As Table 1 indicates, a larger amount of clients' combined income comes from employment at follow-up in all levels of care and methadone than at baseline, especially for those in MM. Specifically, at baseline only 21.9% of methadone clients' total income came from employment, while at follow-up 55.3% of their income came from employment. Baseline to follow-up increases in income generated from employment are noted elsewhere in the literature. A study from Washington state found that income from employment increased by 45% from baseline to follow-up (Luchansky et al., 2000). For the ISTOP sample, this increase was 48%.

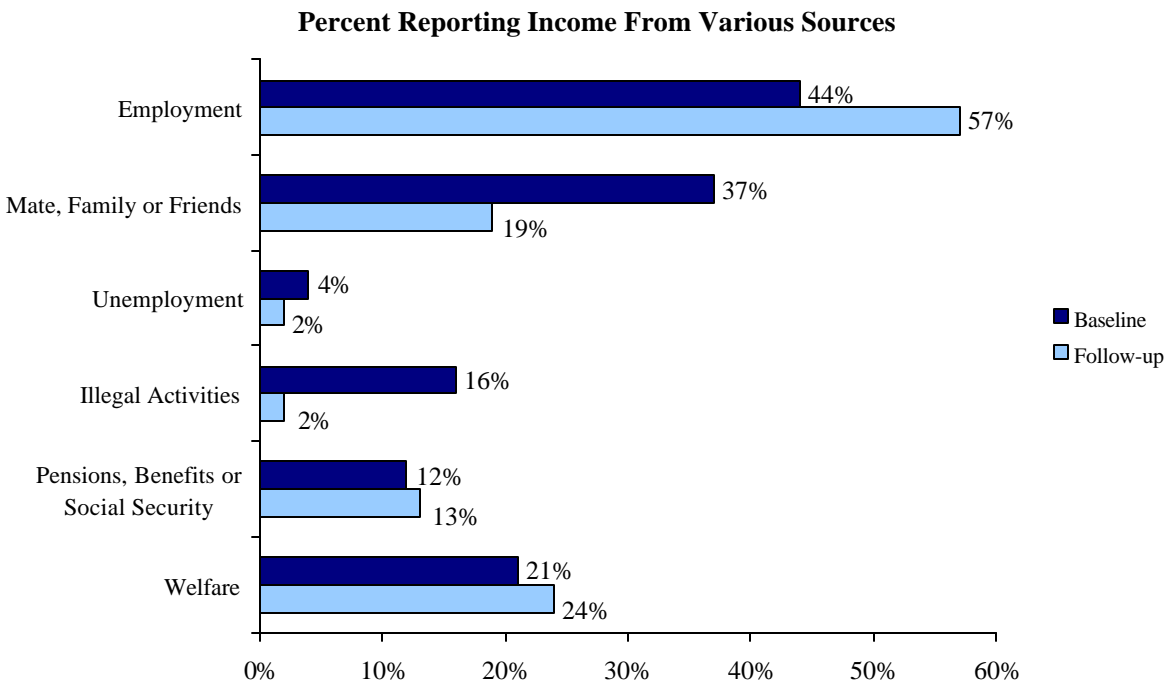
Table 1
Average Combined Income and Employment Only Income in Past 30 Days

| | RR | IOP | OP | MM | Total |
|--|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| Baseline Combined Income | \$845 | \$755 | \$790 | \$1,224 | \$891 |
| Baseline Employment Only Income % of Baseline Total Income | \$352 41.7% | \$449 59.5% | \$561 71.0% | \$268 21.9% | \$405 45.5% |
| Follow-up Combined Income | \$739 | \$865 | \$977 | \$579 | \$789 |
| Follow-up Employment Only Income % of Follow-up Total Income | \$581 78.6% | \$644 74.4% | \$868 88.8% | \$320 55.3% | \$600 76.0% |

Additional indicators of improved functioning among clients in ISTOP are those that highlight changes in the percentage of people receiving income from sources such as employment, others (mate, family and friends), and illegal activities. At baseline, 44% of the sample received income from employment, and at follow-up, 57% of the sample received income through employment. At baseline, 37% of the sample received income from their mates, families and/or friends, and at follow-up, 19% of the sample received income from those same individuals. At baseline, 4% of the sample received income from unemployment compensation, and at follow-up, 2% of the sample received income through unemployment. Finally, at baseline, 16% of the sample received income through engaging in illegal activities, while at follow-up only 2% of the sample received income through illegal means.

Two sources of income of those included in the study - pension/benefits/Social Security and welfare - revealed slight percent increases from baseline to follow-up. At baseline, 12% of clients in the sample reported income from pensions, benefits or Social Security, and at follow-up, that percent increased to 13%. At baseline, 21% of clients in the sample reported income from welfare, and at follow-up, 24% reported some income from welfare (See Figure 29).

Figure 29



Family and Social Relationships

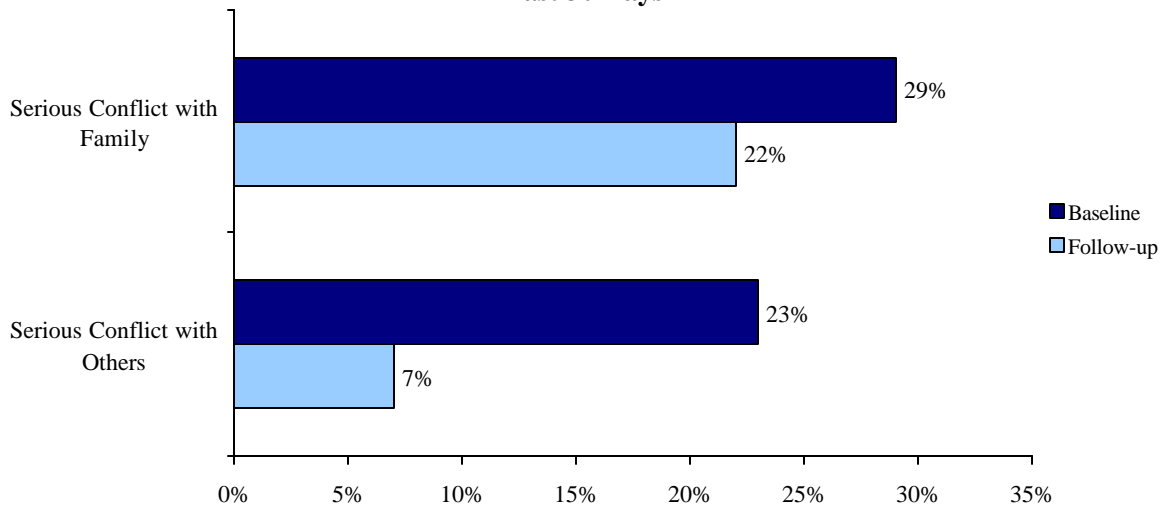
Baseline/Follow-up Comparisons

There are two outcome measures included in the current study which suggest that relations with family and others improved from the time clients entered treatment to the six month follow-up interview. These measures are: 1) the extent to which clients experienced serious conflict with family in the past thirty days, and 2) the extent to which clients experienced serious conflict with others in the past thirty days.

Upon entry into treatment, approximately 29% of clients in the study stated that they had experienced serious conflict with family members in the past thirty days. Of those experiencing conflict, the average number of days of conflict was 9.6 days. At follow-up, approximately 22% of the ISTOP sample stated that they had experienced serious conflict with family members in the past thirty days, with an average of 5.3 days of conflict among those who reported conflict.

Figure 30

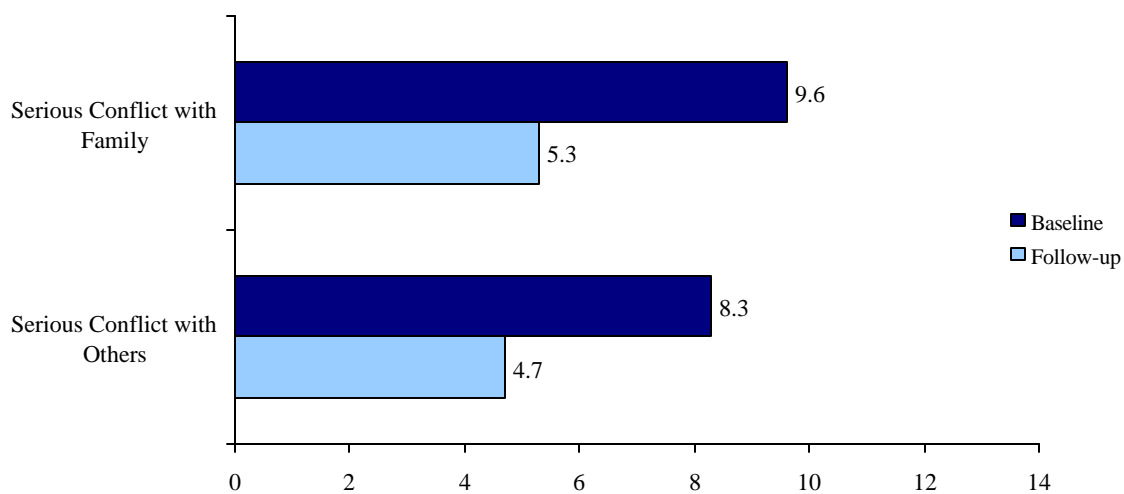
Percent Reporting Interpersonal Conflict in Past 30 Days



Upon entering treatment, approximately 23% of clients in ISTOP stated that they had experienced serious conflict with others (friends, neighbors, co-workers) in the past thirty days. Of those experiencing conflict, the average number of days of conflict was 8.3 days. At follow-up, only 7% of the study sample stated that they had experienced conflict with others in the past thirty days, with an average of 4.7 days of conflict (See Figures 30-31).

Figure 31

Average Days Having Conflict in Past 30



Predictors of Outcomes at Follow-up

Up until this point, a focus has been placed on examining changes in substance use and other behaviors of interest from baseline to follow-up. Examining the changes that take place between the time when clients enter treatment and some follow-up point in time is perhaps the most widely used way to answer questions about the effectiveness of treatment. However, some questions about substance use cannot be answered solely by looking at follow-up outcomes. In order to capture the complexity of phenomena like becoming abstinent or gaining employment, we need to look at the effects of several factors simultaneously on the particular outcome of interest. The way that we do this is by using a statistical technique called regression analysis. This type of analysis allows us to see the effects of many different factors together upon outcomes such as abstinence and employment.

Predictors of Abstinence

Regression analyses were used to identify predictors of abstinence at follow-up for ISTOP clients. Believing that methadone maintenance is categorically distinct from other types of alcohol and drug treatment, (especially with regard to length of stay and variation of services across providers) data on methadone clients were analyzed separately from the rest of the study's data. Given this distinction, the names of the treatment types discussed in this portion of the report are 1) *Non-methadone* (RR, IOP, and OP) and 2) *Methadone*.

From the analyses, it was determined that no predictors of abstinence were common to both non-methadone and methadone clients. This finding confirms just how distinct the clients in methadone maintenance therapy are and how abstinence among methadone clients can be predicted differently from abstinence among those in RR, IOP and OP.

Predictors of abstinence for non-methadone clients are: *less drug/alcohol use in the 30 days prior to entering treatment, being in residential treatment, having fewer lifetime overdoses, not living with anyone who has an alcohol problem, and not having problems with immediate family members*. The first finding, that less alcohol and drug use at baseline is predictive of abstinence at follow-up, is not surprising and has been documented in other studies (Schildhaus et al., 2000b). Also predictive of abstinence among non-methadone clients was participation in residential services. Those having no or few overdoses throughout their lives were more likely than clients who had many overdoses to be abstinent at follow-up. Those who did not live with a person who had an alcohol problem were more likely than those who did live with a person with an alcohol problem to be abstinent at follow-up. Finally, clients who reported not having any serious problems getting along with immediate family members were more likely than those who did report such problems to be abstinent at follow-up.

Predictors of abstinence for methadone clients are: *being younger, living outside of Cook County, not having an arrest history, having more years of methadone use throughout lifetime, and not having immediate family members with drug problems*. Younger methadone clients were more likely than older clients to be abstinent at follow-up. Clients living outside of Cook County in the State of Illinois were more likely than Cook County residents to be abstinent at follow-up. Clients with no arrest history were more likely than

clients who had an arrest history to be abstinent at follow-up. Clients with more years of methadone use throughout life were more likely than those with fewer years to be abstinent at follow-up. Finally, clients who did not have an immediate family member with a drug problem were more likely than those who did, to be abstinent at follow-up (See Table 2 below).

Table 2
Predictors of Abstinence at Follow-up for
Non-Methadone and Methadone Clients

| Predictors of Abstinence | Non-Methadone (RR/IOP/OP) N=942 | Methadone N=268 |
|---|--|----------------------------|
| Being younger (age) | | X |
| Less drug/alcohol use in 30 days prior to entering treatment | X | |
| Being in residential treatment | X | |
| Living outside of Cook County (in Illinois) | | X |
| <i>No</i> arrest history | | X |
| Having fewer lifetime overdoses | X | |
| Having more years of methadone use throughout life | | X |
| <i>Not</i> living with anyone who has an alcohol problem | X | |
| <i>Not</i> having problems with immediate family members | X | |
| <i>Not</i> having an immediate family member with drug problems | | X |

Predictors of Work

Regression analyses were also used to identify predictors of work, measured here as income earned from employment, at follow-up for ISTOP clients. As with the analyses regarding abstinence at follow-up, treatment types discussed in this portion of the report are 1) *Non-methadone* (RR, IOP, and OP) and 2) *Methadone*.

For non-methadone and methadone clients alike, *gender, age, education, pre-treatment employment, and not having psychiatric problems* are predictors of work at the six-month follow-up. For all ISTOP clients, males were more likely than females to work at follow-up. Younger adults were more likely than older adults to work at follow-up. Clients with higher years of education were more likely to work at follow-up than clients with few years of education. Those who worked in the 30 days prior to entering treatment were more likely than those not working before treatment to work at follow-up. Finally, clients having no psychiatric problems were more likely than clients with psychiatric problems to work at follow-up.

Predictors of work unique to non-methadone clients are: *race, being employed for the majority of the 3 years before treatment, not receiving public assistance, and not having any medical problems in the 30 days prior to entering treatment*. White clients were more likely to work than non-white clients at follow-up. Clients who worked for the majority of the three years before their current treatment were more likely to work at follow-up than those with less work experience. Clients who did not receive public assistance were more likely to work at follow-up than those who did receive public assistance. Finally, clients who had no medical problems in the 30 days prior to entering treatment were more likely to work at follow-up than those who had medical problems prior to entering treatment.

The one predictor of work unique to methadone clients is having a valid driver's license. For methadone clients, those who had a driver's license were more likely than those without a license to work at follow-up (See Table 3).

Table 3

**Predictors of Work at Follow-up for
Non-Methadone and Methadone Clients**

| Predictors of Work | Non-Methadone (RR/IOP/OP) N=942 | Methadone N=268 |
|---|--|----------------------------|
| Being male (gender) | X | X |
| Being younger (age) | X | X |
| Being white (race) | X | |
| Having more years of education | X | X |
| Having a valid driver's license | | X |
| Earning income from employment in the 30 days prior to entering treatment | X | X |
| Being employed for the majority of the three years before entering treatment. | X | |
| Not receiving public assistance prior to entering treatment | X | |
| Not having any medical problems in the 30 days prior to entering treatment | X | |
| Not having psychiatric problems ¹ | X | X |

¹ Two separate variables were examined in measuring psychiatric problems in the multivariate analyses. In the analysis of RR/IOP/OP clients the variable *Not receiving a pension for psychiatric disability* was found to be a predictor of work at follow-up. In the analysis of MM clients, the variable *Not being prescribed medication for psychological problems in the 30 days prior to entering treatment* was determined to be a predictor of work at follow-up.

Impact of Substance Abuse Treatment on the Use of Public Assistance

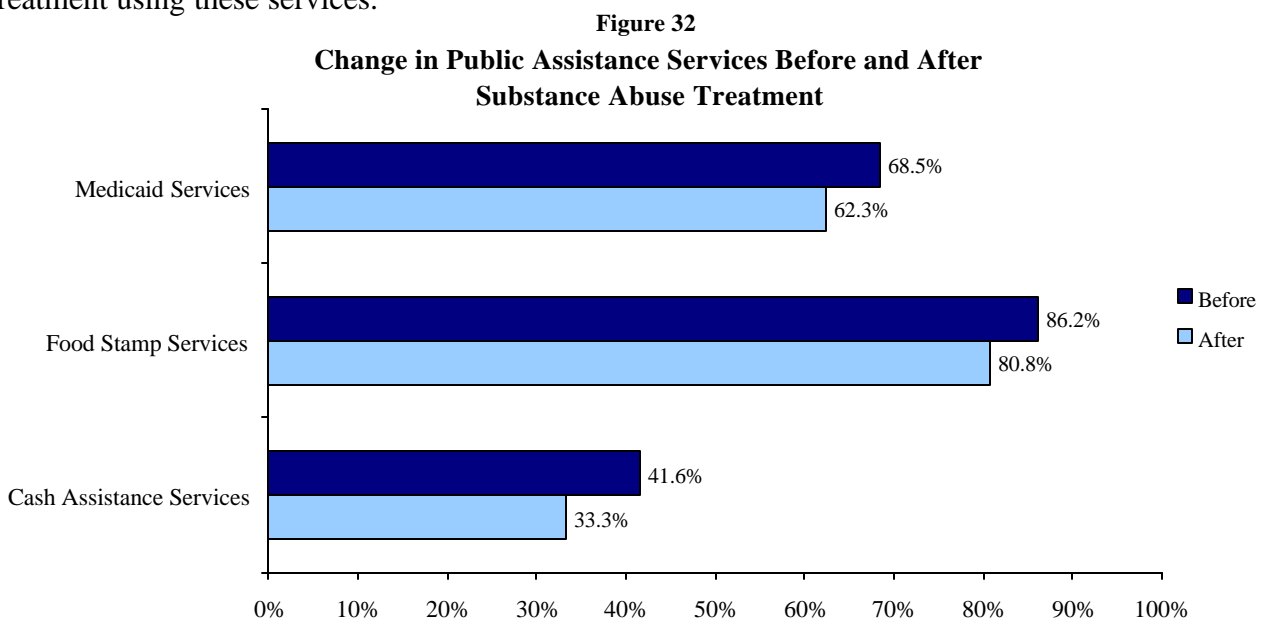
For some time, the Illinois Department of Human Services, Office of Alcoholism and Substance Abuse has pursued efforts to link its data with external data sources in other DHS offices to look at the impact of drug and alcohol treatment on subsequent use of other DHS funded services. In addition to collecting the data already presented in this report, ISTOP research staff also worked with DHS/Division of Transitional Services to collect public assistance service data on ISTOP clients. Public assistance data were obtained from the Client Database (CDB) at the Division of Transitional Services. Analyses were conducted to examine the change in public assistance service use after clients participated in substance abuse treatment and any potential cost savings that might result from a reduction in public assistance use.

Methodology

Data from the CDB pertaining to Medicaid, food stamps, and cash assistance were obtained for the time period from April 1998 through February 2001. These data were matched with the names of clients in ISTOP in order to determine how many people in the study received public assistance during the designated period of the study. A total of 1,001 (out of the total sample of 1,890) clients who had received public assistance services and participated in ISTOP were identified. The CDB data for these 1,001 clients were then analyzed and evaluated for cost savings associated with treatment.

Public Assistance Service Use Before and After Treatment

In looking at the change in public assistance service use before and after substance abuse treatment, we found that public assistance clients reduced their use of services following treatment.² Of the 1,001 ISTOP clients located in the CDB database, 558 had received at least one month of one of the three services prior to treatment. Overall, there was a reduction in use of Medicaid, food stamps, and cash assistance among substance abuse clients who entered treatment using these services.



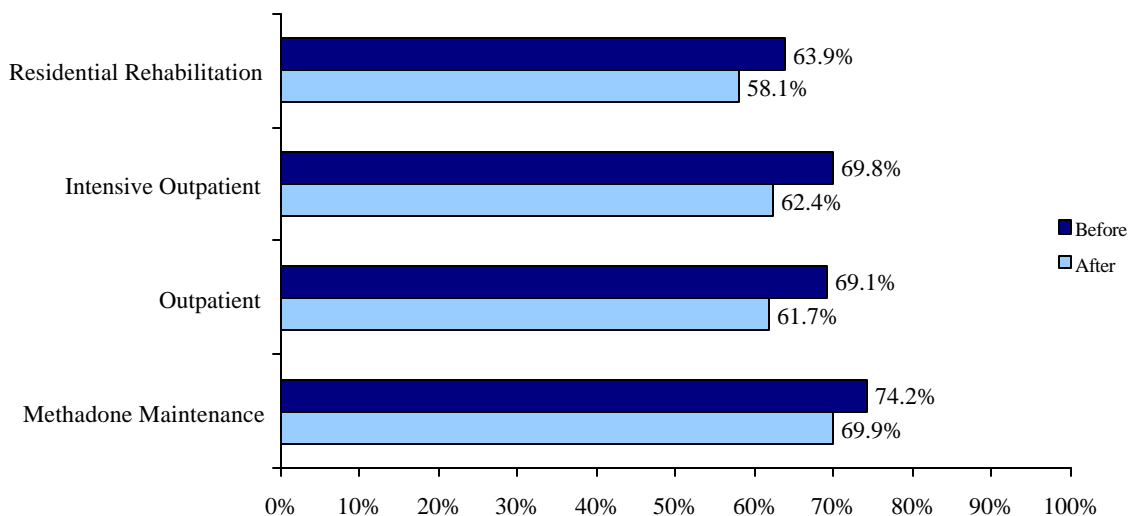
² Earlier, this report (Figure 29) stated that there was a slight increase in the percentage of clients receiving “welfare” from baseline to follow-up. It should be noted that this finding was based on clients’ self-report of receipt of a variety of benefits, including cash grants, food stamps and other additional help from their treatment programs, such as transportation money (continued on p. 53).

For instance, as shown in Figure 32, use of Medicaid services decreased from 68.5% before treatment to 62.3% after treatment. Use of food stamps decreased from 86.2% to 80.8%, and use of cash grants decreased from 41.6% to 33.3%.

The overall pattern of reduced public assistance use holds when examining service receipt by level of care and among methadone maintenance clients, as shown in Figures 33-35. For residential clients, Medicaid receipt declined from 63.9% receiving any before treatment to 58.1% receiving any after treatment. IOP showed a similar decline from 69.8% before to 62.4% after treatment. OP clients also decreased from 69.1% receiving Medicaid before treatment to 61.7% receiving these benefits after treatment. Among methadone clients, 74.2% received Medicaid before treatment and 69.9% received any Medicaid after treatment.

Figure 33

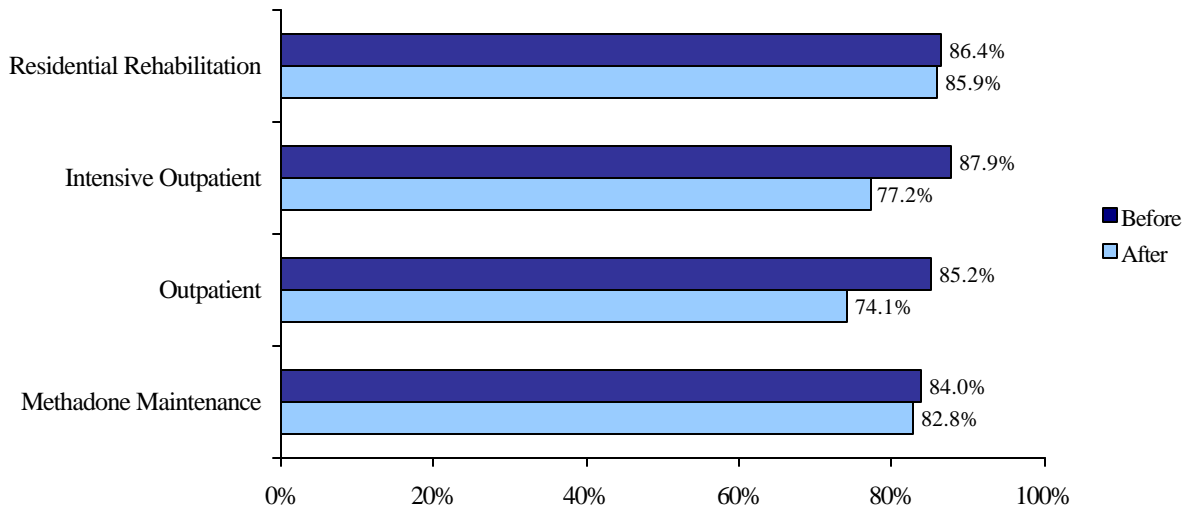
Use of Medicaid Services Before and After Substance Abuse Treatment



² cont. The definition of “public assistance” in this analysis is much stricter and only includes Medicaid services, cash assistance provided by the state (TANF) and food stamps. This analysis also includes only those who were already receiving public assistance when they began treatment, while the data in Figure 29 includes those who became attached to public assistance services through treatment.

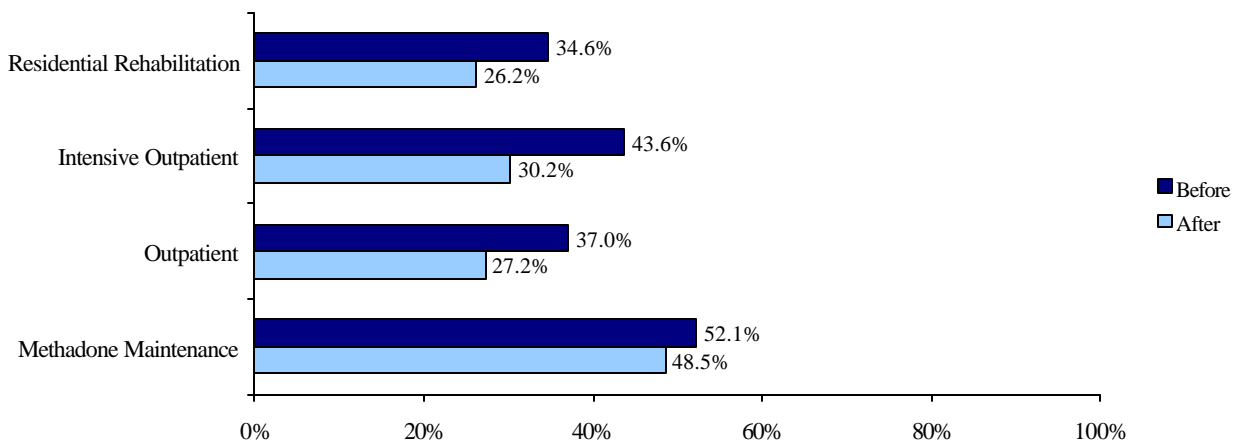
Reductions in food stamp use are shown in Figure 34. RR clients had a very slight decrease in food stamp receipt from 86.4% receiving any before treatment to 85.9% receiving any food stamps after treatment. IOP declined more dramatically from 87.9% before treatment to 77.2% after treatment. OP also experienced a large decrease from 85.2% to 74.1%. While 84.0% of MM clients received any food stamps before treatment, 82.8% received any after treatment.

Figure 34
Use of Food Stamp Services Before and After Substance Abuse Treatment



Finally, cash assistance to all three levels of care and methadone clients also declined from pre-treatment levels, as shown in Figure 35. Prior to treatment 34.6% of RR clients received at least one month of cash assistance while after treatment only 26.2% received at least one month of assistance. Similarly, 43.6% of IOP clients received any cash assistance before treatment and 30.2% received any after treatment. Receipt of cash assistance decreased among OP clients from 37.0% before treatment to 27.2% after treatment. About half, (52.1%) of MM clients received any cash assistance before treatment while 48.5% received these benefits after treatment.

Figure 35
Use of Cash Assistance Services Before and After Substance Abuse Treatment



Cost Savings Associated with Treatment

Using the combined CDB-ISTOP database, analyses were conducted to estimate cost savings on public assistance expenditures for individuals who received both public assistance benefits and alcohol and other drug treatment in Illinois. Among ISTOP clients located in the CDB, out of 407 substance abuse clients receiving Medicaid before treatment, 370 received Medicaid services after treatment (9.1% reduction). This reduction of 37 clients, at an average cost of \$621 per month, yielded an average monthly Medicaid savings of \$22,977. Of the 512 substance abuse clients receiving food stamps prior to entering treatment, 480 received these services after treatment (6.3% reduction). This reduction of 32 clients, at an average cost of \$341 per month, yielded an average monthly food stamp savings of \$10,912. Lastly, out of the 247 substance abuse clients who received cash assistance before they entered treatment, 196 received these benefits after treatment (20.0% reduction). This reduction of 51 clients, at an average cost of \$377 per month, yielded an average monthly cash assistance savings of \$19,227. The total average monthly savings for all three services among ISTOP clients was \$53,116.³

Additional analyses were conducted in order to use the estimates of service use reductions found among ISTOP clients to approximate the cost savings that may be found across the entire treatment system in Illinois. To begin, estimates were obtained for the number of clients served by OASA annually who also receive each of the three public assistance services. Medicaid information is collected by OASA, which supplied the annual number of Medicaid clients served by OASA: 26,873. The number of OASA clients receiving food stamps was estimated based on the fact that in the sample of ISTOP clients used, 80% of the clients receiving Medicaid also received food stamps. So 80% of 26,873 or 21,498 was used as the estimate of OASA Medicaid clients annually receiving any food stamps. Finally, OASA also collects information about income sources. 10,353 clients reported that they had some income in the form of a public assistance cash grant. These figures served as a starting point to figure the reduction in clients receiving any services, based on the assumption that the ISTOP client sample is representative of the whole system.

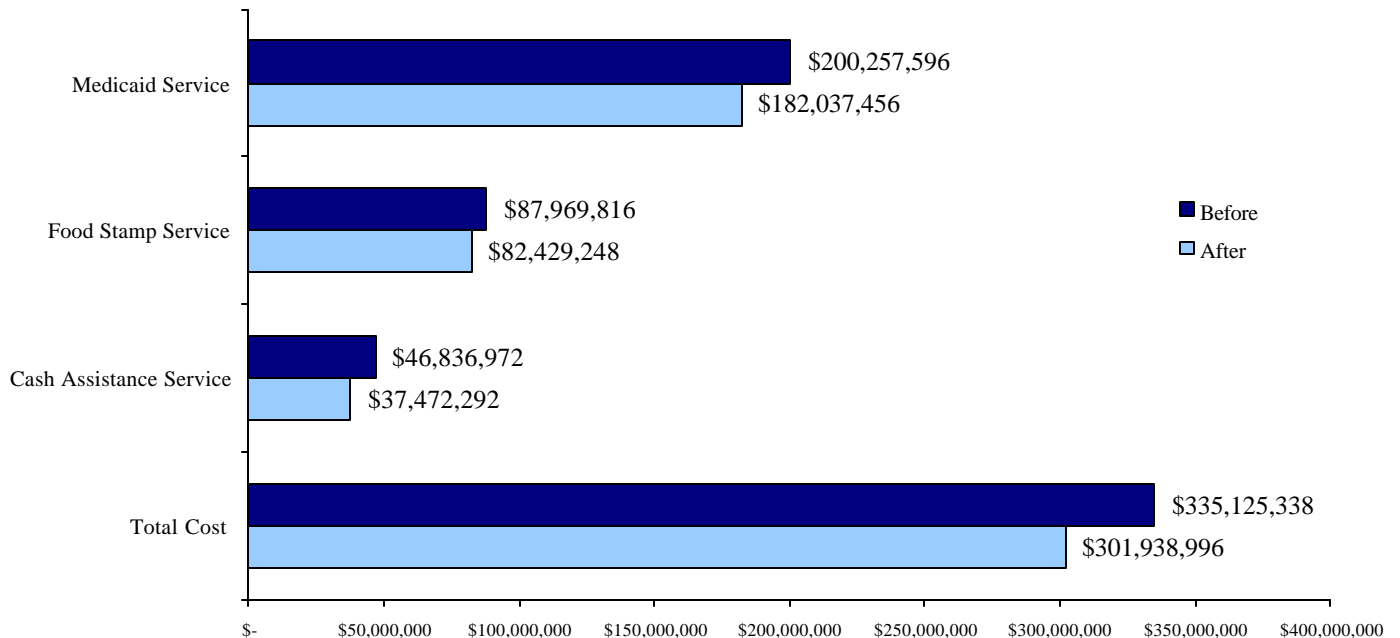
The above estimates of annual numbers of OASA clients receiving public assistance services were then reduced by the percent reduction found in the number of clients served after treatment. Thus, the before treatment group consisted of 26,873 clients annually receiving any Medicaid. This figure was reduced by 9.1% to 24,428 clients receiving Medicaid after treatment (based on the assumption of the same post-treatment reduction seen with the ISTOP sub-sample). Savings were calculated based on 2,445 fewer clients receiving Medicaid at \$621 per month for typical Medicaid services.

³ Public assistance cost figures provided by the Division of Transitional Services.

As shown in Figure 36, the calculated annual savings in FY2000 for Medicaid was \$18,220,140. The projected food stamp annual savings was \$5,540,568 and annual saving from cash assistance was \$9,364,680. The total projected savings in post-treatment public assistance costs were \$33,125,388. This is a 9.9% reduction in costs from the pre-treatment figures. The projected cost of OASA's services to the Medicaid clients in these same levels of care was \$32,414,794. Therefore, even when taking into account the cost of providing treatment, it is estimated that the annual public assistance savings associated with treating substance abuse clients who use these services is approximately \$710,594. It is important to point out that the estimate calculated here only includes savings on Medicaid, food stamps, and cash grants to those receiving substance abuse treatment. A more comprehensive analysis including data on reduced costs associated with criminal justice, child welfare, medical costs, and other social services would most likely result in an even larger estimate of cost savings resulting from substance abuse treatment. In fact, a recent study made the argument that savings in criminal justice costs alone provide an adequate fiscal rationale for alcohol and other drug treatment (Flynn et al., 1999). In addition, The California Drug and Alcohol Treatment Assessment - CALDATA (Gerstein et al., 1994), conducted by the University of Chicago's National Opinion Research Center which included 1,850 clients in 83 programs found that for every \$1 spent on treatment \$7 was saved in social costs, including criminal justice and medical costs.

Figure 36

**Change in Annual Public Assistance Costs
Before and After Substance Abuse Treatment**



Section Highlights

Among the 1,210 ISTOP clients who participated in baseline and follow-up interviews:

- ◆ Drug and alcohol use decreased markedly from baseline to follow-up.
- ◆ The percent of those who used alcohol in the past month (before interview) decreased from 59% to 30% from baseline to follow-up.
- ◆ The percent of those who used marijuana in the past month decreased from 30% to 6% from baseline to follow-up.
- ◆ The percent of those who used cocaine in the past month decreased from 37% to 6% from baseline to follow-up.
- ◆ The percent of those who used heroin in the past month decreased from 24% to 6% from baseline to follow-up.
- ◆ For clients in methadone maintenance (MM), the percent of those who used heroin in the past month decreased from 92% to 25%.
- ◆ The overall occurrence of medical problems and mental health problems decreased for clients from baseline to follow-up. On average, the number of days having medical problems in the past 30 days decreased from 13.2 at baseline to 12.6 at follow-up. The average number of days having psychological problems in the past 30 days decreased from 14.9 at baseline to 13.2 at follow-up.
- ◆ Clients experienced improvements in employment from baseline to follow-up. The average number of days in the past month in which clients earned income increased from 7.1 at baseline to 10.7 at follow-up. The amount of monthly income earned from employment by clients increased from \$405 at baseline to \$600 at follow-up.
- ◆ The percent of clients engaging in illegal activities for profit decreased from baseline to follow-up from 16% to 2%.
- ◆ Overall improvements in family and social relationships occurred from baseline to follow-up. The percent of clients reporting recent serious conflict with family decreased from 29% to 22%, and the percent of clients reporting recent serious conflict with others decreased from 23% to 7%.
- ◆ Factors found to predict abstinence for clients in RR, IOP, and OP are *less drug/alcohol use in the 30 days prior to entering treatment, being in residential treatment, having fewer lifetime overdoses, not living with anyone who has an alcohol problem, and not having problems with immediate family members.*
- ◆ Factors found to predict abstinence for methadone clients are *being younger, living outside of Cook County, not having an arrest history, having more years of methadone use throughout lifetime, and not having immediate family members with drug problems.*
- ◆ For clients in all levels of care, the factors found to predict employment are *being male, being younger, having higher years of education and not having psychiatric problems.*
- ◆ Among clients who received any public assistance before treatment, there was a reduction in the number who received any public assistance after treatment. The monthly saving among ISTOP clients from this reduction in service use was \$53,116. The potential saving to the whole treatment population yields a projected savings in public assistance costs of \$33,186,342 annually.

Section 4. Implications and Recommendations

Summary of Findings

As highlighted throughout this report, clients experienced many positive changes after their participation in substance abuse treatment. Large numbers of clients reported a reduction in negative or harmful behaviors and an increase in positive, healthy behaviors. Most important among the changes observed was the decrease in use of alcohol and other drugs. Substantially fewer clients used alcohol and other drugs after treatment than before treatment. For those who continued to use at follow-up, the number of days using alcohol/drugs decreased. Clients' criminal activity also decreased. At follow-up, clients reported fewer days engaged in illegal activities, and less income generated from illegal activity. Among clients receiving any public assistance, (such as Medicaid, food stamps or cash assistance) before treatment, the percentage of clients who received any public assistance after treatment decreased.

Beyond decreases in substance use and illegal activity, other study findings reveal improvements at follow-up with regard to employment, physical and mental health, and relationships with family and others. At follow-up, clients spent more days working for pay and reported more income from employment. Additionally, a much larger share of their income came from employment rather than from family or friends, criminal activity, public assistance, or other non-work sources. Clients were both physically and mentally healthier at follow-up. Physical health improved slightly with fewer clients reporting health problems. Mental health improvements were more notable. Not only was a smaller percentage of clients experiencing depression, anxiety, and thoughts of suicide, but among those still reporting mental health problems at follow-up, symptoms were experienced on fewer days. Finally, clients got along better with their families, friends, and other acquaintances. Clients reported having fewer conflicts with their families, friends, neighbors, and co-workers, and a higher percentage of clients reported close relationships with their parents at follow-up compared to baseline.

In addition to revealing positive client outcomes, the ISTOP study was able to assess system-level performance in appropriately assigning clients to level of care. In the process of analyzing the data, we found that clients who were using substances more frequently and had greater collateral problems were assigned to a higher level of care (e.g., more intense treatment). This finding reinforces our confidence in the performance of the current treatment system, and encourages investment in further improvements at the system and provider level.

Recommendations

Given the study findings summarized above, the closing section of this report addresses the implications of ISTOP findings, and makes a number of recommendations for improvements in the treatment system. Some of these recommendations involve specific ideas for the funded treatment programs, others are long-term goals for the system as a whole.

Improvements in the Current Treatment System

Findings from ISTOP inform us that the treatment system must continue to be responsive to clients with certain histories and needs. *Specifically, we must continue to seek out effective, innovative approaches for treating individuals who have mental health histories and experiences with emotional, physical, or sexual abuse. Interventions must also be tailored to meet the needs of clients who are at risk of dropping out of treatment and who are mandated into treatment.*

Substance Abuse and Mental Health Services

During the past several years in Illinois, there has been growing attention and effort paid to designing and delivering services to clients who are dually diagnosed as having both severe mental health problems as well as serious substance abuse problems. In FY99, OASA received funding to develop an extensive initiative to improve services to individuals who are dually disordered (MISA). The key priorities of this initiative are to provide for local integration of mental health and substance abuse services for dually disordered individuals and to reduce the barriers preventing access to services for these clients.

Despite increased resources for serving substance abuse clients with severe and persistent mental illness, there is also a need for resources to improve treatment services for clients who may not meet the criteria for a diagnosis of mental illness, but who still face serious mental health symptoms. For instance, this study found that over half of the clients sampled (53%) had experienced serious depression, 48% had experienced serious anxiety and 28% had experienced thoughts of suicide at some point in their lives. These mental health problems were more prevalent among female clients than among males. While these clients are not so severely impaired that they would be targeted for MISA services, they draw attention to an area still requiring specialized services. That is, even among the general population of substance abuse clients, it is likely that many need services for their untreated mental health symptoms. Improvement in referrals to outpatient mental health services and better coordination of services between substance abuse treatment providers and mental health service providers may help these clients achieve better long-term outcomes.

Substance Abuse and Domestic Violence Services

In addition to finding large numbers of clients with mental health problems, this study also revealed a very high percentage of female clients who had been physically, sexually and/or emotionally abused at some point in their lives. Although a number of male clients had also experienced abuse, the majority of individuals with abuse experience was female (57% of women vs. 23% of men).

The importance of substance abuse treatment programs becoming more responsive to clients' experiences with abuse cannot be understated. To begin, programs must carefully

screen all women entering substance abuse services for lifetime histories of abuse as well as for current experience with domestic violence. Substance abuse services must take into account the extreme traumatization clients face as a result of both past and current abuse experience (Illinois Department of Human Services, Domestic Violence/Substance Abuse Interdisciplinary Task Force, 1999).

If domestic violence screening uncovers information that a client is currently in an abusive situation, substance abuse treatment programs must provide adequate referrals to shelters or other service providers who may specialize in domestic violence. Substance abuse treatment staff must work closely with staff from domestic violence programs to coordinate clients' services as much as possible.

Substance Abuse Services and Treatment Drop-Outs

ISTOP findings confirmed the fact that clients have windows of vulnerability when they are more likely (than at other times) to leave treatment. For instance, IOP clients are more likely than clients in other levels of care (and methadone clients) to complete the intake process but not show up for their first treatment appointment (13.9% of IOP clients compared to 4.3% of RR, 8.4% of OP and 9.9% of MM). This makes sense clinically because of the substantial time commitment required of IOP clients. Many of these clients may get discouraged after their intake appointment and decide that the requirements of IOP treatment are too overwhelming for them. It is important for IOP programs, then, to enlist strategies during the intake appointment that stress the benefits of treatment and adequately address the concerns clients may have about their ability to follow through with the treatment regimen. Strategies must also be developed to encourage clients who begin receiving services to stay. Clients who began outpatient (OP) treatment were found to be at greatest risk for dropping out during weeks 2-4 of their programs. Additional work on clients' reasons for leaving at this point in treatment should be supported so that effective approaches may be developed and implemented to address clients' vulnerability to drop out during these weeks.

Substance Abuse Services and Mandated Clients

Some ISTOP clients were mandated to participate in treatment as a result of a DUI conviction or other drug related criminal activity, or as a result of involvement with the Illinois Department of Children and Family Services. These clients may have a different motivation for attending treatment than non-mandated clients. Until recently, the idea that mandated clients are inclined toward resistance and/or hostility has been widely held. This study upholds the results of recent research, namely that, at least for DUI clients, mandated clients do as well in treatment as other clients. We found that DUI clients were more likely to show up for their first treatment appointment, more likely to complete treatment, and more likely to remain in treatment for six months or longer, than non-DUI clients. This last finding is perhaps the most critical, since it suggests that even though DUI clients are initially coerced into attending treatment, at some point they may begin to experience positive benefits and they voluntarily stay in services beyond their mandated stay. The implication for treatment programs is that, even though DUI clients may be initially harder to serve than those who are not mandated, the likelihood of success may actually be greater in the long run. Programs must continue to work with mandated clients on "making the turn," that is, shifting from seeing treatment as something they have to do, to taking ownership of their program and their recovery.

Improve OASA Administrative Tracking

Findings from ISTOP have highlighted a need to allocate resources for the examination of administrative data that may be used to track clients' treatment careers across levels of care. For example, one quarter of clients entering IOP transferred to a different level of care. Unfortunately, it was beyond the scope of the current study to track where these clients went and what kind of services they received, if any. With appropriate staff resources, the existing administrative data system could be used, along with some additional primary data collection, to examine exposure to services across a longer period of time. It would be valuable to know the answers to such questions as 'What happens when clients step-down?' 'Where do they typically go?' and 'What are their long-term outcomes?' We recognize that it may take additional resources to fully answer these questions, but understanding clients' treatment "careers" is an important area which has not received enough attention to date.

Improve Collaboration between DHS Agencies

The intra-agency collaboration that enabled the sharing of data on public assistance was an excellent first step toward learning more about the scope of substance abuse clients' service utilization and needs. Efforts should continue to foster intra- and inter-agency exchanges of existing administrative data. Better understanding clients' involvement with the Department of Children and Family Services, the Division of Transitional Services, the Division of Community Operations, the Department of Corrections, and the Office of Mental Health would increase efficiency at multiple levels. Not only would collaborating agencies and departments learn more about the clients they serve, but clients could ultimately benefit from this collaboration by receiving more comprehensive and effective services.

Continue to Support Outcomes Evaluation Research

The Illinois Statewide Treatment Outcomes Project was the first of its kind and scope for the State of Illinois. We must continue to invest in the evaluation of client outcomes, to build upon the work started with ISTOP. This study has shed light on many issues pertinent to alcohol and other drug treatment, and somewhat expectedly, raised some questions while it answered others. Only continued outcome research can provide additional insight on the chronic nature of drug and alcohol abuse. Further outcome studies, with a longer follow-up period for tracking outcomes, will increase our understanding of substance abuse, treatment services delivered and the process of recovery.

Technical Notes

Data Collection Processes

Recruitment and data collection for ISTOP began in August of 1998 and ended in February of 2000. Recruitment was staggered, occurring in four phases, generally by DHS region (See map in Appendix). Each phase had a training period and active data collection period. During training, staff at participating sites who were designated as recruiters for ISTOP attended a two-day seminar where they learned how to administer the data collection instruments. Data collection began approximately two weeks after training in each phase. Recruitment continued until each site met its target number of clients to be recruited.

Recruitment occurred at 40 sites across Illinois in three levels of care (residential rehabilitation, intensive outpatient, and outpatient) and methadone maintenance. DeltaMetrics, Inc. (the research firm responsible for designing and implementing the study) conducted a power analysis in order to determine the ideal total sample size for ISTOP. Once the total sample size was determined, a target number for each level of care was fixed, and sites providing each level of care were selected randomly from a pool of all providers in the state. After sites for each level of care were confirmed, a target recruitment number for each site at each level of care was calculated. The number of clients each site was expected to recruit in a particular level of care was determined by making projections based on FY97 DARTS admission data. Table A1 in the Appendix supplies the names and final recruitment numbers for all 40 provider sites.

Client participation in ISTOP was voluntary. Enrollment occurred upon completion of the intake process and acceptance into treatment. Any individual eligible to receive treatment at the level of care specified for the recruitment site was eligible to participate in the study. ISTOP employed an 'intent to treat' methodology, in which attempts were made to collect follow-up information on all clients, regardless of whether or not they completed treatment. This methodology was used because early treatment dropout is in itself an outcome, and results can be biased when follow-up information is only collected for those who complete treatment. For clients, participation in the study entailed giving informed consent, participating in a baseline interview, agreeing to be called approximately six months after the baseline interview for a telephone follow-up interview, and completing the follow-up interview. Clients were compensated for both baseline and follow-up interviews.

Data Collection Instruments

The primary instrument for data collection in this study was the Addiction Severity Index-5th edition clinical training version (McLellan et al., 1992). The ASI is a 40-60 minute semi-structured interview that obtains demographic information and assesses lifetime and current (past 30 day) functioning in six key areas commonly affected in alcohol or drug abusing individuals (medical status, employment, alcohol and drug use, legal status, family relations, and psychiatric status).

The ASI administered at follow-up was a shorter version of the full ASI, usually taking about 20 minutes to complete. In addition to the ASI, two other instruments were used in this study. These were the Locator Sheet and the Weekly Service Log. The Locator Sheet, completed at the time of enrollment, asked a number of questions regarding ways in which clients could be contacted in order to complete a follow-up interview. Years of conducting alcohol and other drug use research have taught researchers the importance of obtaining detailed locator information for follow-up. The Locator Sheet used for ISTOP asked not only the address and telephone number where the client lived or expected to return (if in residential treatment), but a number of other key items. These items included: 1) the names of others living at current address; 2) the names and phone numbers and address of three other adults who would know how to reach the client; 3) the best time of day to be contacted; 4) a case worker's name, phone number and address if applicable; 5) a parole/probation officer's name, phone number and address if applicable; 6) the names of other treatment programs attended in the past year; and 7) and the names of other living arrangements (shelter, halfway house etc.) lived at in the past year.

The third data collection instrument used in the study was the Weekly Service Log. This form was completed by treatment staff at the close of every week a client was in treatment. The form was a checklist that required staff to summarize (for a given week) the type of services received by the clients, and to identify the provider of said services. The service log categorized domains of service in the following manner: 1) Alcohol and other drug services; 2) Psychosocial services; 3) Family/Social services; 4) Basics (food, clothing, etc.); 5) Medical services; 6) Employment services; 7) Educational services; 8) Financial services; and 9) Legal services. For methadone clients, staff was asked to complete service logs for the entire length of time clients received treatment, with a cap of six months time.

Follow-up Procedures

Follow-up interviews were completed via telephone by DeltaMetrics interviewers six months after intake. In order to locate clients at follow-up, DeltaMetrics interviewers utilized the locator information provided by the client during ISTOP enrollment. Prior to attempting to contact clients via telephone, DeltaMetrics research staff sent letters reminding clients that they would be paid \$30 for completing a health survey. In addition, the letter provided a toll-free number that clients could call in order to complete their survey. Interviewers then attempted to phone clients and their contacts at different times of the day and evening and on different days of the week. If phone attempts failed, additional correspondence, in the form of postcards, was initiated to the client and/or contact persons provided. Additionally, treatment facilities were also contacted for further information about clients' whereabouts, and/or to leave messages for clients, when appropriate. It should be noted that none of the correspondence from DeltaMetrics (phone or mailing) identified clients as being affiliated with substance abuse treatment in any way. The only exception to this rule was when interviewers contacted the treatment facility at which the client was recruited. Interviewers attempted to contact clients up to 10 times over a 4-6 week period or until they were located and interviewed.

Approximately 65% of clients with whom we attempted to follow-up were located and interviewed. Thirty five percent of clients (680 individuals) did not complete a follow-up

interview. Of those 680 individuals, 42% were non-locatable. Clients were considered non-locatable if all telephone numbers given were either disconnected or went unanswered, if no contacts with whom interviewers spoke had any idea of the client's whereabouts, or if interviewers left messages on machines of contacts where they did not believe the client to be living. An additional 40% of those not interviewed were non-responders. Clients were considered non-responders if interviewers left messages with a person whom they believed the client had contact with, or if they left messages on a machine where the client was believed to live. The remainder of those who did not complete a follow up interview were incarcerated (12%), hospitalized and unable to complete the interview (1%), had died (2%), or withdrew consent to participate in the interview after interviewers spoke with them directly (3%).

Comparison of Those Who Did and Did Not Participate in Follow-up Interviews

Methodologically, it is important to examine potential bias in a study by asking the question of whether or not there are discernible differences between those who participated in follow-up and those who did not. In order to address this issue of bias, an analysis of follow-up was conducted through the use of logistic regression modeling. The results of this analysis can be found in Tables 1 and 2 that follow.

For the most part, there were no major differences between those who followed-up and those who did not. For clients in RR, IOP and OP (N=1,516), those who followed-up tended to be slightly older (approximately two years), were more likely to be female, and were more likely to be non-White. In addition, those who completed the follow-up had more reported years of alcohol/drug use. These differences, displayed in Table 1, are statistically significant, but statistical significance and relevance do not always coincide. In this case, looking at the raw differences in racial and gender composition and in age, we see that the differential is not unexpectedly large, and may be explained by sample size in this study.

For methadone clients (N=374), only one factor of all the factors examined was significantly different for those who followed-up compared to those who did not. Methadone clients who followed-up had been living at their current address for more years on average than clients who did not follow-up. This difference is expected in that having more residential stability reduces the complications of being located for a follow-up interview.

Table 1
Differences Between Clients Completing Follow-up
and Those Not Completing Follow-up
Non-Methadone (RR, IOP, OP)
N=1,516

| | Follow-up | No Follow-up | Significance |
|---|----------------------------|----------------------------|---------------------|
| <i>Age</i> | 34.7 years | 32.8 years | *** |
| <i>Gender</i> | 37.5% Female 62.5% Male | 27.7% Female 72.3% Male | *** |
| <i>Race</i> | 49% White 51% Non-White | 61% White 39% Non-White | *** |
| <i>Years of education</i> | 11.7 | 11.5 | NS |
| <i>Percent in residential rehabilitation</i> | 37.2% | 41.1% | NS |
| <i>Total years living at current address</i> | 4.7 | 4.1 | NS |
| <i>Number of years in life using primary substance+</i> | 15.6 | 13.7 | *** |
| <i>Percent of those using (at baseline) any drugs/alcohol in past thirty days</i> | 74.3% | 73.9% | NS |
| <i>Number of days in past thirty (at baseline) with medical problems</i> | 4.5 | 4.2 | NS |
| <i>Number of days in past thirty (at baseline) engaged in illegal activity</i> | 1.5 | 2.0 | NS |
| <i>Number of days in past thirty (at baseline) paid for work</i> | 8.0 | 7.3 | NS |

Significance Levels:

NS=not significant

* p<.05; **p<.01; ***p<.001

+This variable refers to the longest period of uninterrupted use of one or more substances. Clients were asked to determine the number of years in their life they had used alcohol, marijuana, cocaine and heroin, or more than one of these substances simultaneously. The drug with the longest continual use was designated as primary.

Table 2
Differences Between Clients Completing Follow-up
and Those Not Completing Follow-up
Methadone Treatment
N=374

| | Follow-up | No Follow-up | Significance |
|---|----------------------------|----------------------------|---------------------|
| <i>Age</i> | 37.8 years | 37.0 years | NS |
| <i>Gender</i> | 48.1% Female 51.9% Male | 50.0% Female 50.0% Male | NS |
| <i>Race</i> | 79% White 21% Non-White | 80% White 20% Non-White | NS |
| <i>Years of Education</i> | 11.6 | 11.6 | NS |
| <i>Total years living at current address</i> | 6.6 | 4.3 | * |
| <i>Number of years in life using heroin</i> | 12.6 | 11.4 | NS |
| <i>Percent of those using (at baseline) any drugs/alcohol in past thirty days</i> | 96.6% | 96.2% | NS |
| <i>Number of days in past thirty (at baseline) with medical problems</i> | 4.2 | 6.1 | NS |
| <i>Number of days in past thirty (at baseline) engaged in illegal activity</i> | 7.3 | 7.7 | NS |
| <i>Number of days in past thirty (at baseline) paid for work</i> | 4.6 | 4.8 | NS |

Significance Levels:

NS=not significant

* p<.05; **p<.01; ***p<.001

Description of Survival Methods Used in Examining Length of Stay

In analyzing length of stay in treatment services, much past work has dichotomized the length of stay variable into one that indicates whether or not clients remain for a minimum of 90 days or 12 weeks. Other studies have created a dichotomous variable indicating whether or not clients completed the program. One problem in using a dichotomous distinction of "drop-out" and "completer," especially in longer programs, is that much information about clients' time spent in treatment is lost. To illustrate this point, the following example is provided. There are two treatment programs (programs "A" and "B") which each last 12 weeks. In program "A," 80% of the clients admitted remain for 11 weeks, but the percentage remaining drops to 20% in the 12th week of the program. In program "B," 80% of clients drop out in the first week, yet no additional clients leave during the rest of the program. If a dichotomous distinction between those who complete (stay for 12 weeks) and those who leave early is used in examining attrition in these programs, the percentage of completers will be the same for each program (20%). This may lead to the erroneous conclusion that no differences in client retention exist between the two programs (Poikolainen, 1983).

Because information about time spent in treatment is lost when a dichotomous measure of dropping out is used, this study incorporated advanced statistical methods that made use of all the information related to clients' length of stay in treatment. In examining length of stay in treatment, the study used event history analysis, or "survival" analysis, which is a method of analyzing the entire period of time prior to the occurrence of an event of interest, such as dropping out of services (Yamaguchi, 1991). Sociologists and demographers have used event history methods to study the occurrence and timing of important life events such as births, deaths and marriages. These methods have also been used to examine the occurrence of events among specific treatment samples, such as recidivism among released prison inmates.

Event history methods look at the entire period of time an individual is at risk of experiencing an event and examines the rate of the occurrence of the event during this risk period. Tables 3-5 describe IOP, OP and MM clients' length of stay in treatment through the use of a life table. The first column shows the period of interest, measured in 2-week intervals. The second column shows the number of individuals entering the interval still in treatment ("surviving"). The third column contains the number of clients who drop out of services in each interval. The fourth column gives the mean number of clients who remain and are at risk of dropping out at the beginning of each interval. The fifth column contains the number of "censored" cases, that is, those individuals who either 1) transferred to a different level of care or program (and research staff no longer tracked their participation in treatment), or 2) successfully completed the program. Clients meeting these criteria in a particular interval are not included in the number at risk of dropping out at subsequent intervals. The final column provides the cumulative proportion remaining in treatment. This is the percentage of clients who remain in the program at the beginning of each interval.

It may seem as if an easier way to report length of stay would be to simply report the average number of days spent in treatment. There are several problems with this approach. The main problem for ISTOP was that many clients entered a particular program/level of care, but early in their treatment episode, transferred to a different program/level of care. Since we were unable to track clients once they moved from their original program/level of care, just looking at the number of days they were in treatment would lead to an artificially low estimate, since many of these clients went on to receive services elsewhere. The second problem in reporting average length of stay is that the

"true" value of this measure is unknown for those who do not drop out. For example, in the six month-long ISTOP study, clients who do not drop out may be given a value on the dependent variable equal to the maximum length observed (6 months), yet if the study had lasted eight or twelve months or had not been time-limited, it is unknown what the "true" length of stay would be for these completers. Cases in which an individual does not experience the event of interest during the observation period are also "censored," and simply excluding them or assigning them all the same maximum length of time observed may create substantial bias (Yamaguchi, 1991). Thus, this study has attempted to utilize methods to limit the some of the many common problems found in analyzing and reporting length of stay in services.

Table 3

Life Table Survival Estimates - Clients in Intensive Outpatient Programs

| Duration in Program (Weeks) | # Entering Interval | # Leaving | # Exposed to Risk | Number Censored | Cumulative Proportion Surviving |
|------------------------------------|----------------------------|------------------|--------------------------|------------------------|--|
| 0-2 | 431.0 | 34 | 423.0 | 16 | 1.000 |
| 2-4 | 381.0 | 47 | 366.0 | 30 | 0.920 |
| 4-6 | 304.0 | 38 | 273.0 | 62 | 0.802 |
| 6-8 | 204.0 | 17 | 179.0 | 50 | 0.690 |
| 8-10 | 137.0 | 13 | 119.5 | 35 | 0.624 |
| 10-12 | 89.0 | 6 | 77.0 | 24 | 0.557 |
| 12-14 | 59.0 | 7 | 49.0 | 20 | 0.513 |
| 14-16 | 32.0 | 3 | 29.5 | 5 | 0.440 |
| 16-18 | 24.0 | 1 | 20.0 | 8 | 0.395 |
| 18-20 | 15.0 | 2 | 15.0 | 0 | 0.375 |
| 20-22 | 13.0 | 0 | 11.0 | 4 | 0.325 |
| 22-24 | 9.0 | 1 | 8.0 | 2 | 0.325 |
| 24-26 | 6.0 | 1 | 5.0 | 2 | 0.285 |
| 26-28 | 3.0 | 0 | 2.5 | 1 | 0.228 |
| 28-30 | 2.0 | 0 | 2.0 | 0 | 0.228 |
| 30-32 | 2.0 | 0 | 1.5 | 1 | 0.228 |
| 32-34 | 2.0 | 0 | 0.5 | 1 | 0.228 |

Table 4

Life Table Survival Estimates - Clients in Outpatient Programs

| Duration in Program (Weeks) | # Entering Interval | # Leaving | # Exposed to Risk | Number Censored | Cumulative Proportion Surviving |
|------------------------------------|----------------------------|------------------|--------------------------|------------------------|--|
| 0-2 | 379.0 | 32 | 373.5 | 11 | 1.000 |
| 2-4 | 336.0 | 54 | 325.5 | 21 | 0.914 |
| 4-6 | 261.0 | 35 | 248.0 | 26 | 0.763 |
| 6-8 | 200.0 | 27 | 187.0 | 26 | 0.655 |
| 8-10 | 147.0 | 12 | 134.5 | 25 | 0.560 |
| 10-12 | 110.0 | 8 | 100.5 | 19 | 0.510 |
| 12-14 | 83.0 | 7 | 77.0 | 12 | 0.470 |
| 14-16 | 64.0 | 6 | 58.5 | 11 | 0.427 |
| 16-18 | 47.0 | 3 | 44.0 | 6 | 0.383 |
| 18-20 | 38.0 | 4 | 35.0 | 6 | 0.357 |
| 20-22 | 28.0 | 3 | 24.0 | 8 | 0.316 |
| 22-24 | 17.0 | 2 | 15.0 | 4 | 0.277 |
| 24-26 | 11.0 | 0 | 8.5 | 5 | 0.240 |
| 26-28 | 6.0 | 1 | 5.5 | 1 | 0.240 |
| 28-30 | 4.0 | 2 | 3.5 | 1 | 0.196 |
| 30-32 | 1.0 | 0 | 1.0 | 0 | 0.084 |
| 32-34 | 1.0 | 0 | 0.5 | 1 | 0.084 |

Table 5

Life Table Survival Estimates - Clients in Methadone Programs

| Duration in Program (Weeks) | # Entering Interval | # Leaving | # Exposed to Risk | Number Censored | Cumulative Proportion Surviving |
|------------------------------------|----------------------------|------------------|--------------------------|------------------------|--|
| 0-2 | 352.0 | 0 | 350.0 | 4 | 1.000 |
| 2-4 | 348.0 | 14 | 347.0 | 2 | 1.000 |
| 4-6 | 332.0 | 7 | 328.0 | 8 | 0.960 |
| 6-8 | 317.0 | 15 | 315.5 | 3 | 0.939 |
| 8-10 | 299.0 | 9 | 297.0 | 4 | 0.895 |
| 10-12 | 286.0 | 9 | 284.0 | 4 | 0.867 |
| 12-14 | 273.0 | 5 | 272.0 | 2 | 0.840 |
| 14-16 | 266.0 | 7 | 263.5 | 5 | 0.825 |
| 16-18 | 254.0 | 4 | 252.0 | 4 | 0.803 |
| 18-20 | 246.0 | 7 | 245.0 | 2 | 0.790 |
| 20-22 | 237.0 | 4 | 234.0 | 6 | 0.767 |
| 22-24 | 227.0 | 3 | 226.0 | 2 | 0.754 |
| 24-26 | 222.0 | 2 | 209.5 | 25 | 0.744 |
| 26-28 | 195.0 | 5 | 141.5 | 107 | 0.737 |
| 28-30 | 83.0 | 2 | 62.5 | 41 | 0.711 |
| 30-32 | 40.0 | 0 | 32.0 | 16 | 0.688 |
| 32-34 | 24.0 | 0 | 17.0 | 14 | 0.688 |
| 34-36 | 10.0 | 0 | 7.5 | 5 | 0.688 |
| 36-38 | 5.0 | 0 | 3.5 | 3 | 0.688 |
| 38-40 | 2.0 | 0 | 1.5 | 1 | 0.688 |
| 40-42 | 1.0 | 0 | 0.5 | 1 | 0.688 |

Challenges and Issues Related to ISTOP

Use of Program Staff

Given the enormous scope of this study, involving 40 providers geographically spread out over 430 miles, the decision was made early on to enlist the help of provider staff in collecting the baseline interview data. The use of provider staff led to a number of challenges in the collection of data. Extensive training was required so that treatment provider staff were competent in the administration of the ASI. Unfortunately, many staff who attended the initial ASI training left their jobs with programs in ISTOP before the end of the study. Given the rate of turnover, ongoing training and technical assistance were necessary throughout the duration of data collection.

The paperwork involved in data collection for ISTOP created an additional burden for program staff. Not only was the work time consuming, but for some, the burden was made worse by the fact that it was their first exposure to field research. Despite the efforts of program staff, paperwork still required careful review by DeltaMetrics staff.

Self -Reported Information

The data collected on ISTOP clients pertaining to demographics, substance use and problems in other life domains was based upon client self-reports. The study relied exclusively upon the ASI, and did not attempt to validate ASI data with collateral data sources. Given this fact, we cannot be certain that client reports were accurate or reliable. However, research on alcohol and other drug use has specifically addressed the topic of self-report reliability in the last decade. Findings from this research indicate that client reports about alcohol and other drug use tend to be quite accurate (McLellan et al., 1994). Given that clients enrolled in ISTOP while they were seeking treatment for a drug/alcohol problem, we might expect that they were motivated to be truthful in order to be best matched with an appropriate level of care.

Generalizability

The overall recruitment rate for ISTOP was 65%. The follow-up rate was also 65%. These percentages are quite good for a field study of this magnitude. However, the fact that 35% of individuals eligible did not participate in the study, and the fact that 35% those who participated did not follow-up raises some concern about the extent to which the findings in this report can be generalized to the entire treatment population in Illinois. As in most large studies such as ISTOP, generalizability is a concern. Attempts were made to reduce systematic bias whenever possible. In addition, system-wide demographic comparisons between ISTOP clients and non-ISTOP clients were conducted to determine whether clients in the study differed from clients not recruited into the study, and whether or not those who followed-up differed from those who did not follow-up. Despite all conscientious efforts in this area, there will always be some level of uncertainty about systematic bias and generalizability. These issues are fundamental to the research process.

Appendix

Table A1

| Provider | | | | | Total |
|---|------------|------------|------------|------------|-------------|
| | RR | IOP | OP | MM | |
| C4-Recovery Point | 0 | 57 | 74 | 0 | 131 |
| CEAD Council | 0 | 2 | 35 | 0 | 37 |
| Center for Alcohol & Drug Services - Country Oaks | 21 | 0 | 0 | 0 | 21 |
| Center for Alcohol & Drug Services - Rock Island | 0 | 30 | 11 | 6 | 47 |
| Community Counseling of Fox Valley | 17 | 18 | 5 | 0 | 40 |
| Comprehensive MHC of St. Clair County - ARTS | 0 | 31 | 18 | 0 | 49 |
| Comprehensive MHC of St. Clair County - SMARTS | 51 | 1 | 0 | 0 | 52 |
| Cornell Interventions Lifeworks Program | 0 | 0 | 0 | 8 | 8 |
| Cornell Interventions North Side | 0 | 0 | 0 | 33 | 33 |
| Family Guidance Center - Aurora | 0 | 0 | 0 | 6 | 6 |
| Family Guidance Center - Chicago | 0 | 0 | 0 | 121 | 121 |
| Family Guidance Center - Des Plaines | 0 | 0 | 0 | 12 | 12 |
| Family Service and CMHC for McHenry County | 0 | 33 | 24 | 0 | 57 |
| Garfield Counseling Center | 0 | 0 | 0 | 67 | 67 |
| Gateway Foundation - Caseyville | 68 | 0 | 0 | 0 | 68 |
| Gateway Foundation - Springfield | 59 | 3 | 6 | 0 | 68 |
| Healthcare Alternative Systems, Inc. | 57 | 39 | 24 | 0 | 120 |
| Heritage Behavioral Health Geoghegan Recovery | 0 | 0 | 0 | 9 | 9 |
| Human Resources Development Institute, Inc. (MM) | 60 | 0 | 0 | 0 | 60 |
| Human Resources Development Institute, Inc. (RR) | 0 | 0 | 0 | 35 | 35 |
| Human Service Center - CICTA | 0 | 0 | 0 | 16 | 16 |
| Human Service Center - Men's Residential | 59 | 0 | 0 | 0 | 59 |
| Human Service Center - Outpatient | 0 | 35 | 3 | 0 | 38 |
| Human Service Center - Women's Residential | 44 | 1 | 0 | 0 | 45 |
| Lake County Health Dpt. & Community Health Ctr. | 14 | 0 | 0 | 0 | 14 |
| Lutheran Social Services of Illinois | 0 | 2 | 34 | 0 | 36 |
| PEER Services, Inc. | 0 | 0 | 0 | 61 | 61 |
| Prairie Center Health Systems, Inc. - Champaign | 55 | 6 | 4 | 0 | 65 |
| Prairie Center Health Systems, Inc. - Urbana | 1 | 18 | 23 | 0 | 42 |
| Recovery Resources, Inc. | 0 | 37 | 22 | 0 | 59 |
| Renz Addiction Counseling Center | 0 | 15 | 14 | 0 | 29 |
| Riverside Resolve Center | 0 | 9 | 0 | 0 | 9 |
| Rosecrance on Harrison | 0 | 107 | 20 | 0 | 127 |
| Rosecrance on State | 0 | 15 | 3 | 0 | 18 |
| Sojourn House | 29 | 0 | 0 | 0 | 29 |
| South East Alcohol and Drug Abuse Center | 0 | 27 | 47 | 0 | 74 |
| St. Anthony's Health Center | 0 | 13 | 6 | 0 | 19 |
| Stepping Stones | 21 | 0 | 0 | 0 | 21 |
| Triangle Center - Springfield | 28 | 26 | 2 | 0 | 56 |
| Triangle Center - Taylorville | 0 | 0 | 32 | 0 | 32 |
| | 584 | 525 | 407 | 374 | 1890 |

Table A2
Illinois Statewide Treatment Outcomes Project
Alcohol and Other Drug Use by Level of Care and Methadone Clients

| | | RR N=350 | IOP N=337 | OP N=255 | MM N=268 | Total N=1,210 |
|--|-----------|--------------------|---------------------|--------------------|--------------------|-------------------------|
| Percent Using Alcohol in Past 30 Days | Baseline | 71.2 | 60.6 | 49.6 | 47.9 | 58.5 |
| | Follow-up | 29.1 | 30.6 | 32.0 | 27.7 | 29.8 |
| Percent Using Marijuana in Past 30 Days | Baseline | 44.3 | 29.3 | 11.4 | 27.6 | 29.6 |
| | Follow-up | 6.9 | 6.3 | 4.7 | 7.5 | 6.4 |
| Percent Using Cocaine in Past 30 Days | Baseline | 57.0 | 29.9 | 9.4 | 45.1 | 36.8 |
| | Follow-up | 5.7 | 5.7 | 2.8 | 10.5 | 6.2 |
| Percent Using Heroin in Past 30 Days | Baseline | 9.6 | 2.7 | 0.8 | 92.1 | 24.2 |
| | Follow-up | 0.9 | 0.9 | 0.4 | 25.2 | 6.2 |
| <u>Among Those Who Used in Past 30 Days</u> | | | | | | |
| Days Using Alcohol in Past 30 | Baseline | 14.3 (247) | 9.0 (203) | 6.6 (126) | 8.5 (127) | 10.3 (703) |
| | Follow-up | 8.9 (101) | 6.2 (102) | 5.4 (81) | 8.1 (74) | 7.2 (358) |
| Days Using Marijuana in Past 30 | Baseline | 10.5 (153) | 6.7 (99) | 9.0 (29) | 9.1 (72) | 9.0 (353) |
| | Follow-up | 7.5 (24) | 10.2 (21) | 5.2 (12) | 8.9 (20) | 8.2 (77) |
| Days Using Cocaine in Past 30 | Baseline | 15.0 (199) | 8.2 (100) | 6.6 (24) | 9.1 (119) | 11.4 (442) |
| | Follow-up | 8.4 (20) | 4.7 (19) | * | 8.6 (28) | 7.5 (74) |
| Days Using Heroin in Past 30 | Baseline | 17.3 (33) | * | * | 26.1 (245) | 24.5 (289) |
| | Follow-up | * | * | * | 11.8 (67) | 12.1 (74) |

* N in this cell is too small (less than 10) to calculate a meaningful average.

Table A3

**Illinois Statewide Treatment Outcomes Project
Alcohol and Other Drug Use by Gender**

| | | Males N=728 | Females N=482 | Total N=1,210 |
|--|-----------|-----------------------|-------------------------|-------------------------|
| Percent Using Alcohol in Past 30 Days | Baseline | 60.9 | 55.0 | 58.5 |
| | Follow-up | 32.5 | 25.8 | 29.8 |
| Percent Using Marijuana in Past 30 Days | Baseline | 31.0 | 27.3 | 29.6 |
| | Follow-up | 7.5 | 4.8 | 6.4 |
| Percent Using Cocaine in Past 30 Days | Baseline | 30.8 | 45.9 | 36.8 |
| | Follow-up | 5.3 | 7.5 | 6.2 |
| Percent Using Heroin in Past 30 Days | Baseline | 21.1 | 28.9 | 24.2 |
| | Follow-up | 6.7 | 5.4 | 6.2 |
| <i>Among Clients who Used in Past 30 Days</i> | | | | |
| Average Days Using Alcohol in Past 30 | Baseline | 10.7 (440) | 9.8 (263) | 10.3 (703) |
| | Follow-up | 7.2 (234) | 7.0 (124) | 7.2 (358) |
| Average Days Using Marijuana in Past 30 | Baseline | 9.6 (224) | 8.0 (129) | 9.0 (353) |
| | Follow-up | 8.6 (54) | 7.4 (23) | 8.2 (77) |
| Average Days Using Cocaine in Past 30 | Baseline | 10.4 (223) | 12.4 (219) | 11.4 (442) |
| | Follow-up | 6.8 (38) | 8.2(36) | 7.5 (74) |
| Average Days Using Heroin in Past 30 | Baseline | 24.5 (152) | 24.5 (137) | 24.5 (289) |
| | Follow-up | 11.0 (48) | 14.2 (26) | 12.1 (74) |

References

CSAT, Treatment Improvement Protocol Series #14. (1995). Developing state outcomes monitoring systems for alcohol and other drug abuse treatment (DHHS Publication No. (SMA) 95-3031). Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

DeLeon, G. (1986). The therapeutic community for substance abuse: Perspective and approach. In G. DeLeon & J. Ziegenfuss, Jr. (Eds.), Therapeutic communities for addictions: Readings in theory, research and practice (pp. 5-19). Springfield, IL: Charles C. Thomas.

Dunn, J., Ferri, C. P., & Laranjeira, R. (2001). Does multisite sampling improve patient heterogeneity in drug misuse research? Drug and Alcohol Dependence, 63, 79-85.

Flynn, P. M., Kristiansen, P. L., Porto, J. V., & Hubbard, R. L. (1999). Costs and benefits of treatment for cocaine addiction in DATOS. Drug and Alcohol Dependence, 57, 167-174.

Gerstein, D. R., Johnson, R. A., Harwood, H. J., Fountain, D., Suter, N., & Malloy, K. (1994). Evaluating recovery services: The California Drug and Alcohol Treatment Assessment (CALDATA). Sacramento: California Department of Alcohol and Drug Programs.

Goldapple, G. C., & Montgomery, D. (1993). Evaluating a behaviorally based intervention to improve client retention in therapeutic community treatment for drug dependency. Research on Social Work Practice, 3, 21-39.

Grella, C. E., Hser, Y. I., Joshi, V., & Anglin, M. D. (1999). Patient histories, retention, and outcome models for younger and older adults in DATOS. Drug and Alcohol Dependence, 57, 151-166.

Harrison, P. A., & Asche, S. E. (2000). The challenges and benefits of chemical dependency treatment: Results from Minnesota's treatment outcomes monitoring system 1993-1999. St. Paul: Minnesota Department of Human Services, Performance Measurement & Quality Improvement Health Care Research and Evaluation Division.

Hubbard, R. L., Craddock, S. G., Flynn, P. M., Anderson, J., & Etheridge, R. M. (1997). Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). Psychology of Addictive Behaviors, 11 (4), 261-278.

Illinois Department of Human Services. (1997). State of Illinois Department of Human Services Plan. Springfield, IL: Author.

Illinois Department of Human Services, Domestic Violence/Substance Abuse Interdisciplinary Task Force. (1999). Safety, sobriety, and justice: Better practice in substance abuse and domestic violence. Springfield, IL: Author.

Luchansky, B., Brown, M., Longhi, D., Stark, K., & Krupski, A. (2000). Chemical dependency treatment and employment outcomes: Results from the 'ADATSA' program in Washington State. Drug and Alcohol Dependence, 60, 151-159.

McLellan, A. T., Alterman, A. I., Metzger, D. S., Grissom, G. R., Woody, G. E., Luborsky, L., & O'Brian, C. P. (1994). Similarity of outcome predictors across opiate, cocaine, and alcohol treatments: Role of treatment services. Journal of Consulting and Clinical Psychology, 62, 1141-1158.

McLellan, A. T., Kushner, H., Metzger, D., Peters, R., Smith, I., Grissom, G., Pettinati, H., & Argeriou, M. (1992). The fifth edition of the Addiction Severity Index. Journal of Substance Abuse Treatment, 9, 199-213.

Miller, W. R., Walters, S. T., & Bennett, M. E. (2001). How effective is alcoholism treatment in the United States? Journal of Studies on Alcohol, 62, 211-220.

Poikolainen, K. (1983). Survival methods in the evaluation of the outcome of alcoholism treatment. British Journal of Addiction, 78, 403-407.

Schildhaus, S., Gerstein, D., Brittingham, A., Cerbone, F., & Dugoni, B. (2000a). Services Research Outcomes Study: Overview of drug treatment population and outcomes. Substance Use & Misuse, 35 (12-14), 1849-1877.

Schildhaus, S., Gerstein, D., Dugoni, B., Brittingham, A., & Cerbone, F. (2000b). Services Research Outcomes Study: Explanation of treatment effectiveness, using individual-level and programmatic variables. Substance Use & Misuse, 35 (12-14), 1879-1910.

Schmidt, L., & Weisner, C. (1993). Developments in alcoholism treatment. In M. Galanter (Ed.), Recent developments in alcoholism, Volume 11: Ten years of progress. New York, NY: Plenum Press.

Simpson, D. D., Joe, G. W., Broome, K. M., Hiller, M. L., Knight, K., & Rowan-Szal, G. A. (1997). Program diversity and treatment retention rates in the Drug Abuse Treatment Outcome Study (DATOS). Psychology of Addictive Behaviors, 11 (4), 279-293.

Simpson, D. D., Joe, G. W., & Brown, B. S. (1997). Treatment retention and follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). Psychology of Addictive Behaviors, 11 (4), 294-307.

Sosin, M. R., Yamaguchi, J., Bruni, M., Grossman, S., Leonelli, B., Reidy, M., & Schwingen, J. (1994). Treating homelessness and substance abuse in community context: A case management and supported housing demonstration. Chicago, IL: University of Chicago, School of Social Service Administration.

Stark, M. J. (1992). Dropping out of substance abuse treatment: A clinically oriented review. Clinical Psychology Review, 12, 93-116.

Yamaguchi, K. (1991). Event history analysis. Newbury Park, CA: Sage Publications, Inc.