Process and Outcome Evaluation of the Iowa First Judicial District Department of Correctional Services Dual Diagnosis Offender Program (DDOP)

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Prepared by

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Executive Summary

This study consists of a process and outcome evaluation of the First Judicial District's Dual Diagnosis Offender Program (DDOP). The study was supported by Byrne funds through the Iowa Office of Drug Control Policy, which provided partial support for DDOP operation.

The purposes of the study were to:

- explain the context of the program, its history and funding sources;
- depict the program staff;
- describe the program and activities;
- portray the beneficiaries of the program and describe who completes it;
- describe changes to the program; and
- assess participants and a comparison group on measures such as recidivism, substance abuse relapse, and justice system costs.

Program

The Dual Diagnosis Offender Program (DDOP) is delivered by the First District Department of Correctional Services. The residential portion is housed at the Waterloo Residential Correctional Facility and consists of a 16–bed unit for male offenders. The program began in 1998 and was created to fill a void in services for criminally-involved dual-diagnosed individuals. The goal of DDOP is to divert clients from incarceration and crime and enhance coordination of criminal justice and mental health services for the target population. The program provides integrated substance abuse and mental health group and individual treatment, which empirical research has identified as being an effective treatment model. The program also incorporates other elements that have been identified in the literature as being effective for dually-diagnosed offenders.

Staff

DDOP staff had varying educational and professional backgrounds and years of experience, a reflection of a program with a multidisciplinary team. Most staff had at least a Bachelor's degree and professional background in human services or counseling with roughly half being with DDOP for up to five years.

Program Clients

Between January 1, 2001 and September 30, 2007, 236 males were admitted to the DDOP. Offenders were court ordered into the program for a minimum of six months and a maximum of one year. Participants spent an average of about five months in the residential program, with about 60% completing the residential program.

The average participant at entry was 32 years old, white (71.6%), unmarried (86.0%) and had a GED or high school diploma (61.4%). Most had a prior prison admission (56.8%) and were under supervision for a felony (73.3%). Over one-third reported poly-drug usage (35.2%). Among the 73.3% of participants for whom data on chronic mental illnesses were available, 78% had a serious mental illness. The average score on the Level of Service Inventory-Revised (LSI-R) was

37.3, in the moderate/high risk category, with relatively high average sub-scores on alcohol/drugs (6.0 out of 9) and emotional/personal (4.5 out of 5) indicators.

DDOP Study Group

The DDOP study group included all offenders who started the program after January 1, 2001 and were discharged by September 30, 2005 (n= 144). The matched "comparison group" was comprised of individuals who entered community supervision between January 1, 2001 and December 30, 2005 (n=106). While there were some differences in characteristics between the study and comparison groups, they were sufficiently similar to permit valid comparisons.

Outcomes

The DDOP study group and comparison group were tracked for the three years following their entry to DDOP or community supervision. Outcome measures included recidivism and substance abuse relapse. Justice system costs were also tracked for a three year time period for the groups.

Generally, on recidivism measures, the DDOP study group completers had outcomes similar to the comparison group, while non-completers fared worse.

- 70.9% of the completers and 73.6% of the comparison group had a new conviction compared to 86.2% of the non-completers.
- 19.8% of the completers and 17.9% of the comparison group had a new felony compared to 37.9% of the non-completers.
- 48.8% of the completers and 42.5% of the comparison group returned to prison compared to 98.3% of the non-completers.

On relapse measures, the DDOP study group completers and non-completers showed similar outcomes, while the comparison group fared worse.

- Half of the completers and 41.1% of the non-completers had a positive drug test, compared to 64.7% of the comparison group.
- 18.6% of the completers and 17.2% of the non-completers had a new drug conviction, compared to 25.5% of the comparison group.
- 62.8% of the completers and 55.2% of the non-completers had a positive drug test *or* a new drug or alcohol conviction, compared to 71.7% of the comparison group.

In terms of justice systems costs, DDOP non-completers had the highest three-year supervision costs, followed by DDOP completers. Longer-term study is necessary to determine the true financial impact of the program.

Race

Outcomes suggested that white and non-white DDOP participants benefitted equally from the program. This is noteworthy because non-whites tend to have higher rates of failure than whites in most correctional programming. There were considerable differences in outcome measures between non-white DDOP clients and their comparison group counterparts.

Introduction

In summer 2007, the Division of Criminal and Juvenile Justice Planning (CJJP) was asked by the Governor's Office of Drug Control Policy (ODCP) to evaluate the First Judicial District's Dual Diagnosis Offender Program (DDOP). CJJP received Byrne Justice Assistance Grant (JAG) Program funds to conduct a process and outcome evaluation.

The First Judicial District's Dual Diagnosis Offender Program (DDOP) is an integrated treatment program for offenders who experience co-occurring mental health and substance abuse disorders. The primary treatment program is located in the Waterloo Residential Facility and provides participants with on-site substance abuse and mental health treatment. Participants successfully completing the residential program are provided continuing support through the aftercare component of the program.

The purposes of the process portion of the study were to describe the program; depict the program staff; portray the beneficiaries of the program and describe changes to the program over time. The purposes of the outcomes portion of the study were to assess program participants on measures such as recidivism, substance abuse relapse, and justice systems costs.

Evaluation questions explored in this report were:

1. What is the program's context (e.g., sponsorship of the program, setting, history, and funding)?

2. Who staffs the program (e.g., number and characteristics, length of time with program, job duties, and educational/training background)?

3. What were the program activities?

4. Who are the beneficiaries (e.g., number and characteristics, length of stay in program, completion status, background, and risk level)?

5. Who completes the program?

6. How has the program changed over time?

7. Does the program reduce recidivism?

8. Does the program reduce substance abuse relapse?

9. Does the program save money?

Literature Review

Dual diagnosis, the co-occurrence of mental illness and drug/alcohol abuse, affects a considerable number of individuals involved in the criminal justice system. The prevalence of dual diagnosis varies widely depending on the study's sample and setting (SAMHSA, p.2). Nevertheless, it is estimated that a quarter to a half of the people with severe mental illnesses are affected by substance abuse during their lives (Drake, Essock, Shaner, Carey, Minkoff, Kola, Lynde, Osher, Clark, & Rickards, 2001; SAMHSA; GAINS). Among the incarcerated population, an estimated five percent of jail inmates and thirteen percent of prisoners have a dual diagnosis (GAINS 1997).

Dually-diagnosed individuals pose greater risk and are more likely to re-enter the criminal justice system than people who suffer only from mental illness (Hartwell 2004). Drugs and alcohol may precipitate the symptoms of mental disorders and make relapse more likely as individuals medicate to reduce the symptoms of mental disorders (Peters & Hills 1997, p.33). Jails have become "psychiatric crisis centers of last resort," and without treatment services, people are likely to cycle in and out (Osher, Steadman, & Barr 2003, p.3).

The nature of a co-occurring substance abuse and mental illness makes treatment important; however, the correctional system, community treatment services, and the unique characteristics of dually-diagnosed offenders present challenges to treatment. Jail systems are sometimes poorly coordinated with mental health services in the community, and jail officials may lack awareness of community programs. Also, some community treatment services have program admission guidelines that exclude people with criminal histories (Peters & Hills 1997). Furthermore, stigmatization associated with mental illness and substance abuse may limit offenders' access to basic community resources, such as housing. Dually-diagnosed offenders have differing service needs and levels of functioning than offenders with only mental health issues (Hartwell 2004) and are often difficult to treat due to blaming of others, distrust of service providers, and sudden symptom changes (Peters & Hills 1997).

There are several models of community treatment for dual diagnosis offenders: 1) sequential treatment, which offers referrals from one service to another; 2) parallel treatment, which coordinates two service systems; and 3) integrated treatment, identified as being the most effective model, in which a team of multidisciplinary staff simultaneously provide services to clients all in one setting (GAINS; Peters & Hills 1997). Elements identified as contributing to client success (using various outcome measures including psychiatric symptoms, substance abuse, employment, recidivism, and housing) include:

- Integrated substance abuse, mental health, justice, and medical services that collaborate around the common goal of rehabilitating clients (Drake et. al 2001; Draine & Solomon 1999; Brunette, Mueser, & Drake 2004; Minkoff 2006)
- Creating stages of progress as clients move through the program (Drake et. al 2001).

- Introducing a variety of treatment options, such as social skill education, substance abuse counseling, family intervention (Drake et. al 2001), and general (life) and substance-specific (behavioral) coping skills (Moggi, Ouimette, Moos, & Finney 1999)
- Outreach to link offenders to community services (Drake et. al 2001)
- Helping clients establish life goals to motivate them to change their behaviors (Drake et. al 2001)
- Long-term rehabilitation (Drake et. al 2001)
- Therapeutic treatment programs (which use a behavioral cognitive treatment approach) combined with an aftercare program (Sacks, Sacks, McKendrick, Banks, & Stommel 2004).
- More intensive treatment programs (Timko & Sempel 2004)
- Residential treatment offers advantages, providing clients with a structured "built-in" community, peer support, and housing; however, more research is needed to establish the characteristics of individuals who benefit most from it (Brunette et al. 2004).
- 12-Step programming that focuses on building peer support networks (Aase, Jason & Robinson 2008; Moggi et. al 1999b).
- Programs that are welcoming, empathetic, acknowledge clients' individuality, and tailor the interventions and short term goals to meet each individual's needs and levels of functioning (Minkoff & Cline 2004).

Although the integrated treatment model is identified as being the most effective, it is difficult to adapt in the traditional correctional system (Peters, LeVasseur, & Chandler 2004; Chandler & Spicer 2006) and is also costlier to implement (GAINS). Jails play a role in transitioning offenders into the community, and ideally should develop a discharge plan, identify community treatment programs, and establish linkages between offenders and community treatment services (Osher et. al 2003). Some jails have created specific diversion programs to divert dually-diagnosed offenders before they enter the criminal justice system or before they are released back into the community (Draine & Solomon 1999, p.56). Jail diversion programs that provide treatment reduce subsequent incarceration time (GAINS 2004b), especially among those who are arrested for minor offenses that carry longer jail time (Hoff, Rosenheck, Baranosky, Buchanan, & Zonana 1999); however, they do not significantly reduce re-arrest rates (GAINS 2004b) and may be more effective when coupled with a long-term community outreach program (Chandler & Spicer 2006, p.421).

Methods

Data for the process portion of this evaluation were collected through document reviews and semi-structured individual interviews with former and current program and residential staff. Two of the evaluators interviewed a total of eleven former and current program staff, residential officers, and supervisors. The following documents were reviewed: treatment, phase sheets, and discharge plan forms; job descriptions; and curriculum materials. The interview sessions were audio recorded and transcribed. Independently, three analysts read through the transcripts to identify themes and patterns. The analysts then met to discuss the larger themes that emerged and resolve any issues in interpretation. Program documents were reviewed using standard protocols.

A list of program participants, their dates in the residential portion of the program, and their completion statuses were provided by the dual diagnosis program staff. This study examined two treatment groups and one comparison group. The first treatment group, referred to as the "participant group," included all offenders who were served in the First District Dual Diagnosis Offender Program (DDOP) from January 1, 2001 through September 30, 2007 (n=236). Information collected on the participant group included offender characteristics, program retention length, and completion rates. The information for the participant group is presented in the program beneficiaries section of this document and is intended to provide descriptive data on the typical dual diagnosis participant.

The second treatment group, referred to as the "study group", was all offenders in the DDOP who started after January 1, 2001 and were discharged by September 30, 2005 (n= 144). These parameters allowed for the inclusion of participants who started after implementation of the Iowa Corrections Offender Network (ICON), permitting the collection of three years of recidivism data. This group is examined in the outcome section of the report.

Originally, the evaluators had hoped to have two comparison groups: a referred and a matched group. However, records were not kept on individuals referred to DDOP, but not accepted, so only a matched group was drawn. The matched comparison group was comprised of individuals who entered community supervision between January 1, 2001 and December 30, 2005 (n=106).

It was difficult to draw a matched group that was comparable to the dual diagnosis population on all background and demographic elements. However, the comparison group was comparable to the study group on several key elements, including age, Level of Service Inventory-Revised (LSI-R) total score, emotional/personal and alcohol/drug abuse sub-scores from the LSI-R, marital status, types of drugs abused, and having a "serious mental illness." It differed from the study group in terms of race, most serious offense at study entry, prior prison admission, and prior interventions and intervention programs. The comparison group had a higher percentage of white offenders (80% vs. 67% in the study group) and was *less likely* to have offenders with a current felony conviction (43% vs. 72%), a prior prison admission (38% vs. 59%), a prior intervention (15% vs. 44%), or a prior intervention program (11% vs. 35%). It

should be noted that the study group tended to have more serious current and former involvement in the justice system.

Data indicating individual offenders' phase completion through the program were not readily available in ICON. Additionally, aftercare data were limited. Aftercare for dual diagnosis participants was not tracked in ICON until 2005. Examination of the 2005 to 2008 data showed that 74 DDOP participants were successfully discharged from the program, but not all of them entered aftercare. Additional detail regarding the aftercare finding is provided in the beneficiary section of this report.

Study group and comparison group members were tracked for the three years following their entry to DDOP or community supervision. Outcome measures included recidivism (measured by a new in-state conviction or any return to Iowa prison) and substance abuse relapse (indicated by a positive unsatisfactory urinalysis or breath analysis test result or a new in-state conviction for drug or alcohol related offenses). Please note that recidivism and substance abuse relapse findings may be conservative because out-of-state convictions were not collected.

Cross tabulations and tables presenting percentages and averages were used to explore relationships between the various outcome indicators and offender background variables. Differences between groups (study group vs. comparison group and program completers vs. non-completers) were assessed depending on the dependent variable of interest. A cost comparison analysis was also conducted.

Data Sources

Semi-structured interviews were conducted with program staff and program documents were reviewed. Demographic variables and outcomes were obtained from electronic sources: Iowa Court Information System (ICIS) for recidivism data (convictions) and Iowa Corrections Offender Network (ICON) for incarceration and supervision data. Recidivism data were extracted from the Iowa Justice Data Warehouse (IJDW), a central repository of key Iowa criminal and juvenile justice information which is managed by the Iowa Division of Criminal and Juvenile Justice Planning. The IJDW includes data from the Iowa Computerized Criminal History (CCH) and the Iowa Court Information System (ICIS), as well as information from the Iowa Correctional Offender Network (ICON) system. Table 1 provides a list of variables examined and data sources.

Table 1. Study Variables and Sources

Study Variables	Sources
Program Process & Staff	
Program curriculum and activities	Interviews, Documents
Program staff background and job descriptions	Interviews, Documents
Program changes	Interviews
Offender Demographics/Background	
Participant and study group	DDOP
Comparison group	ICON
ICON number	ICON
Name	DDOP, ICON
Date of birth	DDOP, ICON
Age	ICON
Race	ICON
Marital status	ICON
Highest level of education	ICON
Prior prison admission(s)	ICON
Prior intervention(s)	ICON
Prior intervention program(s)	ICON
Most serious conviction class at study entry	ICON
LSI-R scores – total score, emotional/personal sub-score, and alcohol/drug problem sub-score	ICON
Chronic mental illness diagnosis	ICON
Drug Problem	ICON
DDOP program start date (residential)	DDOP
DDOP program end date (residential)	DDOP
DDOP program start date (aftercare)*	ICON
DDOP program end date (aftercare)*	ICON
DDOP program status (completer, non-completer)	DDOP

Offender Outcomes	
New conviction(s) – number and type	ICIS
Return to prison (including technical violations)	ICON
Urinalyses/breath analysis	ICON
New drug/ alcohol conviction(s)	ICIS
Offender Costs	
Daily cost per offender for DDOP residential and aftercare phases and field supervision	DDOP; IDOC - First Judicial District year 2005 costs
Supervision statuses	ICON

*Incomplete data

Program Process

The following section, based on a review of documents, interviews with program staff, and a 2004 article by the Director of the first judicial district, provides a description of the following aspects of the Dual Diagnosis Offender Program:

1. explains the context of the program, its history and funding sources;
2. depicts the program staff;
3. describes the program and activities;
4. portrays the beneficiaries of the program and describes who completes it; and
5. describes changes to the program.

Program Context

The Dual Diagnosis Offender Program (DDOP) began in 1998 and was created to fill a void in services for criminally-involved, dual-diagnosed individuals and to address the unique problems they posed in the criminal justice system. Before DDOP, individuals with these characteristics may have been ignored, incarcerated in jail or prison, or terminated from community agencies because of their ongoing drug use, ongoing mental health issues, or non-compliance. Other treatment in the community offered parallel systems with little interaction between substance abuse treatment and mental health and/or required insurance. The goal of DDOP was to divert clients from incarceration and crime and enhance coordination of criminal justice and mental health services (Craig 2004).

The Dual Diagnosis Offender Program is delivered by the First District Department of Correctional Services. The residential portion is housed at the Waterloo Residential Correctional Facility and consists of a 16–bed unit for male offenders.

In interviews, staff members reported a strong belief that the program was having a positive impact on offenders, working well, and fulfilling a purpose in the community. “The whole reason behind starting the program was that they weren’t being served a lot of times. Whether they were being incarcerated and then going to prison or being in jail and …a lot of times these

people [would] have been kicked out of community agencies. … If they couldn't come here, I don't know where they would end up… the idea behind starting the program was that we were filling a void and meeting a need for consumers that weren't getting what they needed in the community." The program is also unique because it is one of the few which is integrated and provides mental health care for some people who would be unable to access other programs that require medical insurance or substantial financial means.

Funding for the program has come from a variety of sources: Federal Bureau of Justice Assistance, Residential Substance Abuse Treatment appropriations; Edward Byrne Memorial State and Local Law Enforcement Assistance Program, Black Hawk County or Central Point of Coordination Office (CPC), other county CPCs, state appropriations, and participants. The substance abuse treatment and mental health counselor positions are contracted services with Pathways Behavioral Health Services and Black Hawk Grundy Mental Health Center, Incorporated (respectively).

The CPC determines whether clients are funded or not. Smaller rural counties often do not fund their services. Some participants pay a portion ($16 per day) towards the residential costs of the program. For example, participants may be required to contribute to the cost of the residential stay if a county is willing to only pay for the mental health treatment and medication or if the participant is employed.

Program Staff

Several individuals play key roles in the DDOP. These roles include: community treatment coordinator (CTC), mental health counselor (MHC), substance abuse treatment counselor (SATX), residential probation/parole officer (RPPO), aftercare probation/parole officer (APPO), and residential officers (ROs). The MHC and SATX are contracted service providers.

All staff interviewed for this project expressed a desire to work with this population. There was a shared understanding of the goals of the program among staff. "Get them stable, get them treatment so they understand their substance abuse and their mental health, [thereby] reducing their risk levels." This was in effort to keep both the offender and the community safe.

Community Treatment Coordinator

The Community Treatment Coordinator (CTC) is the entry point person. All referrals come through this position. Generally, referrals are made by someone within the correctional system (probation, parole, prison, or jail staff), and the CTC estimates that the vast majority of DDOP participants come from jail or prison.[1]

If a prospective participant is in the community or jail, the CTC meets him face-to-face to discuss the program, gather social history, and get release of information forms signed. Next,

[1] Data provided by the program from June 2002 through November 2007 show that 80% of DDOP participants come from a residential facility, jail, or prison.

the CTC gathers documented copies of mental health evaluations, types of medication prescribed, substance abuse evaluations, treatment admissions, and drug testing results. If a prospective participant is in prison, the CTC will talk with the prison counselor to gather this information.

The CTC assesses the referral, reviews ICON for gaps in information, follows up with the referring source on missing information, and contacts the funding source (Central Point of Coordination or CPC). The CTC then decides who enters the program based on specific criteria and then consults with the mental health supervisor. Once funding is secured, the CTC consults with the probation/parole officers and attorney and files appropriate court papers for admission. For individuals coming out of prison, the prison counselor makes recommendations to the Board of Parole.

For individuals in jail or on probation, with an original sentencing order allowing the offender to be placed on the corrections continuum, a board within the Department of Correctional Services can order placement into the facility. If offenders are on parole, they have to go through a hearing with the Administrative Law Judge and are ordered into the facility.

The CTC attempts to stagger admissions in order to facilitate participant rotation and avoid mass program entrance and exits.

Mental Health Counselor and Substance Abuse Treatment Counselor

The mental health counselor (MHC) and substance abuse treatment counselor (SATX) co-facilitate group therapy sessions three times per week. The MHC handles much of the medical-related issues such as filling med boxes every week and making referrals to the psychiatrist and People's Clinic. The SATX handles more of the social work issues and has individual sessions with clients at least every other week. One afternoon per week, the SATX has individual sessions with clients no longer in the program. The MHC also sees participants for therapy and deals with crisis situations.

Residential Probation/Parole Officer

The MHC, SATX, and residential probation/parole officer (RPPO) meet weekly and work together to establish unified treatment and discharge plans. The RPPO is the case manager for all DDOP residents who live in the building. The RPPO facilitates one cognitive skills group per week. The RPPO has an open door policy so clients can see him as needed. This position also serves as "the enforcer" when participants do not comply with or meet requirements and helps to develop discharge plans for offenders.

Aftercare Probation/Parole Officer

The aftercare probation/parole officer (APPO) identifies community services (e.g. transportation, housing, medical care, mental health and substance abuse treatment) to help offenders transition to the community after program completion and to continue their progress. His role is to identify community service providers and link participants with those services. He also supports and interacts with families and makes them aware of community

services. The APPO works with residential program staff throughout the program to holistically understand the treatment plan, because "transition has to start the day they come into the facility."

Residential Officers

The primary focus of the residential officers (RO) is security and control. The position was described as a cross between a prison guard and a parole officer. At the beginning of their shifts, ROs conduct a head count. Over the course of their shifts, ROs sign out clients for groups, pat search offenders returning to the facility, conduct regular room searches, and perform accountability checks on individuals leaving the building. The ROs have a considerable amount of contact with DDOP participants. Because of the level of interaction the ROs have with participants they also model daily living skills, build rapport, and communicate resident cares or concerns to treatment staff and the RPPO. The ROs use various methods to communicate information to other staff. ROs enter everyday concerns in the summary log, utilize emails to communicate more serious concerns, and may contact a supervisor at home in case of emergencies.

Staff Education, Training, and Work Experience

Interviewed staff had varying educational and professional backgrounds and years of experience with the dual diagnosis offender program, a reflection of a program with a multidisciplinary team. The typical interviewee had a Bachelor's degree (n=6), with a professional background in human services or counseling (n=8), and had worked with DDOP for less than five years (54.5%).

Staff reported completing a variety of training. The types of training most often mentioned in the interviews were education on mental illness through classes, attendance at conferences, or training offered by organizations; training to complete dual diagnosis certification; generalized staff training; and training on techniques to facilitate interaction with clients.

During the interviews, several staff mentioned being required to complete at least 40 hours of training a year, although they are encouraged to do more. Some training is mandatory, but interviewees also indicated that they had a choice in selecting the trainings that they attend. A couple of staff members volunteer for other projects or served with organizations as part of their training. See Table 2 for detailed information.

Table 2. Staff Education, Training, and Work Experience

Staff Background			
Highest Level of Education Completed		N	%
	Less than Bachelor's Degree	1	9.1%
	Bachelor's Degree	6	54.5%
	Master's Degree	4	36.3%
Professional Background*			
	Corrections	7	63.6%
	Human Services/Counseling	8	72.7%
	Other	1	9.1%
Years with DDOP			
	Less than 5 years	6	54.5%
	6 to 10 years	5	45.5%
Types of Training completed*			
	Mental Illness (general or specific)	5	19.2%
	Association Conferences/ Training offered by Organizations	5	19.2%
	Dual Diagnosis Licensure or Certification/ Co-Occurring disorders	4	15.4%
	Staff Training (e.g. mandatory reporting, self-reflection, ethics, evidence-based practices)	4	15.4%
	Interaction Techniques (e.g. motivational interviewing, play therapy)	4	15.4%
	Sex Offender	2	7.7%
	Substance Abuse	1	3.8%
	Suicide Prevention	1	3.8%

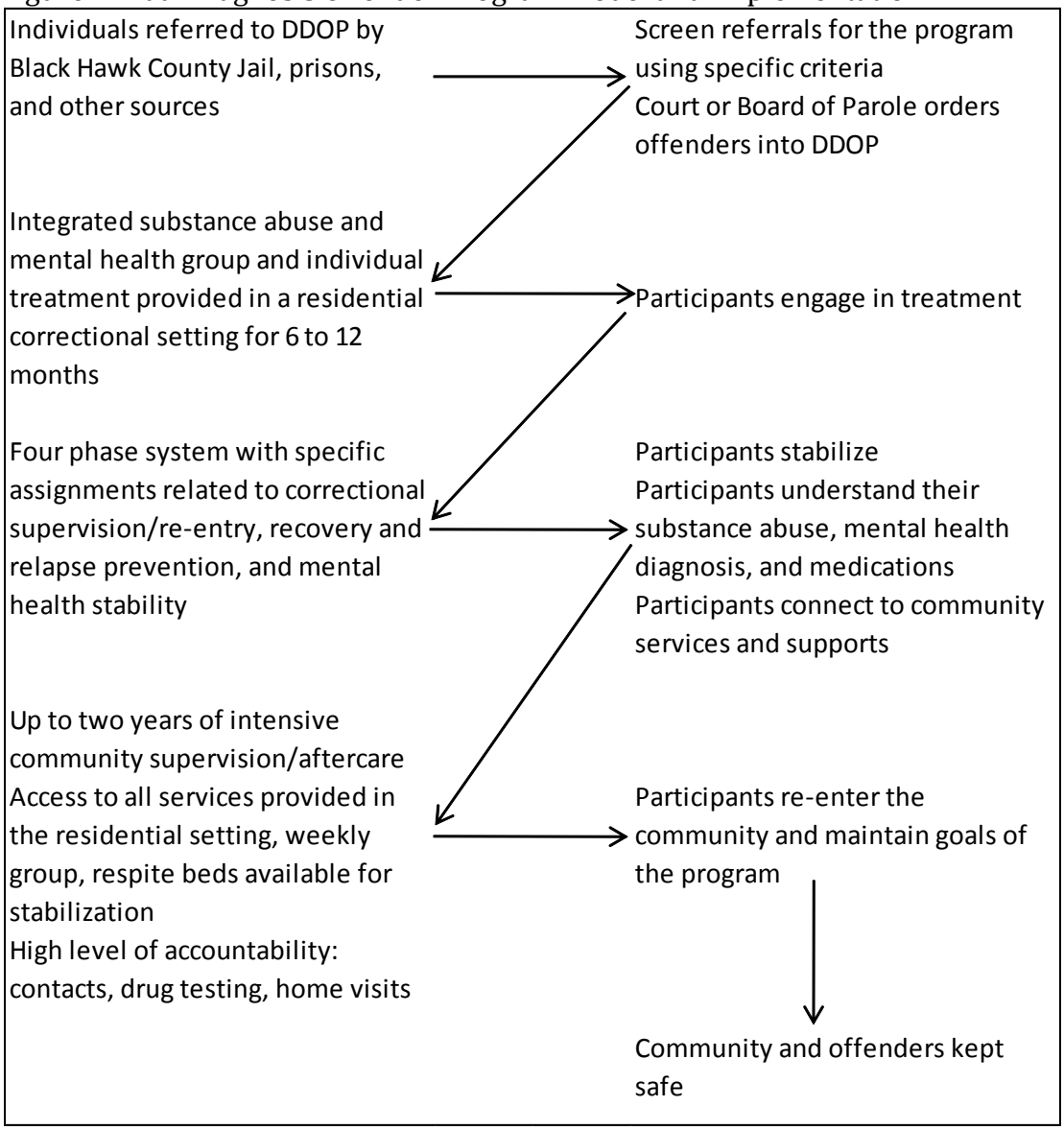
*Considers all professional experience, individual may be counted multiple times in more than one category

Program Description

Model and Implementation

The Dual Diagnosis Offender Program Model and Implementation diagram is presented in Figure 1. The program begins with a referral to the program by the Black Hawk County Jail, (BHCJ), prisons, or other sources. Then, the CTC meets with offenders in the BHCJ or community or corresponds with referring staff, such as prison counselors, to determine program eligibility. The referrals and screening utilize specific criteria. The CTC and mental health supervisor make the final decision on who enters the program.

Figure 1. Dual Diagnosis Offender Program Model and Implementation



Offenders are ordered by the Court or Board of Parole into the Dual Diagnosis Offender Program for a minimum of six months and a maximum of one year. Typically, participants spend six to seven months in the correctional facility-based program.

The program provides integrated substance abuse and mental health group and individual treatment. Participant progress is overseen by a multi-disciplinary treatment team including corrections, substance abuse treatment, and mental health professionals. Staff provided several examples of how the DDOP is integrated. Staff specifically identified location, group session co-facilitation, and integrated treatment plans. "From start to finish, you have all of your providers under one office and you have them all working together as opposed to trying to farm people out to different services. You have it all here." Another staff member stated, "We're all here on site, hopefully working together enough toward the same goals so that the client is directed in their treatment and directed in where they want to be… communication-wise, being here together, being on-site; I think all those things can make it integrated." All treatment is provided in the residential facility. The substance abuse treatment provider, mental health provider, and probation/parole officer are located in close proximity to the DDOP wing and a psychiatrist comes to the residential facility twice a month. The substance abuse treatment counselor and mental health counselor co-facilitate their groups, and staff work together on integrated treatment and transition plans.

Participants work through a four-phase system of orientation, ownership, responsibility/action, and discharge planning. Discharge planning begins when participants enter the program. Offenders complete specific assignments related to correctional supervision/re-entry, recovery and relapse prevention, and mental health stability. The participants receive increasing privileges and skill opportunities with phase progression. All treatment members must agree on phase advancement.

Activities

During the residential portion of the program, participants are stabilized; educated about their substance abuse, mental health diagnosis, and medications; and connected to services within the community, such as AA meetings, GED courses, community service, church, and vocational rehabilitation. Participants are also encouraged to engage in healthy leisure-time activities. The MHC, RPPO, and SATX participate in pro-social activities with the clients, such as fishing (obtained a fishing license for the unit), bike riding, hiking, music, bowling, volleyball, football (graduates versus current participants), attending activities at the Waterloo Center for the Arts and Friday morning coffee and donuts with "the guys." Staff members view this component of the program as important because it links offenders to the community, promotes social skills, and builds new interests other than drug abuse. When talking about the leisure activities, one staffer said, "I think it's real important to encourage them, because a lot of them… everything that [they] did do was either connected with their substance use or they just haven't had the exposure to doing different things."

According to staff, most successful participants in the residential portion are subject to intensive community supervision/aftercare for up to two years. This intensive community

supervision includes frequent contacts, drug testing, and home visits. Offenders have access to weekly group sessions provided in the residential setting and can participate in social leisure activities. In addition, the APPO can place an aftercare participant into a DDOP respite bed if needed or as a sanction for violations in lieu of revocation.

In the aftercare portion of the program, participants are linked with community services, such as substance abuse recovery groups, financial planning, medical care, housing, transportation, and food assistance. Specific service providers that have offered assistance include Salvation Army, Goodwill, Cedar Valley Community Support Services, Black Hawk/ Grundy Mental Health Center, Vocational Rehabilitation, local churches, and Exceptional Persons, Incorporated (EPI), which provides community housing and independent living for mentally ill, mentally retarded, and disabled adults.

Sources, Models, and Curricula

Staff, including the substance abuse and mental health counselors and the residential and aftercare probation/parole officers, play a role in creating curriculum activities and have "freedom" and flexibility to decide the material and make changes to better address participants' needs. Among the sources, models, and curricula used by staff are the following:

- Freeman-Long path to wellness;
- Hook, Line, and Thinker (Climb International);
- Cognitive Restructuring Curriculum (Dr. Stanton Samenow);
- Pathways for substance abuse;
- Daley-Thase model;
- Addiction Technology Transfer Center (ATTC) curriculum;
- Cognitive Behavior Therapy for Anger Management (SAMHSA)

Although some of the curricula used by individual staff differed, they seemed to have a good understanding of their colleagues' curricula. "We [the staff] kind of integrate whatever that may fit individually for the guy… I think we all use different materials and we facilitate together."

Program participants engage in a variety of structured activities each week. They complete individual assignments about their substance abuse histories and engage in discussion with peers, play games, write journals, and take classes to learn how to deal with anger. The aim of the treatment is to get clients to recognize unhealthy thinking patterns, build coping and social skills, and understand their illness, medications, and history. One staffer indicated that it is important that the curriculum is action-oriented and motivates participants rather than "class-room" type instruction. Staff also stressed the individuality of program participants when developing treatment plans. "[We] are always working together on what we think is most suitable for someone who is in the program, which varies a lot from individual to individual based on their capabilities, and their needs, and what they've done in the past, and what they can do now."

Program Beneficiaries

This section provides descriptive data and completion rates for all participants in DDOP between January 1, 2001 and September 30, 2007. During this time frame, 236 males were admitted to the First Judicial District's Dual Diagnosis Offender Program (DDOP). The purpose of this section is to provide descriptive data of the typical dual diagnosis participant.

The average participant age at entry was 32 years. Most of the participants were unmarried (86.0%). The largest percentage of participants had a GED or high school diploma (61.4%) followed by less than high school diploma (22.5%), unknown (9.7%), and some technical training or post secondary (6.4%). Almost three-quarters of the participants were white (71.6%). Over one-third of participants reported poly-drug usage (35.2%) followed by cannabis (23.3%), cocaine (7.6%) and methamphetamine (6.4%) use. The drug problem was not specified for 26.7% of participants. Among participants for whom correctional data on chronic mental illnesses were available, 78% had a serious mental illness. Chronic substance use (37.6%), depression (36.4%), anxiety disorder (30.1%), psychotic disorder (28.9%), and personality disorder (27.2%) were the most typical mental illness diagnoses for participants. Correctional chronic mental illness data were not available for 26.7% of participants.

Among participants who were assessed near DDOP entry, the average LSI-R score was 37.3, moderate/high risk. Participants also had relatively high average sub-scores on the alcohol/drugs (6.0 out of 9) and emotional/personal (4.5 out of 5) indicators.

Participants spent an average of 158 days, or about five months, in the residential program. Nearly 60% completed the residential program (59.7%). Participants who completed the program spent a greater length of time in the program than those who didn't complete. Completers spent an average of 197 residential days (about six-and-a-half months) in the program, while non-completers spent an average of 99 residential days (just over three months).

In terms of criminal backgrounds, 56.8% of participants had at least one prior prison admission. The most serious offense for which they were under supervision at the time of DDOP entry was a felony (73.3%).

Data about offenders' previous interventions as well as their intervention programs were examined. Interventions may be assigned as either individual programs, or function as components of larger, more comprehensive intervention programs. About 55% of participants had an intervention that ended prior to their entrance in DDOP. Mental health (34.7%) and recovery support/substance abuse education (29.7%) were the most common types of interventions. The average number of interventions in which participants had previously participated was three. Approximately 35% of participants had previously participated in an intervention program. Day program (12.7%) and Treatment Alternatives to Street Crime (TASC) (12.3%) were the most common types of intervention programs. The average number of

intervention programs in which participants had previously participated was one-and-a-half. Detailed data are provided in Appendix A.

Aftercare for dual diagnosis participants was not tracked in ICON until 2005, so data on aftercare retention and completion are incomplete. Examination of the 2005 to 2008 data indicated that not all participant group members were placed in aftercare. Those who did not go into aftercare had discharged their sentences or were transferred to a different county for supervision. The data indicated that about 82% (61 of the 74 participants) who were discharged from the residential portion of the program from 2005 to 2008 were placed in aftercare. Of those, only three were confirmed to have completed aftercare. The average length of stay in aftercare for offenders who participated was 368.8 days, or about one year.

Completion rates in the residential portion of the program were comparable by race. Among both program completers and non-completers, 28.4% were non-white. Having a prior prison admission was not a predictor of program completion, as completers and non-completers had similar percentages of prior prison commitments (around 57%). Furthermore, they were about equally likely to have had a prior intervention (around 55%) and intervention program (around 35%). The types of interventions and programs somewhat differed somewhat, with completers more likely to have participated in cognitive/criminal thinking (14.9% vs. 6.3%) and TASC (14.9% vs. 8.4%). Program completers were slightly older at program entry (33.3 years of age vs. 30.3), more likely to be married (16.3% vs. 10.5%), were more likely to have post-high school education (8.5% vs. 3.2%), and were more likely to have felony convictions at the time they entered DDOP (76.6% vs. 68.4%). Completers were also slightly less likely to be poly-drug users (32.6% vs. 38.9%) and more likely to be cannabis users (27.7% vs. 17.9%), had lower average total LSI-R scores (36.2 vs. 39.1), had lower average LSI-R sub-scores for alcohol and drug problems (5.9 vs. 6.2), and were considerably less likely to have personality disorders (20.5% vs. 33.3%). Table 3 compares completers and non-completers on key variables.

Table 3. DDOP Participant Differences and Similarities, by Completion Status

Variable	***Completers (n=141)***	***Non-completers (n=95)***
Mean Age	*33.3*	*30.3*
Race: White	*71.6%*	*71.6%*
Marital Status: Unmarried	*83.7%*	*89.5%*
Education: High School Grad or GED	*56.0%*	*69.5%*
Current Drug Problem: Poly-Drug	*32.6%*	*38.9%*
Current Drug Problem: Cannabis	*27.7%*	*17.9%*
Most Serious Offense: Felony	*76.6%*	*68.4%*
*Serious Mental Illness**	*79.5%*	*76.7%*
*Personality Disorder**	*20.5%*	*33.3%*
*Depression**	*34.9%*	*37.8%*
Mean LSI-R Score	*36.2*	*39.1*
Mean Alcohol/Drug LSI-R Sub-score (0 to 9)	*5.9*	*6.2*
Mean Emotional/Personal LSI-R Sub-score (0 to 5)	*4.5*	*4.5*
Prior Prison	*56.7%*	*56.8%*
Prior Interventions	*53.9%*	*56.8%*
Prior Cognitive/Criminal Thinking Intervention	*14.9%*	*6.3%*
Prior Intervention Programs	*34.0%*	*35.8%*
Prior TASC Intervention Program	*14.9%*	*8.4%*

Please note that statistical significance was not calculated.

* Some offenders did not have data on their mental illness diagnosis and are not included in the percentages.

Program Changes Over Time

The Iowa Department of Corrections (IDOC) has changed its approach in working with the co-occurring population. The IDOC "became more social work oriented due to pressure from the prison system to keep people in the community and to work with people in the community because of the cost and overcrowding." For the DDOP, there have been several changes in program operations including: referral process, staffing, and components. Many of these changes were the result of trial and error or funding adjustments.

Previously the team, comprised of treatment and correctional staff, decided who was accepted into the program. All treatment referrals now come through the CTC, with a review by the treatment supervisor. This change allowed DDOP to be consistent in criteria for acceptance into the program and enabled streamlining and referral of individuals to other programs that might be a better fit. The CTC also has helped the First District to get more involved in the Black Hawk County Jail, as the co-occurring "population would sit in the jail for an extended period of time, they didn't know what to do with them." This change was due to a focus on "what's in the best interest of the community and the offender. If you've got someone getting more and more ill in the jail, it's a disruption to the jail...it's not that they come out any better."

There have been changes in personnel, positions, and job descriptions. There have been personnel changes in all areas of the residential and aftercare treatment team. At the time interviews were completed, the Probation/Parole Supervisor (PPS) had recently changed, and a new hire for the RPPO was to start work in the next month. Initially, the team included a psychologist. This position was dropped in 2004 due to funding. Also, when the program started, three PPO's each supervised five or six cases, as staff were unsure about how the program was going to operate and did not want one PPO to take on all of the mental health cases at once. Early on, this arrangement was replaced by one PPO for all residential participants. An APPO was added in 2000. The MHC position was not full-time in the beginning, but was at the time of the interviews.

Program component changes included permitting participant employment, adding activities outside of the facility, arranging on-site meetings with the local psychiatrist, modifying the curriculum, and changing furlough practices and discipline. Initially the program was set up as an inpatient program which did not allow participant employment. This has changed over time and participants are now encouraged to work. This change was based both on funding and a need for more structure. Over the years, the treatment team added various activities outside of the facility, such as fishing and bowling. This was prompted by treatment staff, for participants had too much downtime in the beginning. Bringing the psychiatrist to the facility for appointments twice per month has led to greater attendance at appointments. The program's curriculum has also changed throughout the years. These curriculum adjustments have been made to enhance approaches that have historically worked best for the participants and the program. For instance, the mental health counselor and substance abuse counselor added journaling to the weekly activities, initiated a sexually transmitted diseases presentation, and located a new mental health curriculum model that is similar to the popular model but is free to

print. The evolution of furloughs from the program has gone from no furloughs, furloughs called skill building activities, and now furloughs as part of the fourth phase of the program. In terms of discipline, the program added disciplinary reports and sanctions, which initially were not given because program participants were in a "special program." Another change allowed staff to write someone up for bad behavior without having supervisor approval.

Several suggestions were made on ways to improve the effectiveness of the program. One suggestion was to use different assessment instruments to better understand an individual's motivation for the program. Another was to share more information between treatment and the ROs. Specifically, ROs thought it would be helpful to have a better understanding of specific diagnoses. Third, treatment staff voiced support for having more input into correctional decisions such as revocation. There was also support for offering more structured activities. Finally, it was suggested that the program create a more structured aftercare program to hold participants more accountable and reduce the chances of relapse. A concern was that, "a lot of offenders do well when they're in here, because we hold them accountable and then the minute they get back to their environment, they just relapse and just fall apart."

Study and Comparison Group Background and Information

This section provides background and information about the study group and comparison group. These groups are further examined in the outcome section. The "study group" is all offenders in the DDOP who started after January 1, 2001 and were discharged by September 30, 2005 (n= 144). The matched "comparison group" is comprised of individuals who entered community supervision between January 1, 2001 and December 30, 2005 (n=106).

The average DDOP study group age at entry is 32 years. The typical study group participant is white (67.4%), unmarried (85.4%), has a high school diploma or GED (66.0%), is currently a poly-drug user (32.6%) or cannabis user (27.1%), and entered the study with a felony conviction (71.5%). The most common mental illness is depression (36.1%), followed closely by anxiety disorders (33.3%), and around 80% have a serious mental illness. The average LSI-R score for the study group is 37.1, moderate risk. The majority of study group members have a prior prison admission (59.0%), and some have previously participated in interventions (43.8%) and intervention programs (34.7%).

The comparison group is comparable to the study group in age, Level of Service Inventory-Revised (LSI-R) total score, emotional/personal and alcohol/drug abuse sub-scores from the LSI-R, marital status, types of drugs abused, and having a "serious mental illness;" however, it differs from the study group in terms of race, most serious offense at study entry, prior prison admission, and prior interventions and intervention programs. The comparison group has a higher percentage of white offenders (80.2% vs. 67.4% in the study group) and is *less likely* to have offenders with a current felony conviction (43.3% vs. 71.5%), a prior prison admission (37.7% vs. 59.0%), a prior intervention (15.1% vs. 43.8%), or a prior intervention program (11.3% vs. 34.7%). Detailed data for the study group and comparison are provided in Appendix B. Table 4 compares the study group and comparison group on key variables.

Table 4. DDOP Study Group and Comparison Group Differences and Similarities

Variable	***Study Group (n=144)***	***Comparison Group (n=106)***
Mean Age	*31.9*	*32.9*
Race: White	*67.4%*	*80.2%*
Marital Status: Unmarried	*84.5%*	*85.6%*
Education: High School Grad or GED	*66.0%*	*56.6%*
Current Drug Problem: Poly-Drug	*32.6%*	*27.4%*
Current Drug Problem: Cannabis	*27.1%*	*20.8%*
Most Serious Offense: Felony	*71.5%*	*43.3%*
*Serious Mental Illness**	*80.6%*	*75.9%*
Mean LSI-R Score	*37.1*	*36.8*
Mean Alcohol/Drug LSI-R Sub-score	*6.1*	*6.8*
Mean Emotional/Personal LSI-R Sub-score	*4.5*	*4.2*
Prior Prison	*59.0%*	*37.7%*
Prior Interventions	*43.8%*	*15.1%*
Prior Intervention Programs	*34.7%*	*11.3%*

Please note that statistical significance was not calculated.

* Some offenders did not have data on their mental illness diagnosis and are not included in the percentages.

Table 5 shows the differences and similarities between DDOP study group completers and non-completers on demographic and background variables. Appendix C provides detailed data comparing completers and non-completers.

Table 5. DDOP Study Group Differences and Similarities, by Completion Status

Variable	***Completers (n=86)***	***Non-completers (n=58)***
Mean Age	*33.1*	*30.1*
Race: White	*70.9%*	*62.1%*
Marital Status: Unmarried	*83.7%*	*87.9%*
Education: High School Grad or GED	*61.6%*	*72.4%*
Current Drug Problem: Poly-Drug	*32.6%*	*32.8%*
Current Drug Problem: Cannabis	*29.1%*	*24.1%*
Current Drug Problem: Meth	*8.1%*	*3.4%*
Most Serious Offense: Felony	*76.7%*	*63.8%*
*Serious Mental Illness**	*83.3%*	*77.8%*
Mean LSI-R Score	*36.3*	*38.7*
Mean Alcohol/Drug LSI-R Sub-score (0 to 9)	*6.0*	*6.3*
Mean Emotional/Personal LSI-R Sub-score (0 to 5)	*4.5*	*4.5*
Prior Prison	*60.5%*	*56.9%*
Prior Interventions	*46.5%*	*39.7%*
Prior Intervention Programs	*33.7%*	*36.2%*

Please note that statistical significance was not calculated.

* Some offenders did not have data on their mental illness diagnosis and are not included in the percentages.

Outcomes

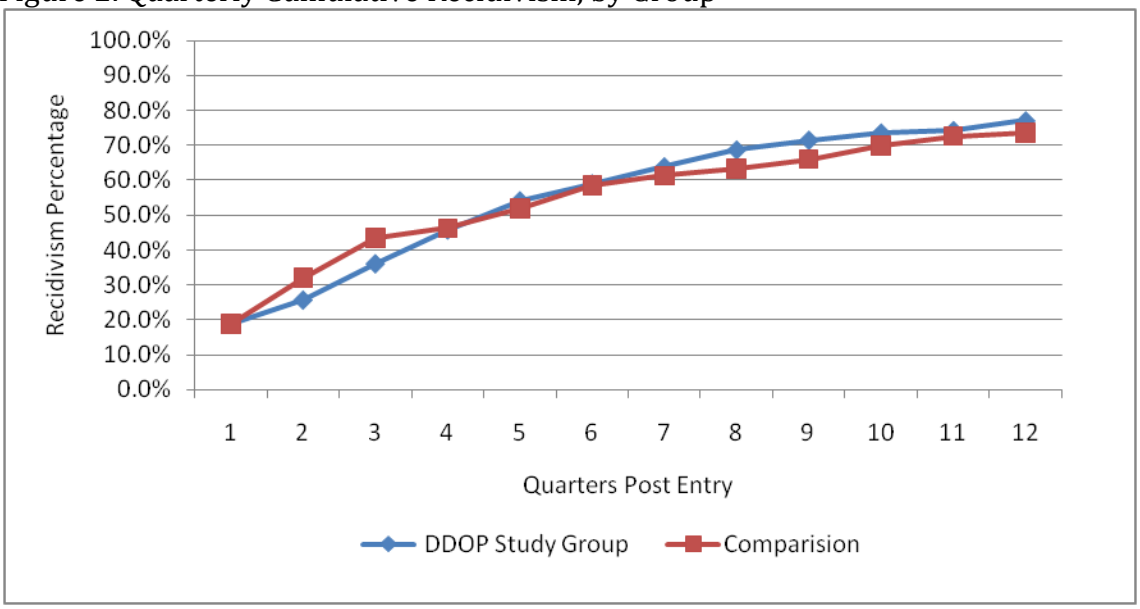
The following section examines outcomes, including recidivism, substance abuse relapse, and justice system costs for the study and comparison groups.

Recidivism

New Convictions

Quarterly cumulative recidivism rates for the DDOP study group and comparison group participants are plotted in Figure 2. During the first four quarters DDOP study group participants had a slightly lower recidivism rate compared to the comparison group. By the fifth quarter, however, this trend changed. Beginning in the fifth quarter, DDOP study group participants had and a slightly higher recidivism rate than the comparison group and maintained a slightly higher recidivism rate over the course of the tracking period. By the end of the tracking period 77.1% of the DDOP study group had recidivated compared to 73.6% of the comparison group. This difference, however, is not statistically significant.

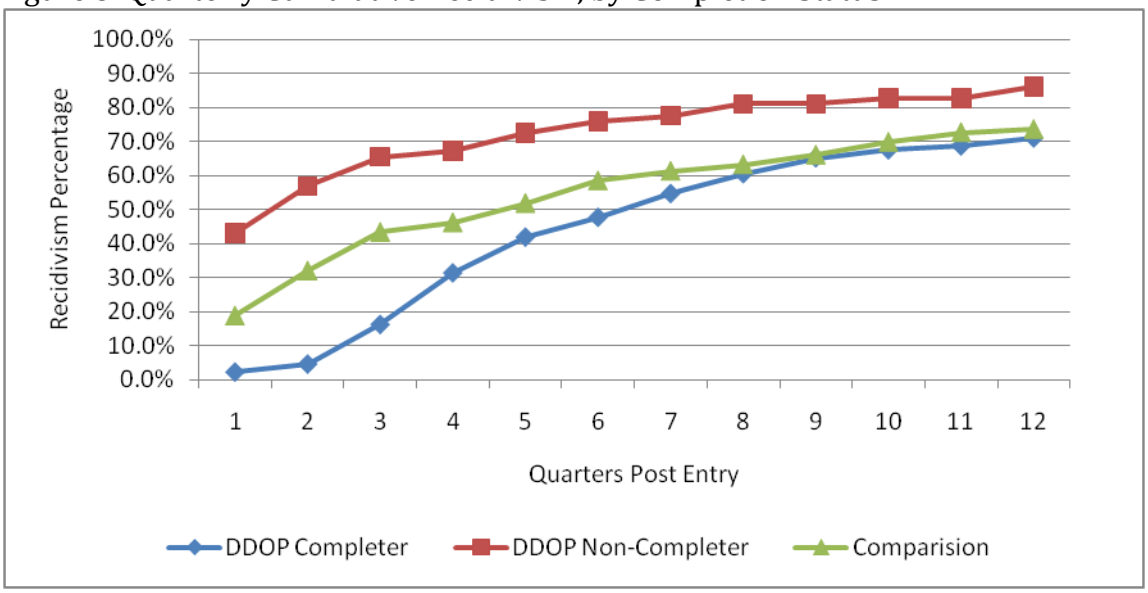
Figure 2. Quarterly Cumulative Recidivism, by Group



DDOP study group participants who successfully *completed* residential placement had a lower recidivism rate than both the DDOP study group participants who did not complete residential placement and the comparison group. The difference in recidivism rates between the groups holds throughout the tracking time, although the difference is most dramatic through the first four quarters. By the end of the fourth quarter only 31.4% of the DDOP completers had recidivated, compared to 67.2% of the DDOP non-completers and 46.2% of the comparison group. By the eighth quarter the recidivism rate of the DDOP completers was 60.5%, compared to 81.0% of the DDOP non-completers and 63.2% of the comparison group. By the end of the

tracking period 70.9% of the DDOP completers, 86.2% of the DDOP non-completers and 73.6% of the comparison group had recidivated. See Figure 3 for additional details.

Figure 3. Quarterly Cumulative Recidivism, by Completion Status



During the tracking period, slightly more than 27% of DDOP study group participants were convicted of a felony as their most serious offense, compared to slightly fewer than 18% of the comparison group. DDOP non-completers had the highest rate of new felony convictions, as nearly 38% of this group was convicted of a felony offense. The comparison group rate of new misdemeanors, however, was higher than either DDOP group. See Table 6 for additional details.

Table 6. Most Serious New Conviction, by Group and Completion Status

	Felony		Misdemeanor		New conviction Total	
Group	n	%	n	%	n	%
DDOP Study Group	39	27.1%	72	50.0%	111	77.1%
Comparison	19	17.9%	59	55.7%	78	73.6%
DDOP Completer	17	19.8%	44	51.2%	61	70.9%
DDOP Non-Completer	22	37.9%	28	48.3%	50	86.2%

In the DDOP study group, non-white participants were about equally as likely as white participants to have new convictions (78.7% vs. 76.3%), however, in the comparison group, non-whites were considerably more likely to have new convictions than whites (90.5% vs. 69.4%). The percentages of DDOP completers and non-completers who had subsequent convictions in the three year tracking period did not differ by race. Among DDOP completers, 72% of non-whites and 70.5% of whites had new convictions. Among non-completers, 86.4% of non-whites and 86.1% of whites had new convictions.

Table 7. Number and Percent with a New Convictions, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	74	76.3%	97	37	78.7%	47
Comparison	59	69.4%	85	19	90.5%	21
DDOP Completer	43	70.5%	61	18	72.0%	25
DDOP Non-Completer	31	86.1%	36	19	86.4%	22

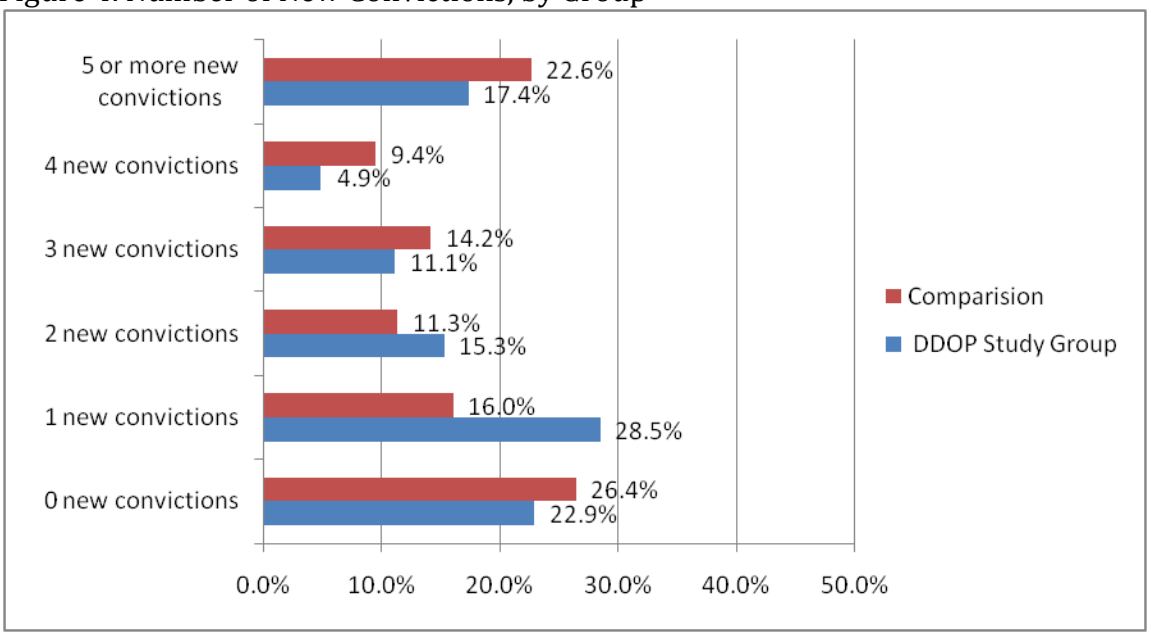
In the DDOP study group, non-white participants were less likely than white participants to have new felony convictions (21.3% vs. 30.9%). In the comparison group, however, non-whites were considerably more likely to have new felony convictions than whites (28.6% vs. 15.3%). The percentages of DDOP completers and non-completers who had subsequent felony convictions in the three year tracking period was lower for non-whites. Among DDOP completers, 12% of non-whites and 24.6% of whites had new felony convictions. Among non-completers, 31.8% of non-whites and 41.7% of whites had new felony convictions. These figures suggest that the DDOP was particularly effective for non-white offenders.

Table 8. Number and Percent with a New Felony Conviction, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	30	30.9%	97	10	21.3%	47
Comparison	13	15.3%	85	6	28.6%	21
DDOP Completer	15	24.6%	61	3	12.0%	25
DDOP Non-Completer	15	41.7%	36	7	31.8%	22

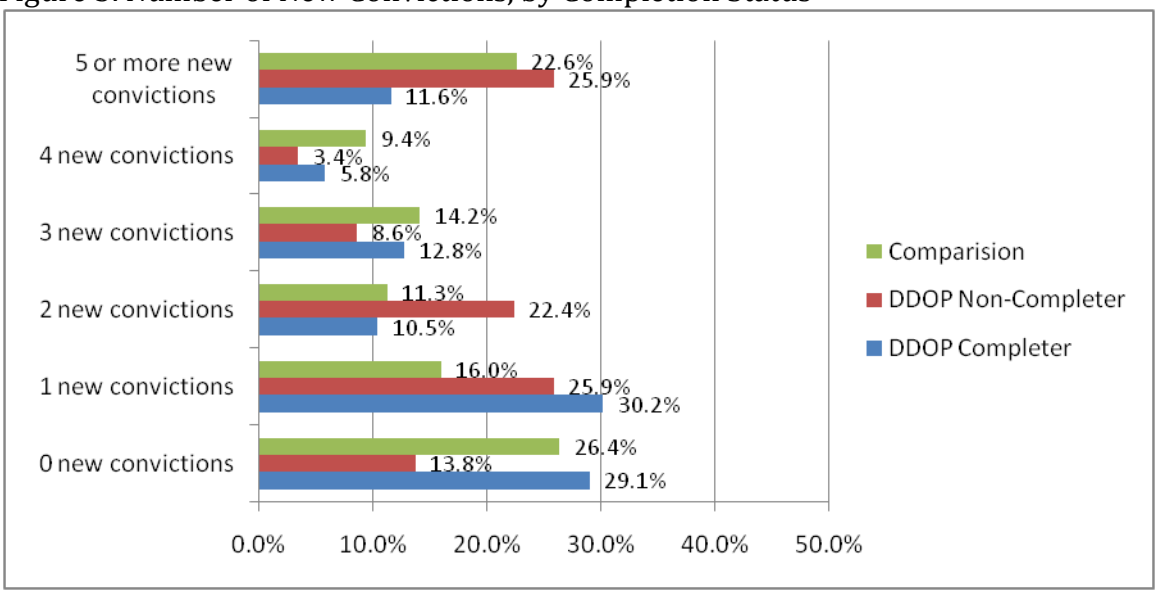
An examination of the number of new convictions an offender committed during the tracking period shows the largest portions of the DDOP study group had either zero (22.9%) or one new conviction (28.5%). By contrast, the largest portions of the comparison group were clustered at five or more new convictions (22.6%) and zero convictions (26.4%). Interestingly, the comparison group had larger percentages in the three, four, and five or more new conviction catagories than the DDOP study group. See Figure 4.

Figure 4. Number of New Convictions, by Group



An examination of number of new convictions, by discharge status, shows a lower percentage of DDOP completers were convicted of mulitple offenses in comparison to the other groups. Only 40.7% of DDOP completers were convicted of two or more new offenses compared to 60.3% of DDOP non-completers and 57.5% of the comparison group. These figures suggest that, while there was little difference in the overall recidivism rates of DDOP clients and the comparison group, the latter group amassed more new convictions than the DDOP study group. As shown in Figure 5, this was particularly the case for those who successfully completed the DDOP.

Figure 5. Number of New Convictions, by Completion Status



Returns to Prison

A return to prison was defined as *any* re-entry to prison (or violators program) on a new conviction or technical violation that occurred within three years after offenders started DDOP or community supervision. A higher percentage of study group participants returned to prison than comparison group members (68.8% vs. 42.5%); however the high return rate for the study group was driven up by the DDOP non-completers. Ninety-eight percent of non-completers returned to prison. DDOP completers had a prison returns rate that was only slightly higher than the comparison group (48.8% vs. 42.5%).

Table 9. Number and Percent with a Return to Prison, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	99	68.8%	144
Comparison	45	42.5%	106
DDOP Completer	42	48.8%	86
DDOP Non-Completer	57	98.3%	58

In both the study group and the comparison group, non-whites had a higher prison returns rate than their white counterparts. Among DDOP participants, 80.9% of non-whites returned to prison within three years compared to 62.9% of whites. Among the comparison group, 52.4% of non-whites returned to prison compared to 40.0% of whites. Among DDOP completers, non-whites had a higher prison return rate than whites (64.0% vs. 42.6%). In assessing the importance of these differences, remember that DDOP participants were more often serving sentences for felonies than the comparison group, and this difference undoubtedly plays a role in their higher rate of returns to prison.

Table 10. Number and Percent with a Return to Prison, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	61	62.9%	97	38	80.9%	47
Comparison	34	40.0%	85	11	52.4%	21
DDOP Completer	26	42.6%	61	16	64.0%	25
DDOP Non-Completer	35	97.2%	36	22	100.0%	22

Substance Abuse Relapse

Urinalysis & Breath Analysis

Cohort members' urinalysis and breath analysis test results were examined to indicate whether they relapsed on drugs or alcohol over the course of the three-year tracking period. A relapse was indicated by a positive test that was marked as "unsatisfactory" and had occurred one month or longer after offenders began DDOP (study group) or community supervision (comparison group). This criterion takes into consideration that a positive test could be the result of an earlier use of drugs lingering in the offender's system and also accounts for prescription medicine use that could result in a false positive. It should be noted that a few positive tests that occurred within the first month of tracking were included because the offenders had an earlier clean test for that specific drug. Also, the estimates may be conservative, as 46 "satisfactory" positive test records (for 15 unique offenders that did not otherwise have a positive test) did not indicate the reason for being "satisfactory," but were *not* counted as relapse.

A considered weakness of using urinalysis and breath analysis data to indicate relapse is inconsistency in the timing and number of tests administered. Tests are only administered under community supervision. Offenders who are not under supervision, such as those who absconded or whose sentences expired, would not be monitored for substance abuse relapse. Also, offenders who return to prison do not have equal opportunity to relapse due to placement in a secure facility. Nineteen of the 144 DDOP study group members did not have a positive UA while in the program and were not tested at all after exiting DDOP.

During the three-year tracking period, a considerably higher average number of tests were administered to the DDOP study group than the comparison group (194 vs. 30). Program completers had a higher average number of tests than non-completers (241 vs. 125), not surprising given their longer tenure in the program. See Table 11.

Table 11. Average, Median, and Range of Tests Administered in Tracking Period

	Mean	Median	Min	Max
DDOP Study Group	194	201	5	440
Comparison	30	8	0	213
DDOP Completer	241	238	68	440
DDOP Non-Completer	125	101	5	410

* Twenty-one offenders in the comparison group did not have a test in the three year tracking time

DDOP study group participants averaged 176 tests while in the program. Program completers had a higher average number of tests in the program than non-completers (218 vs. 114). See Table 12 for more detail.

Table 12. Average, Median, and Range of Tests Administered in DDOP Program

	Mean	Median	Min	Max
DDOP Study Group	176	190	0	409
DDOP Completer	218	218	68	360
DDOP Non-Completer	114	90	0	409

* One DDOP study group participant did not have any tests during the program. Participants with fewer tests in the program had shorter durations in the program.

Almost half (46.5%) of the study group had a positive test in the three year tracking period. A higher percentage of program completers had a positive test than non-completers (50% vs. 41.4%). This finding may be explained by the fact that non-completers tended to be readmitted to prison and therefore were less likely to have regular drug tests and/or have the opportunity to relapse. The comparison group was considerably more likely than study group participants to have a positive test (64.7% vs. 46.5%). See Table 13 below.

Table 13. Number and Percent with a Positive Test, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	67	46.5%	144
Comparison	55	64.7%	85
DDOP Completer	43	50.0%	86
DDOP Non-Completer	24	41.4%	58

Results only include cohort members who were tested in the three year tracking period. Twenty-one comparison group members did not have any tests during the tracking period and were not included in the percentages.

Among those who relapsed in the three year tracking period, the highest percentage (37.7%) had a positive test for multiple drugs/alcohol. The second highest percentage was cannabis (18%), followed closely by methamphetamine (16.4%). The comparison group was more than twice as likely to relapse on cocaine as the study group (16.4% vs. 7.5%), while the study group was more likely to relapse on cannabis (20.9% vs. 14.5%).

Table 14. Type of Drug for the Positive Test, by Group

	Comparison		DDOP Study Group		Grand Total	
Drug	n	%	n	%	n	%
Alcohol	8	14.5%	9	13.4%	17	13.9%
Cocaine	9	16.4%	5	7.5%	14	11.5%
Meth/Amphetamine	10	18.2%	10	14.9%	20	16.4%
Poly-User	20	36.4%	26	38.8%	46	37.7%
Cannabis	8	14.5%	14	20.9%	22	18.0%
Other	0	0.0%	3	4.5%	3	2.5%

Percentage of the total who tested positive

Among study group participants who relapsed in the three year tracking period, about two-thirds (65.7%) had their first positive test while in the program. A considerably higher percentage of non-completers had a positive drug test in the program (95.8% vs. 48.8%). This suggests that having a positive drug test could have contributed to not completing the program.

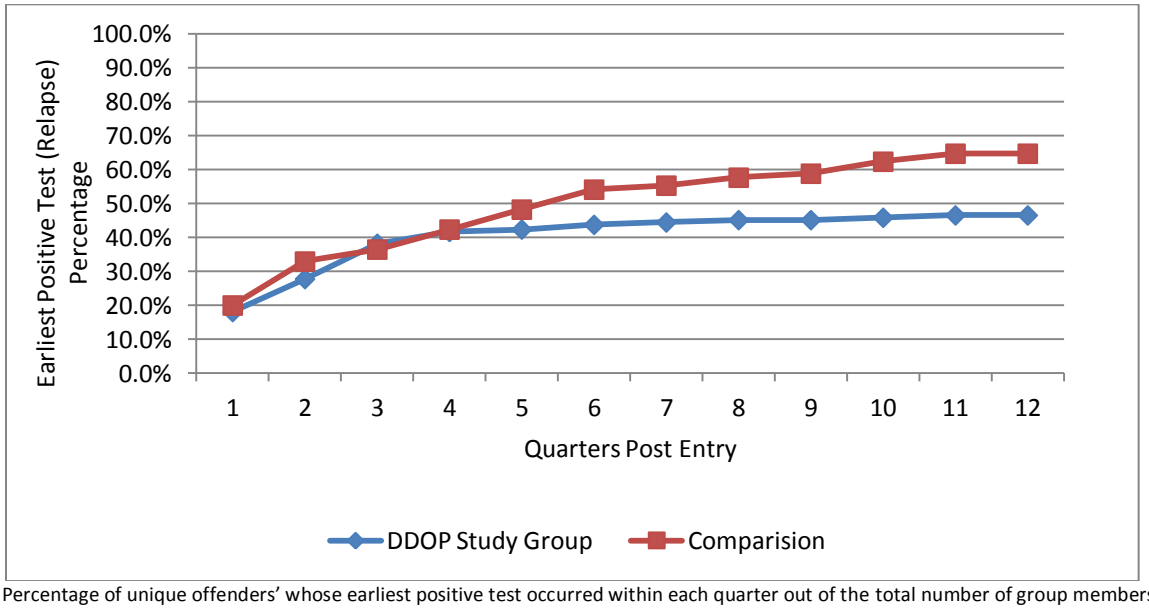
Table 15. Number and Percent with First Positive Test in the Program, by Completion Status

Group	n	%	Total
DDOP Study Group	44	65.7%	67
DDOP Completer	21	48.8%	43
DDOP Non-Completer	23	95.8%	24

Percentage of the total who tested positive

The data suggests that relapse for study group participants is most likely to occur within the first year after their start in DDOP. The first positive drug test was approximately equally likely to occur in the first four quarters for study group participants and comparison group members. After the fourth quarter, the study group leveled off while the comparison group continued to gradually rise. By the fourth quarter, about 42% within each group had their first positive drug test. By the eighth quarter, the relapse rate of the DDOP study group participants was 45.1% compared to 57.6% of the comparison group. By the end of the tracking period 46.5% of the DDOP study group participants and 64.7% of the comparison group had relapsed.

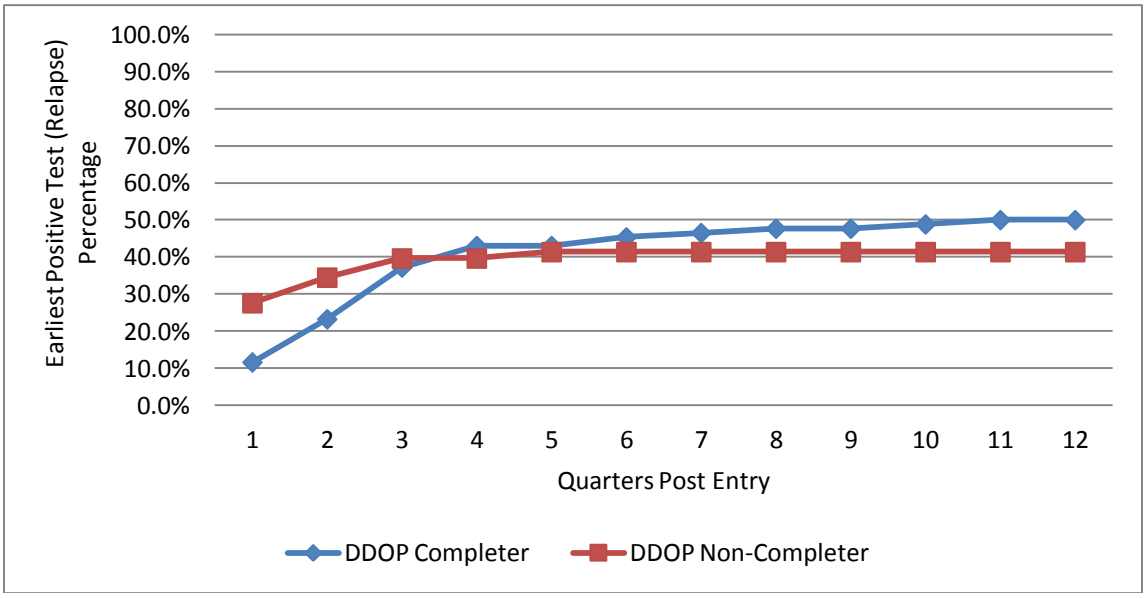
Figure 6. Time to First Positive Drug Test, by Group



Percentage of unique offenders' whose earliest positive test occurred within each quarter out of the total number of group members.

The trend lines show that the first positive drug test for DDOP completers occurred within the first four quarters and then leveled off, while the first positive drug test for non-completers occurred within the first three quarters and then leveled off. This is likely due to offenders exiting the program at those times. While completers were less likely than non-completers to have a first positive drug test in the first three quarters, after the third quarter, completers were slightly more likely to have a first positive drug test. In the first quarter, 11.6% of completers and 27.6% of non-completers had their first positive drug test. By the third quarter, the percentages were 37.2% and 39.7%, respectively. By the end of the tracking period, half of the completers and 41.4% of non-completers had their first positive drug test.

Figure 7. Time to First Positive Drug Test, by Completion Status



Percentage of unique offenders' whose earliest positive test occurred within each quarter out of the total number of group members.

New Drug and Alcohol Convictions

New Drug Convictions

About one-fifth (18.1%) of the DDOP study group were convicted of a new drug related offense. Program completers were slightly more likely than non-completers to have a new drug conviction (18.6% vs. 17.2%). A greater proportion (25.5%) of the comparison group was convicted of a new drug related offense. Further information is provided in Table 16.

Table 16. Number and Percent with a New Drug Conviction, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	26	18.1%	144
Comparison	27	25.5%	106
DDOP Completer	16	18.6%	86
DDOP Non-Completer	10	17.2%	58

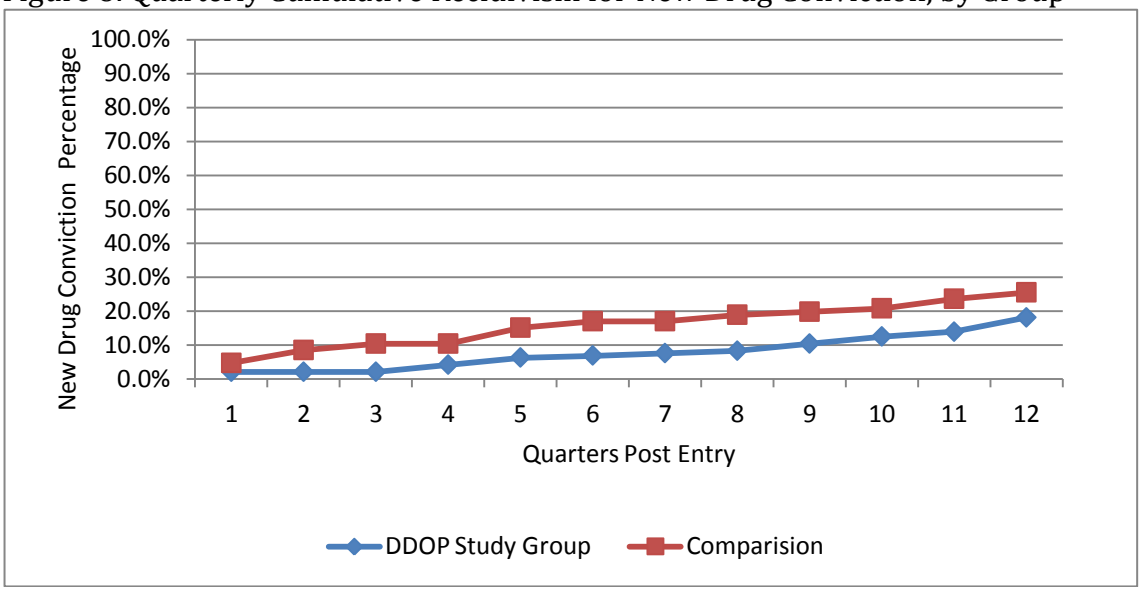
In the DDOP study group, non-white participants were less likely than white participants to have new drug convictions (10.6% vs. 21.6%), however, in the comparison group, non-whites were slightly more likely to have new drug convictions than whites (28.6% vs. 24.7%). The percentages of DDOP completers and non-completers who had subsequent drug convictions in the three year tracking period was lower for non-whites. Among DDOP completers, 8% of non-whites and 23% of whites had new drug convictions. Among non-completers, 13.6% of non-whites and 19.4% of whites had new drug convictions. This is further evidence that the DDOP worked particularly well for non-white participants.

Table 17. Number and Percent with a New Drug Conviction, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	21	21.6%	97	5	10.6%	47
Comparison	21	24.7%	85	6	28.6%	21
DDOP Completer	14	23.0%	61	2	8.0%	25
DDOP Non-Completer	7	19.4%	36	3	13.6%	22

Throughout the tracking period, new drug conviction rates were consistently higher for the comparison group than the DDOP study group. By the fourth quarter, 4.2% of the DDOP study group and 10.4% of the comparison group had been convicted for a drug-related offense. By the eighth quarter, the drug recidivism rates were 8.3% vs. 18.9%, respectively. By the end of the tracking period, 18.1% of DDOP study group participants and 25.5% of comparison group members had new drug convictions. This suggests that the program was effective at reducing offenders' likelihood of acquiring a new drug conviction during program participation.

Figure 8. Quarterly Cumulative Recidivism for New Drug Conviction, by Group



New Alcohol Convictions

About 15% of the DDOP study group was convicted of a new alcohol related offense. Non-completers were slightly more likely than completers to have a new alcohol conviction (17.2% vs. 14.0%). The new alcohol-related offense conviction rate was more than double (at 29.2%) for the comparison group than the study group. Even the DDOP non-completers showed a lower alcohol conviction rate than the comparison group. See Table 18 for more information.

Table 18. Number and Percent with a New Alcohol Convictions, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	22	15.3%	144
Comparison	31	29.2%	106
DDOP Completer	12	14.0%	86
DDOP Non-Completer	10	17.2%	58

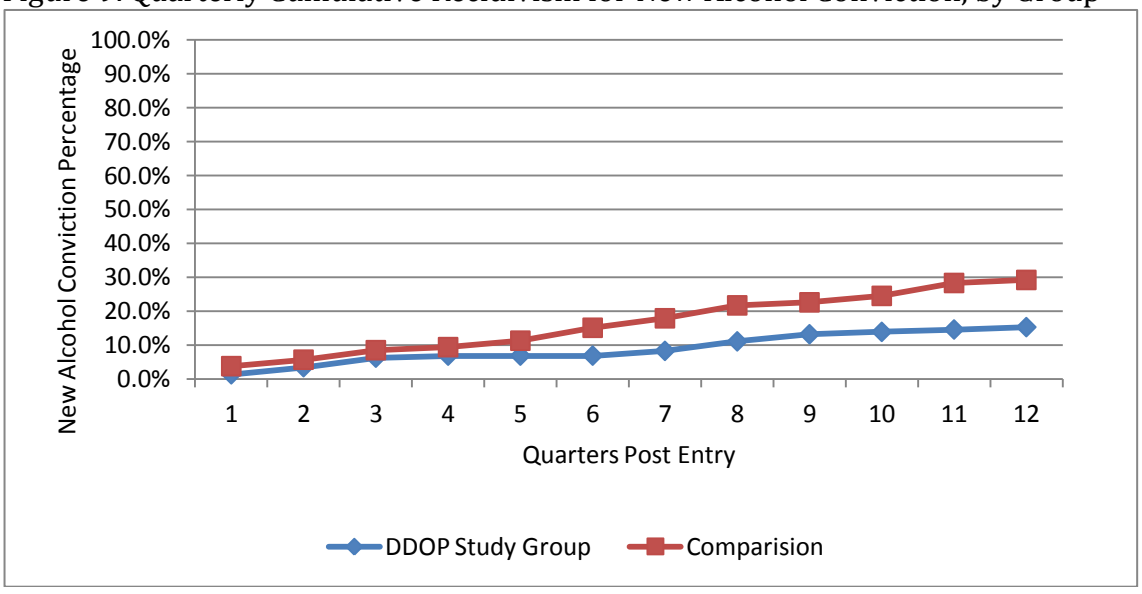
Non-white participants were slightly less likely than white participants to have new alcohol convictions in both the DDOP study group (12.8% vs. 16.5%) and the comparison group (23.8% vs. 30.6%). The percentages of DDOP completers and non-completers who had subsequent alcohol convictions in the three year tracking period was also slightly lower for non-whites. Among DDOP completers, 12.0% of non-whites and 14.8% of whites had new alcohol convictions. Among non-completers, 13.6% of non-whites and 19.4% of whites had new alcohol convictions.

Table 19. Number and Percent with a New Alcohol Conviction, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	16	16.5%	97	6	12.8%	47
Comparison	26	30.6%	85	5	23.8%	21
DDOP Completer	9	14.8%	61	3	12.0%	25
DDOP Non-Completer	7	19.4%	36	3	13.6%	22

During the first four quarters the DDOP study group and comparison group were approximately equally likely to have new convictions for alcohol-related offenses, however, by the fourth quarter this trend changed, with the comparison group having increasingly higher rates of alcohol convictions. In the fourth quarter, 6.9% of the DDOP study group and 9.4% of the comparison group had been convicted for an alcohol-related offense. By the eighth quarter, the alcohol recidivism rates were 11.1% vs. 21.7%, respectively. By the end of the tracking period, 15.3% of DDOP study group participants and 29.2% of comparison group members had new alcohol convictions.

Figure 9. Quarterly Cumulative Recidivism for New Alcohol Conviction, by Group



Combined Substance Abuse Relapse

Sixty-five percent of offenders in the cohort had *either* a positive urinalysis/breath analysis test or a new drug or alcohol conviction in the three year tracking time. By group, a higher percentage of comparison members (71.7%) had a positive drug test or a new drug/alcohol conviction than the study group (59.7%). Interestingly, program completers were more likely to relapse than non-completers (62.8% vs. 55.2%). The following table shows the results by group.

Table 20. Number and Percent with a Positive Test or New Drug/Alcohol Conviction, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	86	59.7%	144
Comparison	76	71.7%	106
DDOP Completer	54	62.8%	86
DDOP Non-Completer	32	55.2%	58

In the DDOP study group, non-white participants were slightly less likely than white participants to relapse (55.3% vs. 61.9%), however, in the comparison group, non-whites were more likely to relapse compared to whites (81.0% vs. 69.4%). The percentage of DDOP completers and non-completers who relapsed in the three year tracking period was slightly lower for non-whites. Among DDOP completers, 60% of non-whites and 63.9% of whites relapsed. Among non-completers, half of non-whites and 58.3% of whites had new drug convictions.

Table 21. Number and Percent with a Positive Test or New Drug/Alcohol Conviction, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	60	61.9%	97	26	55.3%	47
Comparison	59	69.4%	85	17	81.0%	21
DDOP Completer	39	63.9%	61	15	60.0%	25
DDOP Non-Completer	21	58.3%	36	11	50.0%	22

Serious Substance Abuse Relapse

Twenty-two percent of offenders in the cohort had *both* a positive urinalysis or breath analysis test and a new drug or alcohol conviction in the three year tracking time. By group, comparison members were more likely to have had both a positive drug test and a new drug/alcohol conviction than the study group (28.3% vs. 16.7%). Interestingly, program completers were more likely to relapse than non-completers (18.6% vs. 13.8%). Table 22 shows the results by group.

Table 22. Number and Percent with a Positive Test and New Drug/Alcohol Conviction, by Group and Completion Status

Group	n	%	Total
DDOP Study Group	24	16.7%	144
Comparison	30	28.3%	106
Completer	16	18.6%	86
Non-Completer	8	13.8%	58

In the DDOP study group, non-white participants were less likely than white participants to have *both* a positive urinalysis or breath analysis test and a new drug or alcohol conviction (10.6% vs. 19.6%); however, in the comparison group, non-whites and whites were about equally likely to have a positive test and a new drug/alcohol conviction than whites (28.6% vs. 28.2%). The percentages of DDOP completers and non-completers who had subsequent relapse was lower for non-whites. Among DDOP completers, 12.0% of non-whites and 21.3% of whites relapsed. Among non-completers, 9.1% of non-whites and 16.7% of whites relapsed.

Table 23. Number and Percent with a Positive Test and New Drug/Alcohol Conviction, by Race, Group and Completion Status

	White			Non-white		
Group	n	%	Total	n	%	Total
DDOP Study Group	19	19.6%	97	5	10.6%	47
Comparison	24	28.2%	85	6	28.6%	21
DDOP Completer	13	21.3%	61	3	12.0%	25
DDOP Non-Completer	6	16.7%	36	2	9.1%	22

Justice System Cost Comparison

The cost analysis included the DDOP study group and comparison group. Costs were reflective of the costs in year 2005 in the First Judicial District and were obtained from the Department of Corrections. Costs of some special programs administered by outside agencies, such as long term treatment, could not be obtained and are not included in the estimates. The cost rates per offender per day are shown in Table 24.

Table 24. Cost Rates, by Supervision Status

Supervision	Rate/Day (per offender)
Residential Center (Mason City, Cedar Rapids, Dubuque, Waterloo, West Union)	$55.01
Day Reporting - Residential	$4.27
DDOP Residential	$32.65 ($87.66 includes residential center)
DDOP Aftercare	$8.21
Electronic Monitoring - Radio Frequency	$2.28 ($5.56 includes probation/parole)
Global Positioning - Satellite	$4.98
Intensive Supervision	$10.23
Intensive Supervision - Low Functioning Offenders	$10.23
Intensive Supervision - Pretrial Release	$7.40
Intensive Supervision - Sex Offenders	$21.38
Interstate Compact/ Federal	$3.28
Jail	$55.00
Low Risk Probation/ Minimum Risk Program	$0.33
Mental Health Re-Entry / Re-Entry Court	$12.47
OWI Continuum	$55.01
Parole/Probation	$3.28
Pretrial Release With Supervision	$3.27
Prison/ Prison Safe-keeper/ Violator Program	$64.02
Video Display/Breath Alcohol Test/Radio Frequency	$5.00
Work Release	$55.01

Costs were estimated for all offenders' correctional supervision from the start of the study (entry to DDOP or community supervision) through the end of the three year tracking period. The costs of special corrections monitoring during that time period were also included. Efforts were made to track offenders' locations as they moved through the correctional system. Days in pre-trial release with supervision, probation, prison, work release, parole, OWI continuum, violator program, and jail were tabulated for each offender. If offenders were under multiple community supervisions at the same time, the costlier community supervision was included in the costs. If the records indicated that the offender was placed in jail, day reporting, the low-risk offender program, or intensive supervision those placements were counted rather than probation/parole, work release, or residential facility supervision that had occurred at the same

time. In instances of simultaneous residential and community supervisions (i.e. prison or residential center and probation/parole; jail/probation and pre-trial release; intensive supervision and probation/parole), only the residential supervision was included in the cost estimate. Days during which offenders absconded or escaped from supervision were not calculated in the costs. Residential DDOP costs, including subsequent placement in residential DDOP, were included in the cost estimates; however, because aftercare data were incomplete before 2005, aftercare costs were estimated separately.

Table 25. Estimated Costs Excluding Aftercare, by Completion Status

BASELINE AVERAGE COSTS, Excludes Aftercare: Offenders' Supervisions during 3 year Tracking Period	
Group	Average Cost (per offender)
DDOP Study Group	$37,465.00
Comparison	$18,948.87
DDOP Completer	$31,400.51
DDOP Non-Completer	$46,457.19

Aftercare costs were estimated using available data and are based on the estimate that 82.0% of DDOP study group participants were placed in aftercare and that the average stay in aftercare for those who participated was 368.8 days. Aftercare would add an estimated $214,977.21 to the cost estimate for program completers in the cohort.

Table 26. Estimated Cost of Aftercare

Aftercare Cost Estimate for Program Completers					
Total DDOP Completers in Study Group:	Number of Completers in Aftercare if 82% Participated	Average Days in Aftercare	Aftercare Cost per Day (per offender)	Aftercare Total Cost (per offender)	**Total Cost of Aftercare for 82% of Completers**
86	71	368.8	$8.21	$3,027.85	**$214,977.21**

Table 27 shows the costs including the aftercare estimate in the averages.

Table 27. Estimated Costs Including Aftercare, by Completion Status

AVERAGE COSTS, Includes Aftercare: Offenders' Supervisions during 3 year Tracking Period	
Group	Average Cost (per offender)
DDOP Study Group	$37,465.00
Comparison	$18,948.87
DDOP Completer	$33,900.24
DDOP Non-Completer	$46,457.19

In assessing the importance of these figures, it should be remembered first that they reflect the costs only within the three-year window tracked here. Figures over the long term may look very different, particularly when offenders have been returned to prison. If figures are examined with reference to the return-to-prison data presented earlier in the report, figures for the DDOP non-completers would rise more than those of the other groups, while figures for the DDOP completers would rise less. A true assessment of financial impact would require a longer tracking period than examined here, particularly given the nature of the offenders for which the DDOP was designed.

Appendix A

Table A1. DDOP Participant Demographic and Background Information, by Completion Status

Background Variables	Participants (n=236)		Completer (n=141)		Non-Completer (n=95)	
	Mean	SD	Mean	SD	Mean	SD
Age at Entry	32.1	10.1	33.3	9.8	30.3	10.2
Marital Status	N	%	N	%	N	%
Unmarried	203	86.0%	118	83.7%	85	89.5%
Married	33	14.0%	23	16.3%	10	10.5%
Highest Education Level Completed	N	%	N	%	N	%
Less than high school diploma	53	22.5%	32	22.7%	21	22.1%
High school diploma/ GED	145	61.4%	79	56.0%	66	69.5%
Some technical training or post secondary	15	6.4%	12	8.5%	3	3.2%
Unknown	23	9.7%	18	12.8%	5	5.3%
Race	N	%	N	%	N	%
White	169	71.6%	101	71.6%	68	71.6%
Non-white	67	28.4%	40	28.4%	27	28.4%
Most Serious Conviction Class at Study Entry	N	%	N	%	N	%
Felony	173	73.3%	108	76.6%	65	68.4%
Misdemeanor	63	26.7%	33	23.4%	30	31.6%
Drug Problem	N	%	N	%	N	%
Alcohol	1	0.4%	1	0.7%	0	0.0%
Cannabis	56	23.7%	39	27.7%	17	17.9%
Meth	15	6.4%	9	6.4%	6	6.3%
Cocaine	18	7.6%	11	7.8%	7	7.4%
Poly User	83	35.2%	46	32.6%	37	38.9%
Not specified	63	26.7%	35	24.8%	28	29.5%

Drug problem was indicated on the LSI-R assessment. Age is the age at entry into DDOP. Current conviction is offenders' most serious conviction that offenders were under supervision for when they entered DDOP. Offenses occurred before the start of DDOP, but the conviction may have occurred later.

Table A2. DDOP Participant Chronic Mental Illness, by Completion Status

	Participants (n=173 *Known*)		Completer (n=83 *Known*)		Non-Completer (n=90 *Known*)	
Chronic Mental Illness*	N	%	N	%	N	%
Serious Mental Illness**	135	78.0%	66	79.5%	69	76.7%
Anxiety Disorder	52	30.1%	23	27.7%	29	32.2%
Bipolar	32	18.5%	16	19.3%	16	17.8%
Depression	63	36.4%	29	34.9%	34	37.8%
Developmental Disability	21	12.1%	9	10.8%	12	13.3%
Dysthymia/ Neurotic Depression	17	9.8%	9	10.8%	8	8.9%
Impulse Control Disorder	2	1.2%	0	0.0%	2	2.2%
Personality Disorder	47	27.2%	17	20.5%	30	33.3%
PTSD	5	2.9%	3	3.6%	2	2.2%
Psychotic Disorder	50	28.9%	21	25.8%	29	32.2%
Schizophrenia	34	19.7%	18	21.7%	16	17.8%
Substance Use Disorder	65	37.6%	29	34.9%	36	40.0%
Unique Unknown Offenders	*63*	*26.7%*	*58*	*41.1%*	*5*	*5.3%*

*The source of chronic mental illness data is the Department of Corrections. The provided information on mental illness and developmental disability diagnoses from the ICON Medical module utilized DSM IV information where available, and ICD9 diagnoses for older cases where no DSM IV information existed (in 2008 DOC psychiatrists moved from documenting mental illness and developmental disabilities diagnoses using ICD9 diagnosis codes to using DSM IV codes). Only major chronic diagnoses were provided. Chronic mental illnesses were counted regardless of status. No diagnosis information is available for offenders who had never entered the Iowa prison system. In each mental illness category, data is reported for unique offenders diagnosed with the given mental illness. Offenders who have more than one mental illness are counted more than once in each category they have a diagnosis. Some offenders did not have data on their mental illness diagnosis and are not included in the percentages. ** Serious mental illness is not a diagnosis category but a designation that covers individual with diagnoses that involve major impairment to their functioning.

Table A3. DDOP Participant Level of Service Inventory Revised (LSI-R) Total Score and Sub-Scores, by Completion Status

Level of Service Inventory-Revised (LSI-R)	Participants (n=236)		Completer (n=141)		Non-Completer (n=95)	
Total Score	N	%	N	%	N	%
High (41+)	64	27.1%	30	21.3%	34	35.8%
Moderate/High (34-40)	90	38.1%	61	43.3%	29	30.5%
Moderate (24-33)	52	22.0%	40	28.4%	12	12.6%
Low/Moderate (14-23)	1	0.4%	0	0.0%	1	1.1%
Unknown	29	12.3%	10	7.1%	19	20.0%
Total Score and Select Sub-Scores	Mean	SD	Mean	SD	Mean	SD
Total Score	37.3	5.8	36.2	5.3	39.1	6.0
Alcohol/Drug Problem (0, lowest, to 9, highest)	6.0	2.0	5.9	2.0	6.2	2.0
Emotional/Personal (0, lowest, to 5, highest)	4.5	0.7	4.5	0.7	4.5	0.7

Includes LSI-R scores for offenders who were assessed within 180 days before or after DDOP entrance date (participants) or study entry date (comparison group).

Table A4. DDOP Participant Residential Program Retention and Completion

Average Residential Program Days	Mean	SD
All	158.0	73.1
Completer	197.4	36.8
Non-Completer	99.4	74.4
Residential Discharge Status	N	%
Completer	141	59.7%
Non-Completer	95	40.3%

Table A5. DDOP Participant Criminal Background and Intervention History, by Completion Status

Criminal Background & Intervention History	Participants (n=236)		Completer (n=141)		Non-Completer (n=95)	
	N	%	N	%	N	%
Prior Prison Admission	134	56.8%	80	56.7%	54	56.8%
Prior Interventions	N	%	N	%	N	%
Had a prior intervention	130	55.1%	76	53.9%	54	56.8%
Anger/Violence Education or Management	9	3.8%	5	3.5%	4	4.2%
Cognitive/Criminal Thinking	27	11.4%	21	14.9%	6	6.3%
Evaluation	37	15.7%	25	17.7%	12	12.6%
Family/Parenting	3	1.3%	3	2.1%	0	0.0%
Life Skills (includes Employment, Education, Finances, Cultural)	44	18.6%	26	18.4%	18	18.9%
Mental Health	82	34.7%	47	33.3%	35	36.8%
Recovery Support/Substance Abuse Education	70	29.7%	44	31.2%	26	27.4%
Subsistence Services/Medical/Housing	4	1.7%	1	0.7%	3	3.2%
Victim Empathy	6	2.5%	4	2.8%	2	2.1%
Prior Intervention Programs	N	%	N	%	N	%
Had a prior intervention program	82	34.7%	48	34.0%	34	35.8%
Batterer's Education Program	7	3.0%	5	3.5%	2	2.1%
Day Program	30	12.7%	16	11.3%	14	14.7%
Dual Diagnosis	3	1.3%	1	0.7%	2	2.1%
Inner Change Freedom Initiative	1	0.4%	1	0.7%	0	0.0%
OWI Program	3	1.3%	3	2.1%	0	0.0%
Re-Entry Court	4	1.7%	2	1.4%	2	2.1%
Sex Offender	5	2.1%	2	1.4%	3	3.2%
TASC	29	12.3%	21	14.9%	8	8.4%
Violator Program	15	6.4%	8	5.7%	7	7.4%
Youthful Offender Program	10	4.2%	7	5.0%	3	3.2%
	Mean	SD	Mean	SD	Mean	SD
# Prior Interventions	3.0	2.2	3.2	2.3	2.6	2.0
# Prior Intervention Programs	1.5	0.9	1.7	1.0	1.3	0.5

Prior prison includes violator program placement. Prior interventions (intervention programs) are all that ended before or on the same day as offenders' start in DDOP. In each intervention (program) category, data is reported for unique offenders who were placed in that intervention (program). Offenders who have more than one intervention (program) placement prior to DDOP are counted more than once in each category for their respective intervention (program). Offenders without prior intervention (programs) are not included in the averages.

Appendix B

Table B1. Study and Comparison Group Demographic and Background Information

Background Variables	DDOP Study Group (n=144)		Comparison Group (n=106)	
	Mean	SD	Mean	SD
Age at Entry	31.9	9.9	32.9	10.4
Marital Status	N	%	N	%
Unmarried	123	85.4%	91	85.6%
Married	21	14.6%	15	14.2%
Highest Education Level Completed	N	%	N	%
Less than high school diploma	32	22.2%	24	22.6%
High school diploma/ GED	95	66.0%	60	56.6%
Some technical training or post secondary	9	6.3%	9	8.5%
Unknown	8	5.6%	13	12.3%
Race	N	%	N	%
White	97	67.4%	85	80.2%
Non-white	47	32.6%	21	19.8%
Most Serious Conviction Class at Study Entry	N	%	N	%
Felony	103	71.5%	46	43.3%
Misdemeanor	41	28.5%	60	56.6%
Drug Problem	N	%	N	%
Alcohol	1	0.7%	1	0.9%
Cannabis	39	27.1%	22	20.8%
Meth	9	6.3%	5	4.7%
Cocaine	9	6.3%	5	4.7%
Other	0	0.0%	2	1.9%
Poly User	47	32.6%	29	27.4%
Not specified	39	27.1%	42	39.6%

Drug problem was indicated on the LSI-R assessment. Age is the age at entry into DDOP (study group) or the age at study entry date (comparison group). Current conviction is offenders' most serious conviction that offenders were under supervision for when they entered DDOP (study group) or entered the study (comparison group). Offenses occurred before the start of DDOP, but the conviction may have occurred after.

Table B2. Study and Comparison Group Chronic Mental Illness

	DDOP Study Group (n=108 *Known*)		Comparison Group (n=58 *Known*)	
Chronic Mental Illness*	N	%	N	%
Serious Mental Illness**	87	80.6%	44	75.9%
Anxiety Disorder	36	33.3%	16	27.6%
Bipolar	20	18.5%	16	27.6%
Depression	39	36.1%	25	43.1%
Developmental Disability	10	9.3%	4	6.9%
Dysthymia/ Neurotic Depression	13	12.0%	4	6.9%
Impulse Control Disorder	2	1.9%	4	6.9%
Personality Disorder	27	25.0%	12	20.7%
PTSD	2	1.9%	5	8.6%
Psychotic Disorder	32	29.6%	12	20.7%
Schizophrenia	27	25.0%	8	13.8%
Sleep/ Movement/ Eating Disorder	0	0.0%	2	3.4%
Substance Use Disorder	31	28.7%	21	36.2%
Unique Unknown Offenders	*36*	*25.0%*	*48*	*45.3%*

*The source of chronic mental illness data is the Department of Corrections. The provided information on mental illness and developmental disability diagnoses from the ICON Medical module utilized DSM IV information where available, and ICD9 diagnoses for older cases where no DSM IV information existed (in 2008 DOC psychiatrists moved from documenting mental illness and developmental disabilities diagnoses using ICD9 diagnosis codes to using DSM IV codes). Only major chronic diagnoses were provided. Chronic mental illnesses were counted regardless of status. No diagnosis information is available for offenders who had never entered the Iowa prison system. In each mental illness category, data is reported for unique offenders diagnosed with the given mental illness. Offenders who have more than one mental illness are counted more than once in each category they have a diagnosis. Some offenders did not have data on their mental illness diagnosis and are not included in the percentages. ** Serious mental illness is not a diagnosis category but a designation that covers individual with diagnoses that involve major impairment to their functioning.

Table B3. Study and Comparison Group Level of Service Inventory Revised (LSI-R) Total Score and Sub-Scores

Level of Service Inventory-Revised (LSI-R)	DDOP Study Group (n=144)		Comparison Group (n=106)	
Total Score	N	%	N	%
High (41+)	38	26.4%	25	23.6%
Moderate/High (34-40)	51	35.4%	33	31.1%
Moderate (24-33)	35	24.3%	17	16.0%
Low/Moderate (14-23)	1	1.0%	1	0.9%
Unknown	19	13.2%	30	28.3%
Total Score and Select Sub-Scores	Mean	SD	Mean	SD
Total Score	37.1	5.9	36.8	5.7
Alcohol/Drug Problem (0, lowest, to 9, highest)	6.1	2.1	6.8	2.0
Emotional/Personal (0, lowest, to 5, highest)	4.5	0.8	4.2	1.1

Includes LSI-R scores for offenders who were assessed within 180 days before or after DDOP entrance date.

Table B4. Study and Comparison Group Criminal Background and Intervention History

Criminal Background & Intervention History	DDOP Study Group (n=144)		Comparison (n=106)	
	N	%	N	%
Prior Prison Admission	85	59.0%	40	37.7%
Prior Interventions	N	%	N	%
Had a prior intervention	63	43.8%	16	15.1%
Anger/Violence Education or Management	1	0.7%	1	0.9%
Cognitive/Criminal Thinking	16	11.1%	5	4.7%
Evaluation	20	13.9%	9	8.5%
Family/Parenting	2	1.4%	2	1.9%
Life Skills (includes Employment, Education, Finances, Cultural)	22	15.3%	8	7.5%
Mental Health	35	24.3%	7	6.6%
Recovery Support/Substance Abuse Education	34	23.6%	9	8.5%
Subsistence Services/Medical/Housing	2	1.4%	0	0.0%
Victim Empathy	3	2.1%	0	0.0%
Prior Intervention Programs	N	%	N	%
Had a prior intervention program	50	34.7%	12	11.3%
Batterer's Education Program	3	2.1%	4	3.8%
Day Program	20	13.9%	4	3.8%
Dual Diagnosis	3	2.1%	0	0.0%
Inner Change Freedom Initiative	0	0.0%	1	0.9%
OWI Program	2	1.4%	1	0.9%
Re-Entry Court	1	0.7%	0	0.0%
Sex Offender	4	2.8%	0	0.0%
TASC	21	14.6%	3	2.8%
Violator Program	4	2.8%	0	0.0%
Youthful Offender Program	5	3.5%	0	0.0%
	Mean	SD	Mean	SD
# Prior Interventions	2.8	1.9	3.1	1.5
# Prior Intervention Programs	1.4	0.7	1.0	0.0

Prior prison includes violator program placement. Prior interventions (intervention programs) are all that ended before or on the same day as offenders' start in DDOP or community supervision. In each intervention (program) category, data is reported for unique offenders who were placed in that intervention (program). Offenders who have more than one intervention (program) placement prior to DDOP or community supervision are counted more than once in each category for their respective intervention (program). Offenders without prior intervention (programs) are not included in the averages.

Appendix C

Table C1. DDOP Study Group Demographic and Background Information, by Completion Status

Background Variables	DDOP Study Group (n=144)		DDOP Completer (n=86)		DDOP Non-Completer (n=58)	
	Mean	SD	Mean	SD	Mean	SD
Age at Entry	31.9	9.9	33.1	9.1	30.1	10.9
Marital Status	N	%	N	%	N	%
Unmarried	123	85.4%	72	83.7%	51	87.9%
Married	21	14.6%	14	16.3%	7	12.1%
Highest Education Level Completed	N	%	N	%	N	%
Less than high school diploma	32	22.2%	18	20.9%	14	24.1%
High school diploma/ GED	95	66.0%	53	61.6%	42	72.4%
Some technical training or post secondary	9	6.3%	7	8.1%	2	3.4%
Unknown	8	5.6%	8	9.3%	0	0.0%
Race	N	%	N	%	N	%
White	97	67.4%	61	70.9%	36	62.1%
Non-white	47	32.6%	25	29.1%	22	37.9%
Most Serious Conviction Class at Study Entry	N	%	N	%	N	%
Felony	103	71.5%	66	76.7%	37	63.8%
Misdemeanor	41	28.5%	20	23.3%	21	36.2%
Drug Problem	N	%	N	%	N	%
Alcohol	1	0.7%	1	1.2%	0	0.0%
Cannabis	39	27.1%	25	29.1%	14	24.1%
Meth	9	6.3%	7	8.1%	2	3.4%
Cocaine	9	6.3%	5	5.8%	4	6.9%
Poly User	47	32.6%	28	32.6%	19	32.8%
Not specified	39	27.1%	20	23.3%	19	32.8%

Drug problem was indicated on the LSI-R assessment. Age is the age at entry into DDOP. Current conviction is offenders' most serious conviction that offenders were under supervision for when they entered DDOP. Offenses occurred before the start of DDOP, but the conviction may have occurred after.

Table C2. DDOP Study Group Chronic Mental Illness, by Completion Status

	DDOP Study Group (n=108 *Known)*		DDOP Completer (n=54 *Known*)		DDOP Non-Completer (n=54 *Known*)	
Chronic Mental Illness*	N	%	N	%	N	%
Serious Mental Illness**	87	80.6%	45	83.3%	42	77.8%
Anxiety Disorder	36	33.3%	18	33.3%	18	33.3%
Bipolar	20	18.5%	10	18.5%	10	18.5%
Depression	39	36.1%	19	35.2%	20	37.0%
Developmental Disability	10	9.3%	4	7.4%	6	11.1%
Dysthymia/ Neurotic Depression	13	12.0%	7	13.0%	6	11.1%
Impulse Control Disorder	2	1.9%	0	0.0%	2	3.7%
Personality Disorder	27	25.0%	12	22.2%	15	27.8%
PTSD	2	1.9%	2	3.7%	0	0.0%
Psychotic Disorder	32	29.6%	14	25.9%	18	33.3%
Schizophrenia	27	25.0%	15	27.8%	12	22.2%
Substance Use Disorder	31	28.7%	16	29.6%	15	27.8%
Unique Unknown Offenders	*36*	*25.0%*	*32*	*37.2%*	*4*	*6.9%*

*The source of chronic mental illness data is the Department of Corrections. The provided information on mental illness and developmental disability diagnoses from the ICON Medical module utilized DSM IV information where available, and ICD9 diagnoses for older cases where no DSM IV information existed (in 2008 DOC psychiatrists moved from documenting mental illness and developmental disabilities diagnoses using ICD9 diagnosis codes to using DSM IV codes). Only major chronic diagnoses were provided. Chronic mental illnesses were counted regardless of status. No diagnosis information is available for offenders who had never entered the Iowa prison system. In each mental illness category, data is reported for unique offenders diagnosed with the given mental illness. Offenders who have more than one mental illness are counted more than once in each category they have a diagnosis. Some offenders did not have data on their mental illness diagnosis and are not included in the percentages. ** Serious mental illness is not a diagnosis category but a designation that covers individual with diagnoses that involve major impairment to their functioning.

Table C3. DDOP Study Group Level of Service Inventory Revised (LSI-R) Total Score and Sub-Scores, by Completion Status

Level of Service Inventory-Revised (LSI-R)	DDOP Study Group (n=144)		DDOP Completer (n= 86)		DDOP Non-Completer (n= 58)	
Total Score	N	%	N	%	N	%
High (41+)	38	26.4%	18	20.9%	20	34.5%
Moderate/High (34-40)	51	35.4%	39	45.3%	12	20.7%
Moderate (24-33)	35	24.3%	25	29.1%	10	17.2%
Low/Moderate (14-23)	1	1.0%	0	0.0%	1	1.7%
Unknown	19	13.2%	4	4.7%	15	25.9%
Total Score and Select Sub-Scores	Mean	SD	Mean	SD	Mean	SD
Total Score	37.1	5.9	36.3	5.2	38.7	7.0
Alcohol/Drug Problem (0, lowest, to 9, highest)	6.1	2.1	6.0	2.1	6.3	2.1
Emotional/Personal (0, lowest, to 5, highest)	4.5	0.8	4.5	0.7	4.5	0.8

Includes LSI-R scores for offenders who were assessed within 180 days before or after DDOP entrance date.

Table C4. DDOP Study Group Residential Program Retention and Completion

Average Residential Program Days	Mean	SD
All	164.6	73.8
Completer	201.6	37.8
Non-Completer	109.6	79.9
Residential Discharge Status	N	%
Completer	86	59.7%
Non-Completer	58	40.3%

Table C5. DDOP Study Group Criminal Background and Intervention History, by Completion Status

Criminal Background & Intervention History	DDOP Study Group (n=144)		DDOP Completer (n=86)		DDOP Non-Completer (n=58)	
	N	%	N	%	N	%
Prior Prison Admission	85	59.0%	52	60.5%	33	56.9%
Prior Interventions	N	%	N	%	N	%
Had a prior intervention	63	43.8%	40	46.5%	23	39.7%
Anger/Violence Education or Management	1	0.7%	1	1.2%	0	0.0%
Cognitive/Criminal Thinking	16	11.1%	14	16.3%	2	3.4%
Evaluation	20	13.9%	13	15.1%	7	12.1%
Family/Parenting	2	1.4%	2	2.3%	0	0.0%
Life Skills (includes Employment, Education, Finances, Cultural)	22	15.3%	14	16.3%	8	13.8%
Mental Health	35	24.3%	23	26.7%	12	20.7%
Recovery Support/Substance Abuse Education	34	32.6%	23	26.7%	11	19.0%
Subsistence Services/Medical/Housing	2	1.4%	0	0.0%	2	3.4%
Victim Empathy	3	2.1%	1	1.2%	2	3.4%
Prior Intervention Programs	N	%	N	%	N	%
Had a prior intervention program	50	34.7%	29	33.7%	21	36.2%
Batterer's Education Program	3	2.1%	3	3.5%	0	0.0%
Day Program	20	13.9%	10	11.6%	10	17.2%
Dual Diagnosis	3	2.1%	1	1.2%	2	3.4%
OWI Program	2	1.4%	2	2.3%	0	0.0%
Re-Entry Court	1	0.7%	1	1.2%	0	0.0%
Sex Offender	4	2.8%	1	1.2%	3	5.2%
TASC	21	14.6%	15	17.4%	6	10.3%
Violator Program	4	2.8%	3	3.5%	1	1.7%
Youthful Offender Program	5	3.5%	3	3.5%	2	3.4%
	Mean	SD	Mean	SD	Mean	SD
# Prior Interventions	2.8	1.9	3.1	2.0	2.3	1.6
# Prior Intervention Programs	1.4	0.7	1.6	0.8	1.2	0.4

Prior prison includes violator program placement. Prior interventions (intervention programs) are all that ended before or on the same day as offenders' start in DDOP. In each intervention (program) category, data is reported for unique offenders who were placed in that intervention (program). Offenders who have more than one intervention (program) placement prior to DDOP are counted more than once in each category for their respective intervention (program). Offenders without prior intervention (programs) are not included in the averages.

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