



Required Report to the Legislature:

Central Pharmacy Pilot Project

January 2014

About This Report

Per the *Iowa Acts*, "The department of corrections, in cooperation with the attorney general's office, shall submit a report to the co-chairpersons and ranking members of the joint appropriations subcommittee on the justice system, and the legislative agency, by January 15, 2014. The report shall detail the results of the central pharmacy pilot project that utilizes the Iowa prescription drug corporation's voucher program for indigent offenders. The report shall include but is not limited to the number of offenders annually served by the pilot project, funding sources, and the recidivism rates of offenders in the pilot project."

Introduction

Individuals released from Iowa's prison system are faced with tremendous economic, social, and medical challenges. Currently, offenders who leave the prison system are given a 30-day supply of medications. Thirty days is often not an adequate length of time for an offender to establish a source of continuous medication therapy. For offenders with behavioral health disorders, discontinuing many types of psychiatric medications can lead to the underlying illness or illnesses no longer being under control, an outcome of which could lead to the individual reoffending. To address the short-term behavioral health medication needs of released offenders, a pilot project with the Iowa Department of Corrections Central Pharmacy was launched on April 1, 2013. The Central Pharmacy Pilot Project provides up to ninety days of behavioral health prescription drug coverage for offenders released from an Iowa Department of Corrections prison facility.

Preliminary Findings

Although more research time is needed to determine if the increased access to behavioral health medications will positively impact the rate of recidivism among offenders with behavioral health disorders, the preliminary data contained in this report provides an early indication that the Central Pharmacy Program is of great assistance to participants' successful reentry. Specifically:

- **A substantial number of participating offenders were medication compliant;**
- **The mental health adjustment among participating offenders is mainly positive; and**
- **Positive mental health adjustment among participating offenders is strongly associated with success under supervision.**

Background

In 2009, the Iowa Attorney General obtained monetary settlements with two pharmacy benefit managers. These settlement funds were designated to assist Iowans in need of assistance with the purchase of their prescribed medications. As a result, the Iowa Prescription Drug

Corporation (IPDC) established the Iowa Medication Voucher Program in June 2009. Through the Iowa Medication Voucher Program, uninsured or underinsured Iowans with a household income 200% of the federal poverty level or below can utilize a prescription voucher to obtain a 90-day supply of medication from a limited formulary covering five disease states (hypertension, diabetes, elevated cholesterol, depression, and pregnancy/pre-post natal care). To honor the prescription vouchers, participating pharmacies are reimbursed at rates equivalent to Iowa Medicaid reimbursements. Ninety-five of Iowa's 99 counties have a pharmacy participating in the Iowa Medication Voucher Program. Since the program was established (June 2009 through December 15, 2013) 22,146 vouchers have been utilized by safety net patients in Iowa.

Based on a study conducted by the Iowa Pharmacy Association, the University of Iowa - College of Pharmacy, and the Iowa Department of Corrections, a recommendation was made to utilize IPDC programs as a vehicle to connect released offenders with behavioral health medications. As a result, the IPDC proposed a plan to modify the Iowa Medication Voucher Program to serve the short-term behavioral health medication needs of released offenders. The IPDC convened a group of stakeholders consisting of leadership from the Iowa Department of Corrections, the Office of the Attorney General, the University of Iowa - College of Pharmacy, the Iowa Pharmacy Association, and participating retail pharmacies to assist with the development and implementation of the program.

Program Overview

Offenders released from one of Iowa's prisons may access up to 90-days of behavioral health medications at no cost. At the time of release, the Iowa Department of Corrections provides the individual with a 30-day supply of all medications. The offender may also have prescriptions for up to 60-days of behavioral health medications transferred to a participating community pharmacy and filled at no cost to him/her. Prescriptions are limited to mental health medications listed on the current DOC Behavioral Health formulary. Eligible prescriptions (two 30-day refills) are transferred directly to a participating community pharmacy from the DOC Central Pharmacy. Prescriptions must be dispensed in 30-day quantities and pharmacies are reimbursed at rates equivalent to Iowa Medicaid. The program has no patient (offender) co-pay.

Any offender released from one of Iowa's DOC prison facilities with an individual or household income 200% of the federal poverty level or below is eligible to participate. In addition, the offender may not have existing prescription coverage or health insurance that would cover the prescribed medication filled through the Central Pharmacy Pilot Project. Eligibility is determined by DOC staff at the time of release.

Funding

Pharmacies participating in the Central Pharmacy Pilot Project have been reimbursed \$15,485 for prescriptions dispensed from the date of program inception through December 15, 2013. The IPDC is working with program partners to secure additional funding.

Program Usage

The first offender to benefit from the program exited prison on March 8, 2013. Since then and through December 15, 2013, 590 separate drug prescriptions were filled for 165 offenders in 266 pharmacy visits (an average of 1.6 visits per offender). The number of prescribed drugs filled per offender per visit ranged from one to six, and averaged 2.2.

Much of the remainder of this report describes characteristics of the offenders served by the program, their prescriptions, and recidivism to date. Due to the program being new, recidivism outcomes should be considered very preliminary. In order to supplement the quantitative findings, the following section contains observations and comments from corrections professionals familiar with the offenders and the program.

Comments from the Field

“I worked as a Correctional Counselor at the Clinical Care unit, responsible for assisting mentally ill offenders with reentry back into the community. The largest stress to offenders was their fear of how they would pay for their mental health appointments and medications they desperately needed to remain mentally healthy and safe to the community. When the Indigent Prescription program started, and the offenders started to understand the program, it eased their minds about how they would get their medications and remain mentally healthy, which was usually their biggest obstacle. Without the program, and the changes in funding availability through the County, our offenders would be back in the same place, without any assistance to get their prescriptions while they were waiting for the 3-4 months for their Medicaid to be approved. Without their medication, they often are so sick or have disappeared by the time they get their Medicaid that they no longer pursue medication, and ultimately end up in prison again. Not to mention they become a risk to community safety.”

-- Lynn Hartsock, Iowa State Penitentiary

“I couldn’t tell you how many times this program has helped us. We have had to call sending institutions on several occasions to request a scrip due to the fact offenders are unable to get into our local mental health clinic in less than 60 days. The medical staff have been lifesavers on several occasions by sending in a scrip for us.”

-- Monty Sheckles, Dubuque Residential Facility

“I have assisted several offenders recently with using the DOC voucher program through IPDC. Many of my offenders have mental health diagnoses and are released from prison with a small supply of medications, but they are often unable to get in for doctor appointments before their medication runs out. This program allows them to stay on the medications, and they are able to focus on getting jobs and re-entering the community.”

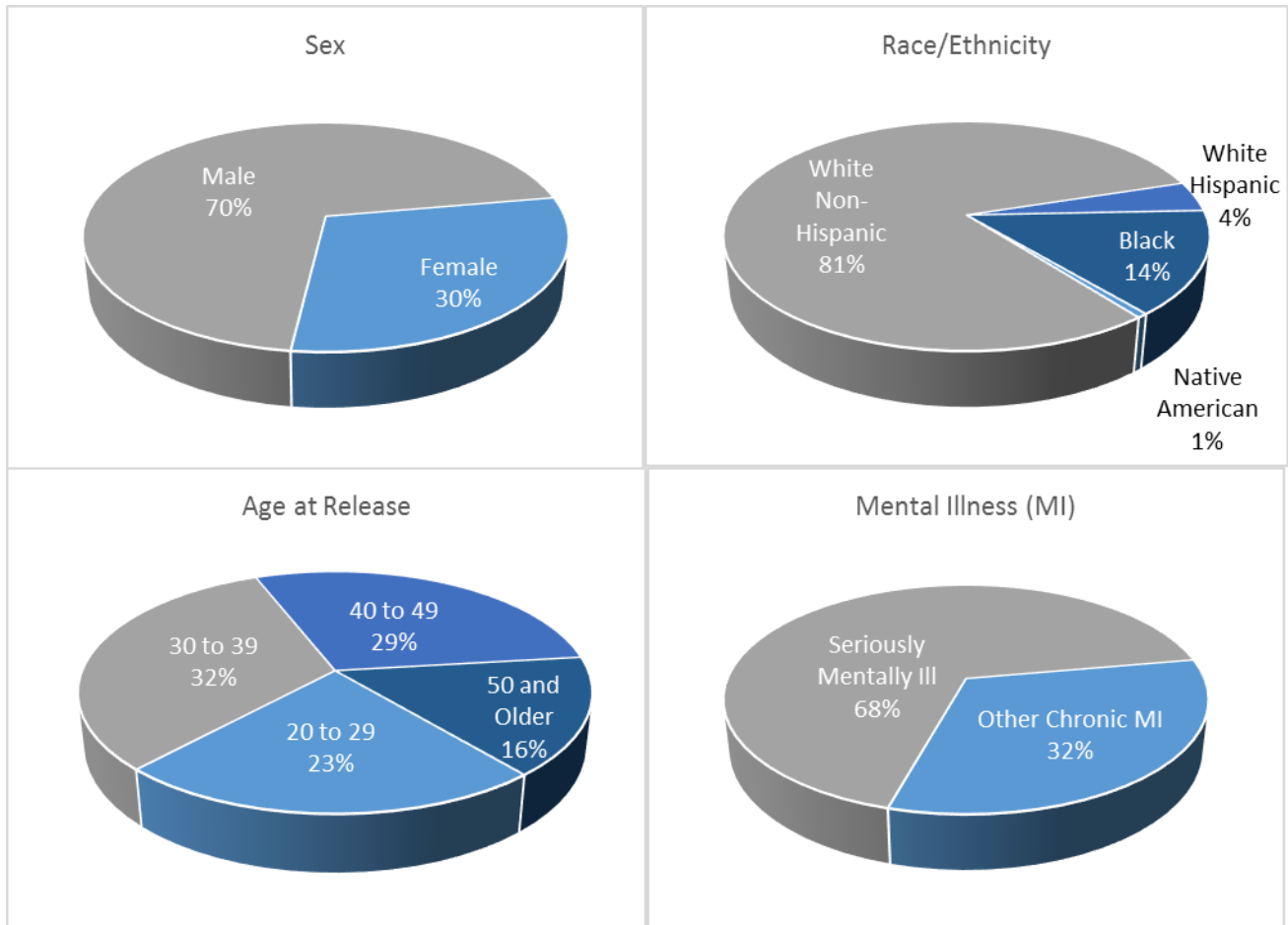
-- Kaia Downing, Parole Officer, Sioux City

Participant Characteristics

The majority of offenders who participated in the program were White Non-Hispanic males. Of particular note, however, is the large percentage of female participants – 30% -- which is expected given their higher rate of mental illness among female prison inmates compared to males in prison. Average age at release from prison for participants was 38, which is slightly older than the average age of the prison inmate population.

Over two-thirds of offenders who participated in the program had at least one diagnosis of a serious mental illness:

- Schizophrenia
- Recurrent Major Depressive Disorders
- Bipolar Disorders
- Other Chronic and Recurrent Psychosis
- Dementia and other Organic Disorders



The average offender had 2.5 separate diagnoses of a chronic mental health condition. In the following table, all such diagnoses are shown. About 69% of offenders had substance use disorders, which highlights the prevalence of co-occurring disorders among the participants. In addition to mental health conditions, the number and percent of those with developmental disabilities are shown as these are often complicating conditions in the management of individuals with mental illnesses.

Chronic Diagnoses: Mental Health & Developmental Disabilities

Diagnosis Category	N Offenders w/Diagnosis	% of Total	Females	Males
Substance use disorders	114	69.1%	40	74
Depression & major depressive disorders	62	37.6%	20	42
Anxiety, general anxiety & panic disorders	61	37.0%	15	46
Personality disorders	31	18.8%	9	22
Psychosis/Psychotic disorders	28	17.0%	8	20
Bipolar disorders	27	16.4%	10	17
Developmental disabilities	22	13.3%	7	15
Posttraumatic stress disorder (PTSD)	14	8.5%	5	9
Schizophrenia	13	7.9%	1	12
Impulse control disorders	5	3.0%		5
Dementia/organic disorders	3	1.8%		3
Dysthymia/Neurotic depression	1	0.6%		1
Sleep, movement & eating disorders	1	0.6%	1	
Total Offenders	165	---	49	116

Diagnoses are included whether or not an offender is receiving medication for the condition.

A given offender may have diagnoses in more than one category.

Prescription Drug Data

The following table provides detail for the 590 separate drug prescriptions filled for participants in 266 pharmacy visits (an average of 1.6 visits per offender). As stated earlier in this report, the number of prescribed drugs filled per offender per visit ranged from one to six, and averaged 2.2. As expected given the mental health issues of the participants, many of the prescriptions are for drugs that are commonly used to treat the seriously mentally ill.

Prescriptions Filled: Program Inception through December 15, 2013

Drug	Common Uses	N Rx Filled	% of Total	Rx for Females	Rx for Males
Amitriptyline	depression	38	6.4%	10	28
Aripiprazole	psychotic disorder, schizophrenia, bipolar disorder	1	0.2%		1
Atomoxetine	attention deficit hyperactivity disorder (ADHD)	11	1.9%	4	7
Benzotropine	symptoms of muscle spasms, stiffness, tremors, etc. as a result of disease such as Parkinson's, drug therapy or other causes	26	4.4%	4	22
Bupropion	major depressive disorder	3	0.5%		3
Buspirone	anxiety disorder	21	3.6%	9	12
Carbamazepine	bipolar disorder; used to treat seizures and nerve pain	12	2.0%	5	7
Chlorpromazine	psychotic disorder, schizophrenia	15	2.5%		15
Citalopram	depression, mood disorder, anxiety	40	6.8%	13	27
Divalproex	bipolar disorder; used to treat seizures	25	4.2%	5	20
Fluoxetine	depression, panic disorder, obsessive-compulsive disorder	34	5.8%	19	15
Haloperidol	schizophrenia; Tourette's syndrome	9	1.5%	4	5
Hydroxyzine	anxiety disorder	78	13.2%	29	49
Imipramine	depression	4	0.7%		4
Lamotrigine	bipolar disorder; used to treat seizures	13	2.2%	11	2
Lithium	bipolar disorder	15	2.5%	4	11
Mirtazapine	major depressive disorder	49	8.3%	5	44
Olanzapine	psychotic disorder, schizophrenia, bipolar disorder	8	1.4%		8
Paroxetine	depression, obsessive-compulsive disorder, anxiety disorder, post-traumatic stress disorder (PTSD)	22	3.7%	13	9
Perphenazine	psychotic disorder, schizophrenia	4	0.7%		4
Prazosin	hypertension, post-traumatic stress disorder (PTSD)	8	1.4%	3	5
Risperidone	psychotic disorder, schizophrenia, bipolar disorder	26	4.4%	4	22
Sertraline	depression, obsessive-compulsive disorder, panic disorder, anxiety disorder, post-traumatic stress disorder (PTSD)	16	2.7%	6	10
Thiothixene	schizophrenia	4	0.7%	2	2
Trazodone	major depressive disorder	60	10.2%	36	24
Trihexyphenidyl	symptoms of muscle spasms, stiffness, tremors, etc. as a result of disease such as Parkinson's, drug therapy or other causes	1	0.2%	1	
Venlafaxine	major depressive disorder, anxiety, and panic disorder	47	8.0%	14	33
Total Prescriptions Filled		590	100.0%	201	389

Prescriptions filled include occasions where the offender received drugs on more than one occasion.

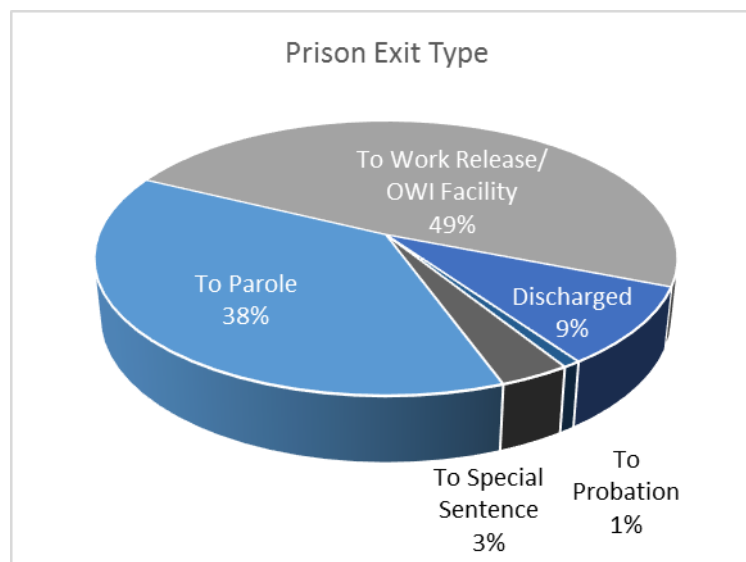
Common uses is not intended to be an exhaustive list of all uses of these medications.

Preliminary Outcomes

As discussed in this section, preliminary results with regard to reducing the likelihood offenders will incur a new charge or have supervision revoked appear promising. However, only a rudimentary comparison with non-participants with mental health diagnoses was conducted, and therefore readers are advised not to draw firm conclusions at this time.

The Iowa Department of Corrections, the University of Iowa - College of Pharmacy, the Office of the Attorney General and IPDC are currently engaged in planning to conduct a more thorough study of offender outcomes, including a carefully crafted comparison group that ensures those offenders are truly similar to the program participants. For example, to ensure offenders in the comparison group were on prescribed psychotropic medications at the time of release; they remained in Iowa; and they were similar to program participants with regard to sex, race, ethnicity, age, mental health diagnosis, risk for reoffending, etc. Future analyses will also provide for a larger number of participants to be studied, and a longer tracking period.

Participants by Prison Exit Type. Due to the recent onset of the program, recidivism will be limited to the critical first ninety days. Of the 165 participants described in this report, 119 had been out of prison for at least ninety days, through December 18, 2013. As shown in the chart below, 9% (11 offenders) discharged their prison sentences and received no post-release supervision. Nearly half of participants were released from prison to community residential corrections facilities on work release status, or to participate in drunken driver (OWI) treatment. Such offenders remain on inmate status for the duration of their stay in those placements.



New Charges. During the first ninety days following release, five offenders (three under community supervision and two who had discharged with no post-release supervision) had new charges entered in ICON (the Iowa Department of Corrections database). This constitutes a recidivism rate of 4.2% (five out of 119 offenders). Charges were: Forgery (Class D felony);

Driving While Barred (aggravated misdemeanor); Unauthorized Use of Credit Card (aggravated misdemeanor); and two offenders charged with Voluntary Absence from residential corrections facilities (serious misdemeanors).

All of the recidivists with new charges had at least one diagnosis of a serious mental illness. A total of 79 participants with serious mental illnesses (SMI) had been out of prison for at least ninety days. Therefore the rate of new charges among participants with serious mental illnesses was 6.3% (five out of 79). The rate of new violent charges was 0%; the new victimization charge rate (violent and property crime combined) was 2.5% (two out of 79).

By way of a rudimentary comparison, offenders with mental health diagnoses who exited prison during the same time period but were not program participants were also tracked for ninety days. The table below summarizes the new charge rates for participants compared with non-participants with mental health issues. For offenders with serious mental illness, participants had significantly lower new charge rates for violent crimes compared with non-participants; rates for other types of new charges were not significantly different. For offenders with other chronic mental illnesses, participants had significantly lower new charge rates of all types compared with non-participants.

Recidivism Rates: Central Pharmacy Program Behavioral Medication Program Participants vs. Non-Participants (First 90 Days After Prison Release)

Participant/Non-Participant Groups	Any New Charge	New Violent Charge	New Victimization Charge	Revoked**
Seriously Mentally Ill - Participants	6.3%	0.0%	2.5%	9.9%
Seriously Mentally Ill - Non-Participants	6.0%	1.6%	3.3%	12.7%
<i>Statistically significant differences</i>		*		
Other Chronic Mentally Ill - Participants	0.0%	0.0%	0.0%	2.7%
Other Chronic Mentally Ill - Non-Participants	5.9%	1.5%	2.8%	11.3%
<i>Statistically significant differences</i>	*	*	*	*

*Statistically significant at the 95% confidence level

** Revocations are only reported for offenders receiving post-release supervision (non-discharges).

Source: Iowa Corrections Offender Network

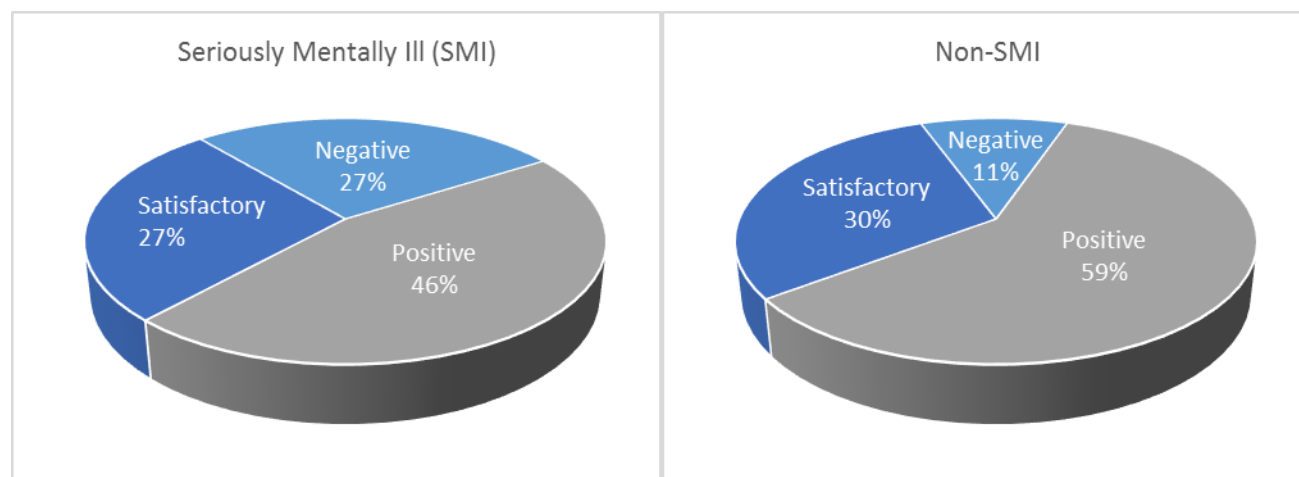
Revocation of Supervision. Of the 119 participants who had been out of prison for at least ninety days, through December 18, 2013, 108 were released to supervision (i.e., were not one of the 11 offenders who discharged) and therefore could be tracked for revocations within the first ninety days. During the first ninety days following release, seven seriously mentally ill participants and one non-SMI participant had their supervisions revoked. The table above compares participant revocation rates with offenders with mental health diagnoses who also received post-release supervision. For offenders with serious mental illness, although revocation rates were lower than for non-participants the rate was not statistically significant. However, offenders with other chronic mental illnesses had significantly lower revocation rates compared with non-participants.

Mental Health Adjustment While Under Supervision

Of the 119 participants tracked for ninety days following release, 107 received in-state parole supervision, meaning records were available to consult rule violations and case manager notes to identify potential mental health issues of concern. Rather than observe behavior for the first ninety days, mental health adjustment was assessed for the duration of the supervision or to the current date (follow-ups were completed on January 6, 2014). The period of time that mental health adjustment could be observed for supervised offenders ranged from 22 days to ten months and averaged 5.7 months.

Mental health adjustment was coded into three categories based on case file reviews:

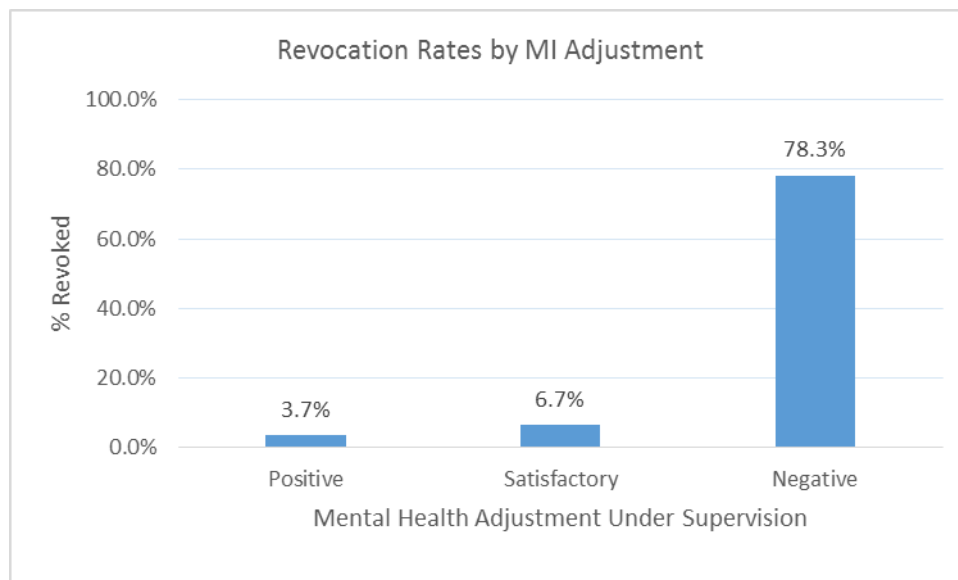
- *Positive*. Medication compliant; seeing mental health provider; no mental health issues noted in file. A few offenders in this category exhibited some initial symptoms or experienced difficulties early on, but incidents were very minimal and the main thrust of their adjustment was best classified as positive.
- *Satisfactory*. Following some negative issues (see below), the offender's mental health adjustment has improved (e.g., got back on medications or had medications adjusted; seeing mental health provider, testing negative for drugs, able to maintain employment, etc.).
- *Negative*. Issues with one or more of the following, but without a subsequent period of satisfactory adjustment, and often with an escalation of issues: symptoms of mental illness; problems with medication compliance; abuse of medications; missing mental health provider appointments or required treatment classes; drug and/or alcohol use (note the high incidence of co-occurring disorders among participants); threatening or bizarre behavior (that may be symptoms of mental health issues).



As shown in the chart above, 73% of seriously mentally ill program participants, and 89% of other chronically mentally ill participants exhibited positive or satisfactory mental health adjustment while under supervision, through January 6, 2014. It is beyond the scope of this report to compare participants' mental health adjustment with a comparison group of non-participants. However, it is clear that large portions of offenders with access to mental health

medications are medication compliant, and remain medication compliant even after the ninety-day period in which medications were obtained via the Central Pharmacy Program.

Moreover, positive mental health adjustment appears closely associated with general success under supervision. Looking at total revocations through January 6, 2014, only two offenders (both seriously mentally ill) had supervision revoked even though they exhibited positive mental health adjustment. Another two offenders with satisfactory adjustment (some issues) were also revoked. By way of comparison, 18 offenders exhibiting negative mental health adjustment were revoked. The chart below shows revocation rates by mental health adjustment under supervision. This information demonstrates that satisfactory mental health adjustment is associated with overall success under supervision.



Conclusion

Access to needed medication is only one of many factors that may contribute to successful reentry for mentally ill offenders, and there are many factors that may contribute to any particular offender's propensity to reoffend. However, the preliminary data contained in this report provides an early indication that the Central Pharmacy Program is of great assistance to participants' successful reentry.

About This Report

Pilot Project participant data regarding pharmacy visits and prescriptions filled were provided by the Iowa Prescription Drug Corporation.

All other data including offender demographics, psychiatric and other diagnoses and outcomes were obtained from the Iowa Corrections Offender Network (ICON) and the ICON-Medical module.

This report was written by Lettie Prell, Director of Research, Iowa Department of Corrections and Jon-Michael Rosmann, Executive Director, Iowa Prescription Drug Corporation. Dr. Bernard Sorofman of the University of Iowa - College of Pharmacy and Kevin McCarthy, Office of the Attorney General provided input and advice.