

MEDICATION ASSISTED TREATMENT

PRESCRIPTION DRUG AND OPIOID ADDICTION

THE IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION

**Year Two
Biannual Evaluation Report
March 2017**

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Grant Number TI026143**



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CONSORTIUM**
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MAT IOWA

Year Two Biannual Evaluation Report March 2017

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EXECUTIVE SUMMARY

In August 2015, the Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Treatment (CSAT) awarded a three-year grant to the Iowa Department of Public Health (IDPH) under the Targeted Capacity Expansion: Medication Assisted Treatment-Prescription Drug and Opioid Addiction (MAT-PDOA) program. The purpose of this grant is to broaden treatment services and infrastructure for evidence-based medication assisted treatment (MAT) services in Iowa. In November 2015, IDPH contracted with the following four substance use treatment providers in the highest need counties in Iowa.

- Area Substance Abuse Council, Linn County located in east central Iowa.
- Jackson Recovery Centers, Woodbury County located in northwest Iowa.
- Mercy Turning Point Treatment Center, Dubuque County located in northeast Iowa.
- United Community Services, Inc., Polk County located in central Iowa.

The Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) conducts the evaluation for the MAT Iowa project. This report presents results through January 31, 2017.

Project Goals

The MAT Iowa project attempts to obtain the following goals:

- 1) Coordinate expansion and enhancement of MAT services.
- 2) Increase the number of individuals receiving MAT services.
- 3) Decrease illicit drug use and improve client outcomes.

MAT Iowa intends to serve 340 new clients during the three-year grant, with the goal of admitting 100 clients in Fiscal Year One and 120 clients in Fiscal Year Two. As of January 31, 2017, 202 clients have been admitted to the grant: 85 clients were admitted in Year One and 117 clients admitted in Year Two.

Description of Clients in MAT Iowa

The Government Performance and Results Act (GPRA) instrument is administered to all clients at grant admission. GPRA admission data were analyzed and the following are characteristics of the 202 individuals in MAT Iowa at grant admission. GPRA questions and responses refer to activity in the past 30 days and are self-reported by clients.

Of the 202 clients:

- One hundred twelve clients (55.4%) are male and 90 clients (44.6%) are female.
- Clients ranged from 20 to 69 years of age at grant admission, with a median age of 33 years.
- The majority of clients (182 clients, 90.1%) are White, 11 clients (5.4%) are African American, three clients (1.5%) are American Indian/Alaska Native, two clients (1%) are Asian, one client (0.5%) is Native Hawaiian/Other Pacific Islander, one client (0.5%) is multi-racial, and data for race are missing for two clients (1%). Hispanic or Latino ethnicity was reported by five clients (2.5%).
- Nearly three-quarters of clients (143 clients, 70.8%) reported use of alcohol or illegal drugs in the 30 days prior to grant admission. Heroin was the most common substance used by one-third of clients (67 clients, 33.2%). Alcohol was the next most common substance reported by 48 clients (23.8%). Over one-quarter of clients (57 clients, 28.2%) reported illegal use of other opioids (not heroin).



- Over one-third of clients (71 clients, 35.1%) indicated they injected drugs in the 30 days prior to grant admission. Twenty-nine of the 71 clients (40.8%) indicated they had shared needles or paraphernalia with someone else in the past 30 days.
- Of the 202 clients admitted to the MAT Iowa grant:
 - One hundred forty-three clients (70.8%) were prescribed buprenorphine.
 - Fifty-four clients (26.7%) were prescribed naltrexone.
 - Three clients (1.5%) were prescribed acamprosate.
 - Two clients (1%) were prescribed disulfiram.
- The MAT Iowa grant has provided many services to clients including:
 - Over 1,000 appointments with physicians.
 - Nearly 200 appointments with nurses.
 - Over 1,000 treatment and case management services (including assessments and care coordination).
 - Over 500 alcohol and drug tests conducted with clients.

Follow-Up Interview

The GPRA is administered to clients when possible approximately six months post-admission (follow-up interview). Of the 202 clients receiving grant services, 61 clients have been eligible to complete the follow-up interview. As of January 31, 2017, follow-up interviews were completed with 61 clients. During the follow-up interview, providers also administer a client satisfaction survey. The results of the follow-up interviews and client satisfaction surveys with clients support that MAT Iowa is making a positive difference in the lives of individuals. Of the 61 clients with completed follow-up interviews:

- There was nearly a threefold reduction in the number of clients with past 30-day use of alcohol or illegal substances at follow-up compared to grant admission, from 42 to 15 clients (McNemar's $\chi^2 = 23.52$, $df = 1$, $p < 0.0001$).
- Nearly one-third of the clients (20 clients, 32.8%) reported heroin use in the 30 days preceding grant admission. Two clients (3.3%) reported heroin use in the 30 days prior to the follow-up interview.
- Injection drug use was cut by one-quarter from admission to follow-up (from 16 clients to four clients). The decrease in injection drug use was statistically significant (McNemar's $\chi^2 = 12.00$, $df = 1$, $p = 0.001$).

Many favorable comments were made by clients about MAT Iowa.

What Services Have Been Most Helpful?
<p>Getting the medicine to help my cravings.</p> <p>Paying for the Suboxone, otherwise I wouldn't be able to afford it.</p> <p>This treatment center doesn't treat me like a drug addict and I like that.</p> <p>Suboxone took away withdrawal so I could focus and gain employment.</p>
Client Comments
<p>I am in awe how much this program has helped us. It has helped to save our lives, I really have no words. I am so thankful.</p> <p>I believe this whole program/agency saved my life, but I also believe you have to want it and work it.</p> <p>This has been very helpful. I am looking for a job and I have my life back, thank you.</p> <p>The medicine probably saved my life and I am grateful.</p>



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OVERVIEW

In August 2015, the Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Treatment (CSAT) awarded a three-year grant to the Iowa Department of Public Health (IDPH) under the Targeted Capacity Expansion: Medication Assisted Treatment-Prescription Drug and Opioid Addiction (MAT-PDOA) program. The purpose of this grant is to broaden treatment services and infrastructure for evidence-based medication assisted treatment (MAT) services in Iowa. In November 2015, IDPH contracted with four substance use disorder treatment providers in some of the highest need counties in Iowa shown in Table 1.

Table 1. Service Providers and MAT Iowa Start Dates

Provider	Iowa County	Area of State	Date MAT Iowa Services Began
Area Substance Abuse Council (ASAC)	Linn	East Central Iowa	12/16/2015
Jackson Recovery Centers	Woodbury	Northwest Iowa	1/7/2016
Mercy Turning Point Treatment Center	Dubuque	Northeast Iowa	12/3/2015
United Community Services, Inc. (UCS)	Polk	Central Iowa	12/2/2015

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- 2) Increase the number of individuals receiving MAT services.
- 3) Decrease illicit drug use and improve client outcomes.

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CLIENTS SERVED

MAT Iowa intends to serve 340 new clients during the three-year grant, with the goal of admitting 100 clients in Year One and 120 clients in Year Two. Clients were admitted to the grant beginning December 2, 2015. As of January 31, 2017, 202 clients have been admitted to the grant: 85 clients were admitted in Year One and 117 clients admitted in Year Two as shown in Table 2.

Table 2. Admissions by Grant Year

Admissions by Grant Year	N=202
Year One (Aug 2015 – July 2016) (Year One Goal: 100)	85
Year Two (Aug 2016 – July 2017) (Year Two Goal: 120)	117



Description of Clients at Admission

One hundred twelve clients (55.4%) are male and 90 clients (44.6%) are female as shown in Table 3. Five clients (2.5%) indicated they are bisexual; one client (0.5%) reported their sexual orientation as a lesbian and one client (0.5%) indicated gay.

Table 3. Sex, Gender, and Sexual Orientation

Sex, Gender, and Sexual Orientation		All Clients percent (N=202)
Sex	Female (Year Two Goal: 96)	44.6 (90)
	Male (Year Two Goal: 123)	55.4 (112)
Gender	Female	44.6 (90)
	Male	55.4 (112)
	Transgender (Year Two Goal: 1)	0.0 (0)
Sexual Orientation	Lesbian (Year Two Goal: 4)	0.5 (1)
	Gay (Year Two Goal: 9)	0.5 (1)
	Bisexual (Year Two Goal:1)	2.5 (5)

The 202 clients ranged from 20 to 69 years of age at grant admission, with a median age of 33 years. Figure 1 presents the number of males and females in five age categories. Clients are most frequently between the ages of 25 and 34 at grant admission. For nearly all age categories, there were more males than females.

Figure 1. Age and Sex

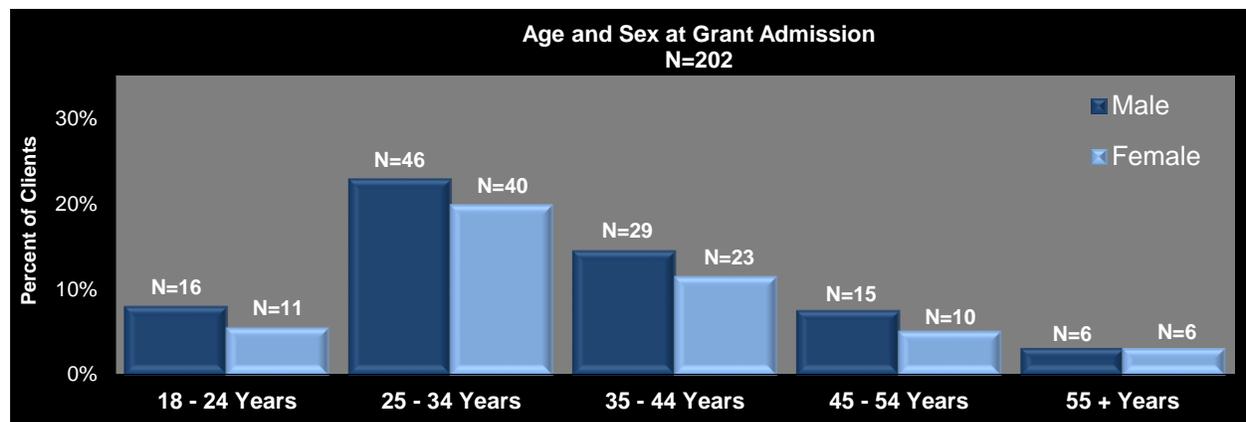


Table 4 presents race and ethnicity reported by clients. One hundred eighty-two clients (90.1%) indicated they are White; 11 clients (5.4%) reported African American; three clients (1.5%) indicated American Indian/Alaskan Native; two clients (1%) reported Asian; one client (0.5%) indicated Native Hawaiian/other Pacific Islander; one client (0.5%) reported more than one race; and data for race are missing for two clients (1%). Hispanic or Latino ethnicity was reported by five clients (2.5%).

Table 4. Race and Ethnicity

Race and Ethnicity		All Clients percent (N=202)
Race	White (Year Two Goal: 194)	90.1 (182)
	African American (Year Two Goal: 13)	5.4 (11)
	American Indian/ Alaska Native (Year Two Goal: 2)	1.5 (3)
	Asian (Year Two Goal: 2)	1.0 (2)
	Native Hawaiian/ Other Pacific Islander (Year Two Goal: 2)	0.5 (1)
	Multi-Racial (Year Two Goal: 2)	0.5 (1)
	Missing Data	1.0 (2)
	Ethnicity	Hispanic/Latino (Year Two Goal: 5)
Not Hispanic/Latino		97.5 (197)

Clients report their county of residence when admitted to the grant. Of the 99 counties in Iowa, 38 counties are identified as urban counties and 61 are rural counties¹. As shown in Table 5, when admitted to the grant, 193 clients (95.5%) resided in urban counties and nine clients (4.5%) resided in rural counties in Iowa.

Table 5. County of Residence

Rural or Urban County of Residence	All Clients percent (N=202)
Rural	4.5 (9)
Urban	95.5 (193)

MAT Medications and Substances of Use

Treatment providers may offer a selection of the following five MAT medications.

- Methadone.
- Acamprosate (Campral).
- Buprenorphine (Suboxone).
- Naltrexone (Revia, Depade, Vivitrol).
- Disulfiram (Antabuse).

Of the 202 clients admitted to the MAT Iowa grant, nearly two-thirds (143 clients, 70.8%) were prescribed buprenorphine, 54 clients (26.7%) were prescribed naltrexone, three clients (1.5%) were prescribed acamprosate, and two clients (1%) were prescribed disulfiram. Table 6 on the following page shows the MAT medications prescribed by substance of use for the 202 clients in the grant.

¹ As defined by U.S. Census Bureau, Population Division, Office of Management and Budget, February 2013 delineations.



Table 6. Substances Used and Planned MAT

Substance of Use	percent (N=202)	Planned MAT Medication	
		Medication	N=202
Heroin	47.5 (96)	Buprenorphine	78
		Naltrexone	18
Heroin and Opioids	1.0 (2)	Buprenorphine	1
		Naltrexone	1
Opioids	37.1 (75)	Buprenorphine	62
		Naltrexone	13
Alcohol	13.9 (28)	Acamprosate	3
		Buprenorphine	1
		Disulfiram	2
		Naltrexone	22
Alcohol and Opioids	0.5 (1)	Buprenorphine	1

OUTCOMES

The treatment providers administer the Government Performance and Results Act Client Outcome Measures Instrument (GPRA) to all clients at grant admission and approximately six months following grant admission (follow-up interview). Adhering to GPRA guidelines, providers may conduct follow-up interviews with clients within a time frame of 30 days before and up to 60 days after the six month post-admission date.

As of January 31, 2017, 97 of the 202 clients receiving grant services are or have been eligible to complete the follow-up interview (within the five to eight month post-admission period). Providers completed follow-up interviews with 61 clients. Of the 97 clients eligible for interview, 85 clients had reached the six month post-admission time frame used to calculate the follow-up rate, resulting in a follow-up rate of 71.8%²

Table 7. Follow-Up Interview Rate

Follow-Up Interviews	
Due for Interview	85
Completed Follow-Up Interview	61
Follow-Up Rate	71.8%

² Follow-up rate = (number of follow-up interviews completed/number of clients six months post-admission) * 100. (61/85) * 100 = 71.8%.



Description of Clients with Completed Follow-Up Interviews

Table 8 shows 35 of the 61 clients (57.4%) who completed follow-up interviews are male and 26 clients (42.6%) are female. Fifty-eight clients (95.1%) are heterosexual and 3 clients (4.9%) are bisexual. Fifty-seven clients (93.4%) are White, three are African American (4.9%) and one client is Asian (1.6%). All clients with completed follow-up interviews are non-Hispanic/Latino.

Table 8. Clients with Completed Follow-Up Interviews

Demographics of Clients with Completed Follow-Up Interviews		percent (N=61)
Sex	Female	42.6 (26)
	Male	57.4 (35)
Gender	Female	42.6 (26)
	Male	57.4 (35)
	Transgender	0.0 (0)
Sexual Orientation	Heterosexual	95.1 (58)
	Lesbian	0.0 (0)
	Gay	0.0 (0)
	Bisexual	4.9 (3)
Race	White	93.4 (57)
	African American	4.9 (3)
	American Indian/Alaska Native	0.0 (0)
	Asian	1.6 (1)
	Native Hawaiian/Other Pacific Islander	0.0 (0)
	Multi-Racial	0.0 (0)
Ethnicity	Hispanic/Latino	0.0 (0)
	Not Hispanic/Latino	100.0 (61)

Table 9 shows substance of use reported at grant admission and the MAT medication prescribed for the 61 clients with completed interviews. Of the 61 clients who completed follow-up interviews, over two-thirds (41 clients, 67.2%) were prescribed Buprenorphine.

Table 9. Clients with Completed Follow-Up Interviews: Substances Used and MAT Medication Prescribed

Clients with Completed Follow-Up Interviews			
Substance of Use	percent (N=61)	MAT Medication	
		Medication	N=61
Heroin	45.9 (28)	Buprenorphine	22
		Naltrexone	6
Heroin and Opioids	1.6 (1)	Buprenorphine	1
Opioids	31.1 (19)	Buprenorphine	17
		Naltrexone	2
Alcohol	19.7 (12)	Acamprosate	1
		Disulfiram	2
		Naltrexone	9
Alcohol and Opioids	1.6 (1)	Buprenorphine	1

Tables 10 through 32 on the following pages present GPRA data collected from clients receiving services through MAT Iowa at grant admission and at the follow-up interview. Admission responses are for the 202 clients admitted to the grant and follow-up responses are from 61 clients who completed follow-up interviews. Data are presented from individual questions in the six sections of the GPRA instrument: drug and alcohol use; family and living conditions; education, employment, and income; crime and criminal justice status; mental and physical health problems and treatment/recovery; and social connectedness. GPRA questions and responses usually refer to activity in the last 30 days: the admission period refers to the 30 days preceding the intake interview and the follow-up period refers to the 30 days preceding the follow-up interview. The first column describes the responses or categories of responses for the GPRA question. The second column presents the responses of 202 clients at grant admission. The third and fourth columns provide comparisons on individual variables by presenting the responses for 61 clients at admission and at follow-up. Admission and follow-up GPRA data are self-reported by clients. It is important to note that 53 of the 61 clients (86.9%) were still receiving grant services at the time their follow-up interview was conducted.

Drug and Alcohol Use

When the GPRA is administered, clients are asked to report all substances used in the past 30 days. Table 10 on the following page shows of the 202 clients receiving MAT Iowa grant services, nearly three-quarters (143 clients, 70.8%) reported use of alcohol or at least one illegal substance in the 30 days prior to grant admission; 59 clients (29.2%) reported abstinence from alcohol or illegal substances in the 30 days preceding grant admission. Illegal drug use was reported by nearly two-thirds of the clients (124 clients, 61.4%). Heroin was the most common



substance used in the 30 days prior to grant admission reported by one-third of the clients in the grant (67 clients, 33.2%). Nearly one-quarter reported use of alcohol (48 clients, 23.8%). Over one-quarter of clients (57 clients, 28.2%) reported illegal use of other opioids (not heroin). Other opioids used illegally by clients include OxyContin or oxycodone (29 clients, 14.4%), Dilaudid (14 clients, 6.9%), Percocet (11 clients, 5.4%), morphine (10 clients, 5%), codeine (6 clients, 3%), Tylenol with codeine (4 clients, 2%) and non-prescription methadone (3 clients, 1.5%).

Of the 61 who completed follow-up interviews, over two-thirds (42 clients, 68.9%) reported use of alcohol or illegal drugs in the 30 days prior to grant admission. This decreased to approximately one-quarter with 15 clients (24.6%) reporting use at follow-up (McNemar's $\chi^2 = 23.52$, $df = 1$, $p < 0.0001$).

Table 10. Substance Use

Substance Use in Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Opioids:			
Heroin	33.2 (67)	32.8 (20)	3.3 (2)
OxyContin/Oxycodone	14.4 (29)	11.5 (7)	0.0 (0)
Dilaudid	6.9 (14)	4.9 (3)	0.0 (0)
Percocet	5.4 (11)	3.3 (2)	0.0 (0)
Morphine	5.0 (10)	4.9 (3)	1.6 (1)
Codeine	3.0 (6)	3.3 (2)	0.0 (0)
Tylenol 2,3,4 (with codeine)	2.0 (4)	0.0 (0)	0.0 (0)
Non-prescription methadone	1.5 (3)	0.0 (0)	0.0 (0)
Alcohol	23.8 (48)	32.8 (20)	13.1 (8)
Marijuana/Hashish	22.8 (46)	26.2 (16)	8.2 (5)
Cocaine/Crack	5.9 (12)	9.8 (6)	1.6 (1)
Benzodiazepines	9.9 (20)	13.1 (8)	0.0 (0)
Methamphetamine	10.9 (22)	9.8 (6)	1.6 (1)
Hallucinogens/Psychedelics	0.5 (1)	0.0 (0)	0.0 (0)
Ketamine	0.5 (1)	0.0 (0)	0.0 (0)
Other Illegal Drugs	2.0 (4)	0.0 (0)	0.0 (0)
No Substance Use in Past 30 Days	29.2 (59)	31.1 (19)	75.4 (46)

Column totals are not equal to the number of individuals since clients report all substances used in the past 30 days.

As shown in Table 11, 31 clients, (15.3%) reported binge drinking in the 30 days prior to grant admission. Twenty clients (9.9%) reported use of alcohol and illegal drugs on the same day. At follow-up, one client (1.6%) reported binge drinking and two clients (3.3%) reported alcohol and illegal drug use on the same day in the 30 days prior to the follow-up interview. The decrease in binge drinking from admission to follow-up is statistically significant change (McNemar's $\chi^2 = 8.33$, $df = 1$, $p = 0.004$).

Table 11. Binge Drinking and Same Day Alcohol and Drug Use

Binge Drinking and Same Day Alcohol and Drug Use	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Binge Drinking (Five or More Drinks in One Sitting)	15.3 (31)	18.0 (11)	1.6 (1)
Used Alcohol and Illegal Drugs on the Same Day	9.9 (20)	16.4 (10)	3.3 (2)

Clients may answer affirmatively to more than one of the questions.

Table 12 shows over one-third of clients (71 clients, 35.1%) in the grant indicated they injected drugs in the 30 days prior to grant admission. At follow-up, four clients (6.6%) reported injection drug use in the 30 days preceding the follow-up interview. The decrease in injection drug use was statistically significant (McNemar's $\chi^2 = 12.00$, $df = 1$, $p = 0.001$).

Table 12. Injection Drug Use

Injection Drug Use	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Injected Drugs in Past 30 Days	35.1 (71)	26.2 (16)	6.6 (4)

Table 13 shows the substances clients reported injecting in the past 30 days. Among the overall group of 202 clients, the percent reporting heroin was 27.2%. For the subset of 71 clients who reported injection drug use in the 30 days prior to grant admission (excluding clients indicating no injection drug use), over three-quarters (55 clients, 77.5%) indicated they injected heroin. Twenty-nine of the 71 clients (40.8%) who injected drugs indicated they had shared needles or paraphernalia with someone else in the 30 days prior to grant admission. The four clients who reported injection drug use at follow-up indicated they injected heroin, morphine, and methamphetamine; one client indicated needle or paraphernalia sharing with someone in the 30 days preceding the follow-up interview.

Table 13. Injection Drug Use Details

Substances Injected	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Opioids:			
Heroin	27.2 (55)	21.3 (13)	3.3 (2)
OxyContin/Oxycodone	3.5 (7)	3.3 (2)	0.0 (0)
Dilaudid	3.0 (6)	0.0 (0)	0.0 (0)
Percocet	2.0 (4)	0.0 (0)	0.0 (0)
Morphine	2.5 (5)	1.6 (1)	1.6 (1)
Codeine	0.5 (1)	0.0 (0)	0.0 (0)
Non-prescription methadone	0.5 (1)	0.0 (0)	0.0 (0)
Cocaine/Crack	2.0 (4)	4.9 (3)	0.0 (0)
Methamphetamine	5.0 (10)	3.3 (2)	1.6 (1)
Not Applicable (No IV Drug Use)	64.9 (131)	73.8 (45)	93.4 (57)
Needle or Paraphernalia Sharing	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Always	3.5 (7)	3.3 (2)	0.0 (0)
More Than Half the Time	1.5 (3)	1.6 (1)	0.0 (0)
Half the Time	3.0 (6)	3.3 (2)	1.6 (1)
Less Than Half the Time	6.4 (13)	3.3 (2)	0.0 (0)
Never	20.8 (42)	14.8 (9)	4.9 (3)
Not Applicable (No IV Drug Use)	64.9 (131)	73.8 (45)	93.4 (57)

Column totals in the "Substance Injected" portion of the table are not equal to the number of clients who reported injection drug use since clients report all substances injected in the past 30 days.

Family and Living Conditions

Clients are asked where they lived most of the time during the past 30 days. At grant admission, just over one-third of clients reported were living in their own apartment or house (38.6%) and just over one-third indicated they were living with someone else (38.6%). The most common living arrangement reported by the 61 clients at follow-up was living in their own apartment or house, reported by over half of the clients (34 clients, 55.7%).

Table 14. Housing

Housing Situation	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Own/Rent Apartment, Room, House	38.6 (78)	41.0 (25)	55.7 (34)
Someone Else's Apartment, Room, House	38.6 (78)	41.0 (25)	29.5 (18)
Institution (Hospital, Jail/Prison)	5.9 (12)	3.3 (2)	8.2 (5)
Halfway House	4.0 (8)	4.9 (3)	4.9 (3)
Shelter	2.0 (4)	1.6 (1)	1.6 (1)
Street/Outdoors	2.0 (4)	0.0 (0)	0.0 (0)
Residential Treatment	6.9 (14)	6.6 (4)	0.0 (0)
Other: Hotel, College Residence	2.0 (4)	1.6 (1)	0.0 (0)

Clients are asked how stressed they have felt in the past 30 days due to their use of alcohol and drugs; if the use of alcohol or illegal substances has caused them to reduce or give up important activities during the past 30 days; and if their use of alcohol or drugs has caused emotional problems during the past 30 days. The response options for these three questions are “not at all”, “somewhat”, “considerably”, and “extremely.” Clients indicating they have not used alcohol or drugs in the past 30 days are still asked the question since previous use of alcohol or drugs could result in an affirmative response to the questions. Table 15 on the following page presents the number of clients who responded “somewhat”, “considerably”, or “extremely” to the three questions.

As presented in Table 15, of the 61 clients with completed follow-up interviews, approximately two-thirds (41 clients, 67.2%) at grant admission indicated experiencing stress in the past 30 days due to current or previous use of alcohol or drugs; this decreased fourfold to 16.4% (10 clients) at follow-up (McNemar's $\chi^2 = 29.12$, $df = 1$, $p < 0.0001$). Approximately two-thirds of the 61 clients (40 clients, 65.6%) indicated current or previous use of alcohol or drugs had caused them to reduce or give up activities that were important to them, this also reduced by over fourfold at follow-up to 7 clients, 11.5% (McNemar's $\chi^2 = 31.11$, $df = 1$, $p < 0.0001$). At admission, 37 of the 61 clients (60.7%) reported they had experienced emotional problems in the past 30 days due to current or previous use of alcohol or drugs, nine clients (14.8%) reported this at follow-up (McNemar's $\chi^2 = 24.50$, $df = 1$, $p < 0.0001$).

Table 15. Stress, Reduction in Activities, and Emotional Problems Due to Use of Alcohol or Drugs

Stress, Reduction in Activities, and Emotional Problems Due to Alcohol and Drug Use	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Experienced Stress Due to Use of Alcohol or Other Drugs in Past 30 Days	66.8 (135)	67.2 (41)	16.4 (10)
Use of Alcohol or Other Drugs Caused Reduction or Giving Up Important Activities in Past 30 Days	63.4 (128)	65.6 (40)	11.5 (7)
Use of Alcohol or Other Drugs Caused Emotional Problems in Past 30 Days	62.9 (127)	60.7 (37)	14.8 (9)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.

Over half of the clients (51.9%) indicated they had children at grant admission. Of the 105 clients who reported they had children, 12 clients (11.4%) indicated they have children living with someone else due to a child protection court order and six clients reported they had lost parental rights.

Education, Employment, and Income

As shown in Table 16, 26 clients (12.9%) reported they had not completed high school at grant admission; their highest education level ranged from 7th to 11th grade. Approximately half of the clients (104 clients, 51.5%) indicated they had a high school diploma or equivalent. Over one-third of the clients (72 clients, 35.6%) had continued their education or training after high school.

Table 16. Education Level

Highest Level of Education	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Did not Graduate High School	12.9 (26)	13.1 (8)	11.5 (7)
High School Diploma/Equivalent	51.5 (104)	49.2 (30)	52.5 (32)
Some College/University or Associates Degree	26.7 (54)	34.4 (21)	32.8 (20)
Bachelor's Degree or Higher	7.4 (15)	3.3 (2)	3.3 (2)
Vocational/Technical Program After High School	1.5 (3)	0.0 (0)	0.0 (0)

Clients are asked if they are currently involved in any educational or job training program. Seven clients (3.5%) reported enrollment in school or a job training program, or working on General Education Development (GED) at grant admission. Three clients (4.9%) who reported part-time enrollment in school or a job training program, or working on their GED at follow-up did not indicate school or job training enrollment or working on their GED at admission.

Table 17. Enrolled in School or Job Training Program

Currently Enrolled in School or Job Training Program	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Enrolled full-time	1.5 (3)	0.0 (0)	0.0 (0)
Enrolled part-time	1.5 (3)	0.0 (0)	3.3 (2)
Other: Working on GED	0.5 (1)	0.0 (0)	1.6 (1)
Not enrolled	96.5 (195)	100.0 (61)	95.1 (58)

Table 18 shows that when admitted to the grant, nearly half of the clients reported full or part-time employment (81 clients, 40.1%). Of the 61 clients with completed follow-up interviews, over half (37 clients, 60.7%) reported employment.

Table 18. Employment Status

Employment Status	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Employed Full-Time (\geq 35 hrs/wk)	30.2 (61)	36.1 (22)	47.5 (29)
Employed Part-Time (<35 hrs/wk)	9.9 (20)	9.8 (6)	13.1 (8)
Unemployed, Looking for Work	42.6 (86)	32.8 (20)	19.7 (12)
Unemployed, Not Looking for Work	8.9 (18)	9.8 (6)	4.9 (3)
Unemployed, Disabled	7.4 (15)	8.2 (5)	11.5 (7)
Unemployed, Retired	0.5 (1)	1.6 (1)	0.0 (0)
Other*	0.5 (1)	1.6 (1)	3.3 (2)

*Included in the “other” category are individuals not working due to injury, lay-offs, or report side jobs.

Clients report their sources of income in the 30 days preceding grant admission. They report the amount of income from each source and may report income from more than one response category. Therefore, sources of income reported by clients in Table 19 outnumber clients. Wages are the income source most frequently reported by clients in the past 30 days at admission and follow-up.

Table 19. Sources of Income

Sources of Income Received in the Past 30 Days	All Clients percent (N=202)*	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)*	Follow-Up percent (N=61)*
Wages	35.1 (71)	41.0 (25)	59.0 (36)
Public Assistance	5.9 (12)	6.6 (4)	4.9 (3)
Retirement	0.5 (1)	1.6 (1)	0.0 (0)
Disability	5.4 (11)	6.6 (4)	11.5 (7)
Non-Legal Income	0.5 (1)	1.6 (1)	0.0 (0)
Family/Friends	14.9 (30)	24.6 (15)	4.9 (3)
Other	1.0 (2)	3.3 (2)	0.0 (0)
No Reported Sources of Income	35.6 (72)	16.4 (10)	21.3 (13)

Column totals are not equal to the number of individuals since clients report income from all sources.

*Data in the table above reflect records of individuals who answered the questions. The number of records in each response category where individuals declined to answer or responded “don’t know” to the question varied.



Income is considered the amount of money received by the client in the 30 days preceding grant admission. The amount reflects pre-tax individual income and includes total income received by the client from all sources (wages, public assistance, retirement, disability, non-legal income, family and friends, and other sources). Table 20 shows the total amount of money received by clients from various sources in the past 30 days. Of clients with completed follow-up interviews, the number of clients reporting monthly income in the “\$1001 to \$2000” and “over \$2000” income categories more than doubled from grant admission to follow-up (from 10 to 23 clients). Although there was an increase in clients reporting no income from grant admission to follow-up (by three clients), the median income for the 55 clients at grant admission was \$600 and the median income for this group of clients at follow-up was \$750. It is important to note of the 55 clients with completed follow-up interviews, approximately one-quarter (14 clients, 25.5%) reported the same income category at admission and follow-up; 15 clients (27.3%) moved from a smaller income category at admission to a larger income category at follow-up; however, nearly half (26 clients, 47.3%) moved from a larger income category at admission to a smaller income category at follow-up. While the income category for some clients changed from admission to follow-up, the pattern was not statistically significant (Wilcoxon $z = -1.616$, $p = 0.106$).

Table 20. Total Income Received

Total Income Received in Past 30 Days	All Clients' percent (N=189)*	Clients with Completed Follow-Up Interviews	
		Admission percent (N=55)*	Follow-Up percent (N=55)*
None	38.1 (72)	16.4 (9)	21.8 (12)
\$500 or Less	21.2 (40)	27.3 (15)	12.7 (7)
\$501 to \$1000	20.1 (38)	38.2 (21)	23.6 (13)
\$1001 to \$2000	16.9 (32)	14.5 (8)	32.7 (18)
Over \$2000	3.7 (7)	3.6 (2)	9.1 (5)

*Data in the table above reflect records of individuals who answered the questions in Table 20. Data for 13 clients in the “All Clients” column are excluded from this table due to clients declining to disclose income or clients responded “don’t know”. Data from six clients in the “Clients with Completed Follow-Up Interviews” columns are excluded due to the admission or follow-up records coded as client declines to disclose income or individuals responded “don’t know”.

Crime and Criminal Justice Status

Six clients (3%) reported being arrested in the 30 days prior to grant admission. None of the clients reported arrests in the past 30 days at follow-up.

Eight clients (4%) reported spending time in jail or prison in the 30 days prior to grant admission as shown in Table 21. One client (1.6%) reported spending nights in jail or prison in the 30 days prior to the follow-up interview.

Table 21. Incarceration

Nights in Jail or Prison in Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
None	96.0 (194)	96.7 (59)	98.4 (60)
One or More Nights	4.0 (8)	3.3 (2)	1.6 (1)

Similar percentages of clients (21.3%) at grant admission and follow-up indicated they were on parole or probation.

Table 22. Currently on Parole or Probation

Currently on Parole or Probation	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Yes	21.3 (43)	21.3 (13)	21.3 (13)
No	78.7 (159)	78.7 (48)	78.7 (48)

Mental and Physical Health Problems and Treatment/Recovery

Clients are asked to rate their overall health, this includes mental, emotional, and physical health. Clients most commonly reported being in good or fair health at admission. From admission to follow-up, the number of clients reporting excellent or very good health more than doubled (from 9 clients to 20 clients) as shown in Table 23 (McNemar's $\chi^2 = 9.31$, $df = 1$, $p = .002$).

Table 23. Overall Health

Self Rating of Overall Health	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Excellent	3.0 (6)	4.9 (3)	6.6 (4)
Very Good	9.9 (20)	9.8 (6)	26.2 (16)
Good	38.6 (78)	24.6 (15)	36.1 (22)
Fair	39.6 (80)	49.2 (30)	26.2 (16)
Poor	8.9 (18)	11.5 (7)	4.9 (3)

To identify their use of the medical and treatment community, Tables 24 and 25 on the following pages provide information regarding clients receiving inpatient, outpatient, and emergency room treatment in the 30 days prior to grant admission.

As shown in Table 24, of the 61 clients with completed follow-up interviews, over one-quarter (16 clients, 26.2%) reported receiving inpatient treatment for alcohol or substance abuse in the 30 days prior to grant admission. Four clients (6.6%) indicated inpatient alcohol or substance abuse treatment in the 30 days preceding the follow-up interview. Fewer than 15% of the clients reported receiving inpatient treatment in the past 30 days for physical issues or mental or emotional difficulties at admission and follow-up.

The majority of clients in the grant indicated they had received outpatient treatment for alcohol or substance abuse in the 30 days prior to grant admission and the 30 days prior to the follow-up interview. Approximately one-third of the 61 clients with completed follow-up interviews reported receiving outpatient treatment for mental or emotional difficulties at grant admission and follow-up (36.1% and 31.1% respectively).

Table 24. Inpatient and Outpatient Treatment

Receiving Inpatient Treatment In Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Physical Complaint	4.5 (9)	9.8 (6)	0.0 (0)
Mental or Emotional Difficulties	6.9 (14)	13.1 (8)	1.6 (1)
Alcohol or Substance Abuse	21.8 (44)	26.2 (16)	6.6 (4)
Receiving Outpatient Treatment In Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Physical Complaint	8.4 (17)	8.2 (5)	18.0 (11)
Mental or Emotional Difficulties	27.2 (55)	36.1 (22)	31.1 (19)
Alcohol or Substance Abuse	87.1 (176)	85.2 (52)	78.7 (48)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.

Of the 61 clients with completed follow-up interviews, 13 clients (21.3%) received emergency room treatment for alcohol or substance abuse reasons in the 30 days prior to grant admission. As shown in Table 25, none of the 61 clients reported emergency room visits related to alcohol or substance abuse in the 30 days preceding the follow-up interview.

Table 25. Emergency Room Visits

Receiving Emergency Room Treatment In Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Physical Complaint	9.9 (20)	18.0 (11)	8.2 (5)
Mental or Emotional Difficulties	6.4 (13)	14.8 (9)	0.0 (0)
Alcohol or Substance Abuse	9.9 (20)	21.3 (13)	0.0 (0)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.

Clients are asked about unprotected sexual contacts they have had in the 30 days prior to grant admission. The intent is to determine unprotected sexual contacts clients may have had with individuals who may be at high risk for human immunodeficiency virus (HIV) infection. Forty clients (19.8%) reported unprotected sexual contacts at grant admission. As shown in Table 26, nine clients (4.5%) indicated they had sexual contacts with an individual who was an injection drug user and 14 clients (6.9%) reported sexual contact with someone who was high on a substance. At follow-up, one client (1.6%) reported sexual contacts with an individual who was an injection drug user and one client (1.6%) reported sexual contacts with someone who was high on a substance.

Table 26. Unprotected Sexual Contacts

Unprotected Sexual Contacts	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Individual Who is HIV Positive or Has AIDS	0.0 (0)	0.0 (0)	0.0 (0)
Individual Who is an Injection Drug User	4.5 (9)	4.9 (3)	1.6 (1)
Individual Who is High on Some Substance	6.9 (14)	9.8 (6)	1.6 (1)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.

Clients are asked if they have ever been tested for HIV. At grant admission, two-thirds of the clients (66.8%) reported they had been tested for HIV. Of the 61 clients completing follow-up interviews, 53 clients (86.9%) indicated they had been tested for HIV from admission to follow-up.

Table 27. Ever Tested for HIV

Tested for HIV	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Yes	66.8 (135)	59.0 (36)	86.9 (53)
No	28.7 (58)	34.4 (21)	9.8 (6)
Client Does Not Know	2.5 (5)	4.9 (3)	3.3 (2)
Declined to Answer Question	2.0 (4)	1.6 (1)	0.0 (0)

Clients are asked if they have experienced psychological or emotional problems (not due to the use of alcohol or drugs) in the past 30 days. Nearly two-thirds (129 clients, 63.9%) responded they had experienced one or more of the psychological or emotional problems listed in Table 28 on one or more days in the 30 days preceding grant admission. Over half of the clients at grant admission and follow-up reported experiencing serious depression or anxiety or tension in the 30 days prior to grant admission.

Table 28. Psychological or Emotional Problems

Psychological or Emotional Problems Experienced In Past 30 Days	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Serious Depression	48.5 (98)	55.7 (34)	42.6 (26)
Anxiety or Tension	51.5 (104)	59.0 (36)	50.8 (31)
Hallucinations	2.0 (4)	1.6 (1)	0.0 (0)
Trouble Understanding, Concentrating, or Remembering	23.8 (48)	23.0 (14)	19.7 (12)
Trouble Controlling Violent Behavior	0.5 (1)	0.0 (0)	1.6 (1)
Attempted Suicide	2.5 (5)	0.0 (0)	0.0 (0)
Taking Prescribed Medication for Psychological/Emotional Problems	42.1 (85)	47.5 (29)	39.3 (24)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the question.

As shown in Table 29, at admission and follow-up, the majority of clients who reported symptoms in the previous 30 days were bothered by their symptoms.

Table 29. How Bothersome Psychological or Emotional Problems Are

Feelings of How Bothersome Psychological or Emotional Problems Are	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Not at All	5.0 (10)	3.3 (2)	11.5 (7)
Slightly	18.3 (37)	14.8 (9)	26.2 (16)
Moderately	21.3 (43)	23.0 (14)	16.4 (10)
Considerably	11.4 (23)	14.8 (9)	11.5 (7)
Extremely	10.4 (21)	21.3 (13)	1.6 (1)
Missing Data	0.5 (1)	1.6 (1)	0.0 (0)
Not Applicable*	33.2 (67)	21.3 (13)	32.8 (20)

*Questions are not asked to individuals reporting no psychological or emotional problems and are not taking medications for psychological/emotional problems.

Clients are asked if they have ever experienced or witnessed violence or trauma in any setting during their lifetime. At grant admission, over half of the 202 clients (104 clients, 51.5%) indicated they had experienced or witnessed violence or trauma during their lifetime. Of the 61 clients with completed follow-up interviews, three clients who reported violence or trauma at admission did not report this at admission.

Clients who report experiencing or witnessing violence or trauma during their lifetime are asked four additional questions. Therefore, Table 30 presents responses to the four questions from the clients who reported experiencing violence or trauma during their lifetime. Most clients who reported violence or trauma indicated they have experienced effects from the event(s).

Table 30. Effects of Violence or Trauma

Effects of Violence or Trauma	All Clients Reporting Violence or Trauma percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Have Had Nightmares or Think About It When Trying Not To	36.6 (74)	55.7 (34)	49.2 (30)
Tried Hard Not to Think About It or Go Out of Way to Avoid Situations That Remind of It	37.1 (75)	57.4 (35)	54.1 (33)
Have Been Constantly on Guard, Watchful, or Easily Startled	32.2 (65)	45.9 (28)	41.0 (25)
Have Felt Numb and Detached from Others, Activities, or Surroundings	32.7 (66)	50.8 (31)	42.6 (26)
Reported No Lifetime Violence or Trauma	48.5 (98)	31.1 (19)	36.1 (22)

Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.



Six of the 202 clients at admission (3%) indicated they had been experienced physical violence in the 30 days preceding the interview as shown in Table 31.

Table 31. Recent Physical Violence

Recent Physical Violence	All Clients Reporting Violence or Trauma percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Been Hit, Kicked, Slapped, or Otherwise Physically Hurt in Past 30 Days	3.0 (6)	1.6 (1)	1.6 (1)

Social Connectedness

To help determine whether clients have a social support network, they are asked about attendance at non-professional, peer oriented self-help groups to assist in their recovery; if they have family and friends who are supportive of their recovery; and if they feel as if they have someone to turn to when having trouble. At follow-up, nearly two-thirds of clients (63.9%) had attended a self-help group for recovery in the prior 30 days; nearly all clients (91.8%) reported they had interaction with family or friends who are supportive of their recovery and all but one client (98.4%) indicated they had someone to turn to when they were having trouble.

Table 32. Social Connectedness

Social Connectedness	All Clients percent (N=202)	Clients with Completed Follow-Up Interviews	
		Admission percent (N=61)	Follow-Up percent (N=61)
Attended Any Type of Self-Help Recovery Groups Including Religious/Faith-Based, Non-Religious, or Any Other in Past 30 Days	40.6 (82)	49.2 (30)	63.9 (39)
Interaction With Family/Friends Who Support Recovery	91.1 (184)	90.2 (55)	91.8 (56)
Have Someone to Turn to When Having Trouble	95.5 (193)	91.8 (56)	98.4 (60)

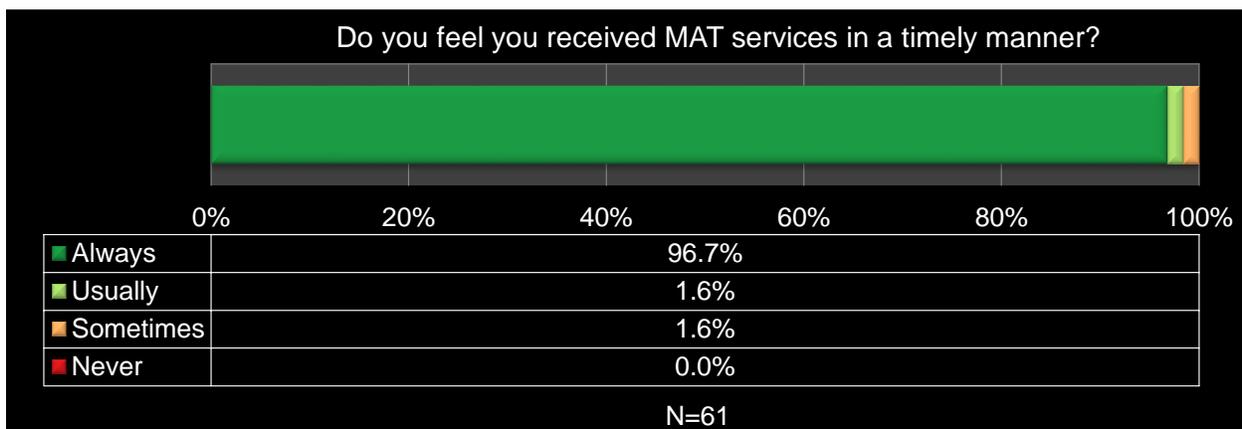
Column totals are not equal to the number of individuals; data are presented for clients who answer affirmatively to each question. Clients may answer affirmatively to more than one of the questions.

CLIENT SATISFACTION

A client satisfaction survey was developed for the MAT Iowa grant. Providers administer the client satisfaction survey with clients when they conduct the follow-up interview (approximately six months following grant admission). As of January 31, 2017, 61 clients have completed the client satisfaction survey. Figures 2 through 13 on the following pages present client satisfaction survey questions and responses.

Figure 2 shows nearly all clients (96.7%) indicated they always felt they received MAT services in a timely manner from providers.

Figure 2. Received MAT Iowa Services in a Timely Manner



Nearly all clients (93.4%) reported there were never delays in receiving the MAT medication prescribed for them as shown in Figure 3.

Figure 3. Delays in Receiving MAT Medication

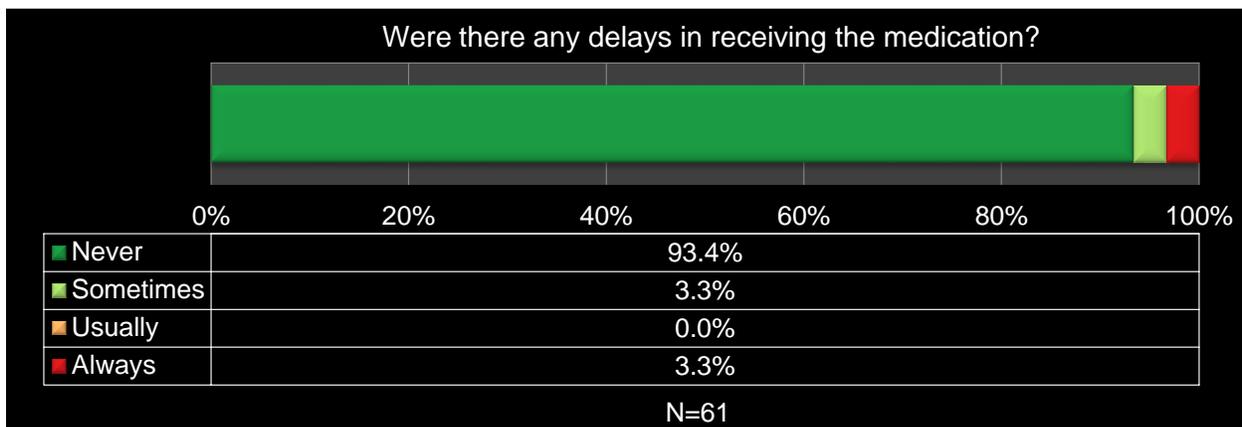
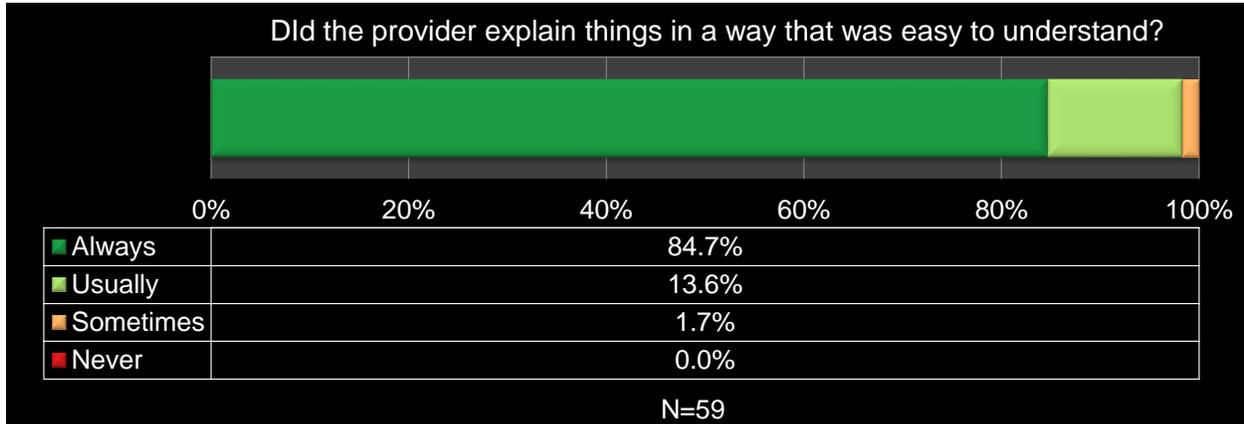


Figure 4 shows 50 of 59 clients (84.7%) felt providers always explained things in an understandable way. Eight clients (13.6%) responded providers usually explain things in a way that was easy for them to understand, one client (1.7%) felt providers sometimes explain things in a way that was easy to understand.

Figure 4. Provider Explanations Easy to Understand



Fifty-nine of the 61 clients (96.7%) felt staff were always courteous and respectful. Two clients (3.3%) indicated staff were usually courteous and respectful as displayed in Figure 5.

Figure 5. Staff Courteous and Respectful

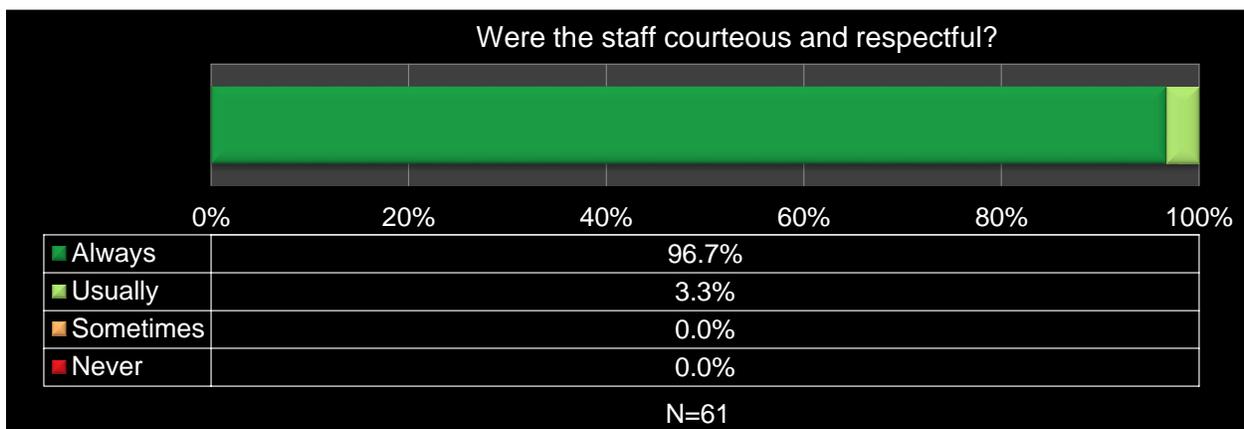
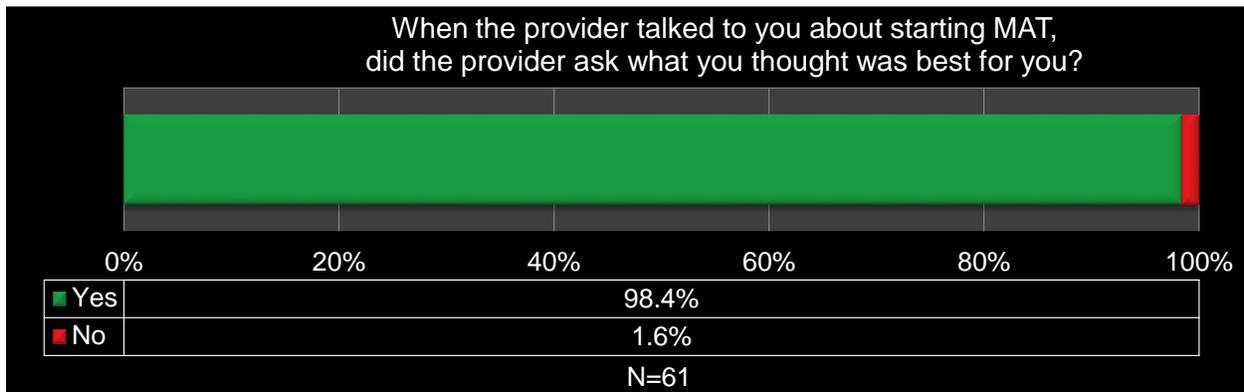


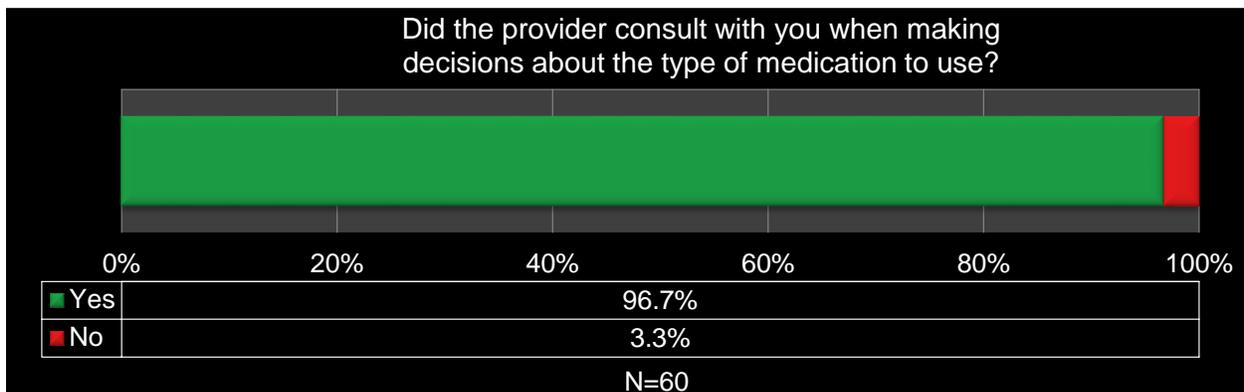
Figure 6 shows all except one client (60 clients, 98.4%) responded “yes” when asked if providers asked what the client thought was best for them when they began MAT services.

Figure 6. Provider Asked What Client Thought Was Best



Fifty-eight of 60 clients (96.7%) responded “yes” when asked if the provider consulted with them when making decisions about the type of MAT medication to use as shown in Figure 7.

Figure 7. Provider Consult About Decisions



Clients are asked if the provider discussed the possible side effects of the MAT medication. Fifty-six of 59 clients (94.9%) responded “yes” as displayed in Figure 8.

Figure 8. Provider Discuss Side Effects of MAT Medication

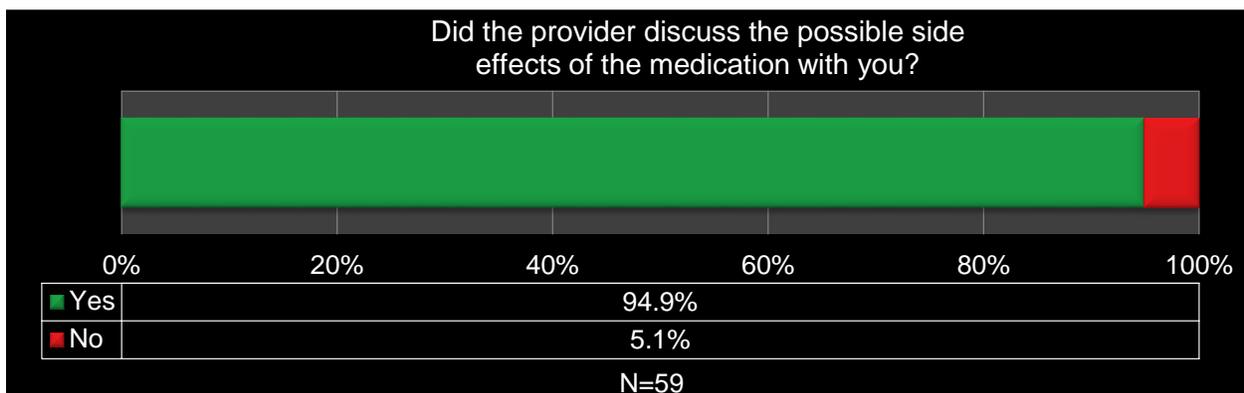
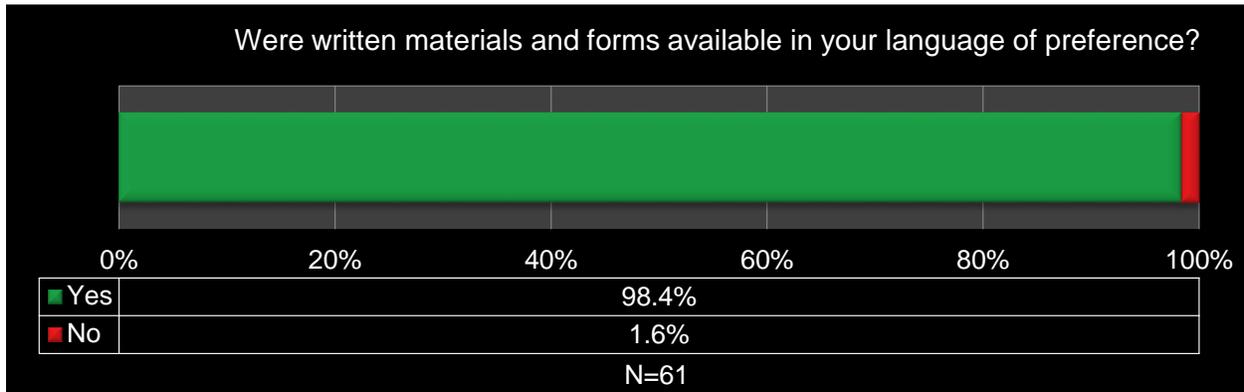


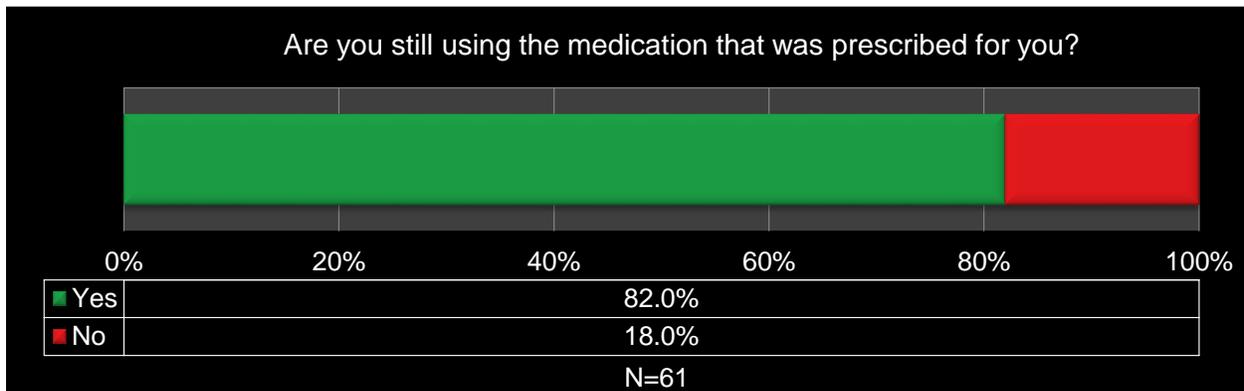
Figure 9 shows all except one client (98.4%) indicated the written materials and forms they received from providers were available in the clients' language of preference.

Figure 9. Materials and Forms in Language of Preference



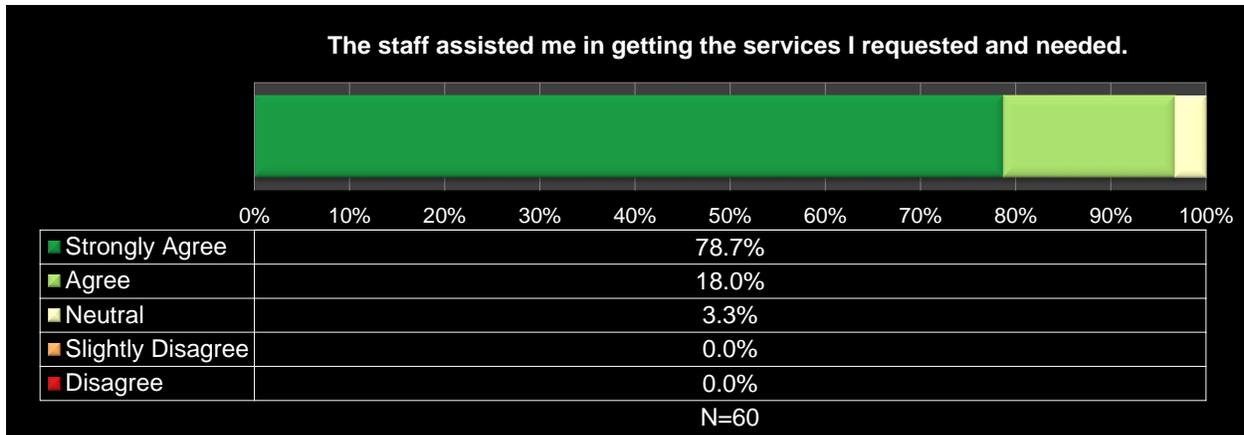
Fifty of the 61 clients (82%) reported they were still using the MAT medication prescribed for them at the time of the follow-up interview as shown in Figure 10.

Figure 10. Using MAT Medication at Time of Follow-Up Interview



Nearly all clients (96.7%) responded “strongly agree” or “agree” when asked to rate how strongly they agree or disagree with the statement that staff assisted them in getting the services they requested and needed.

Figure 11. Staff Assistance with Services



Clients are asked to indicate how strongly they agree or disagree with the statement that the MAT Iowa services they received helped them in their recovery. Figure 12 shows nearly all clients (96.6%) indicated they “strongly agree” or “agree” with the statement.

Figure 12. MAT Services Helped with Recovery

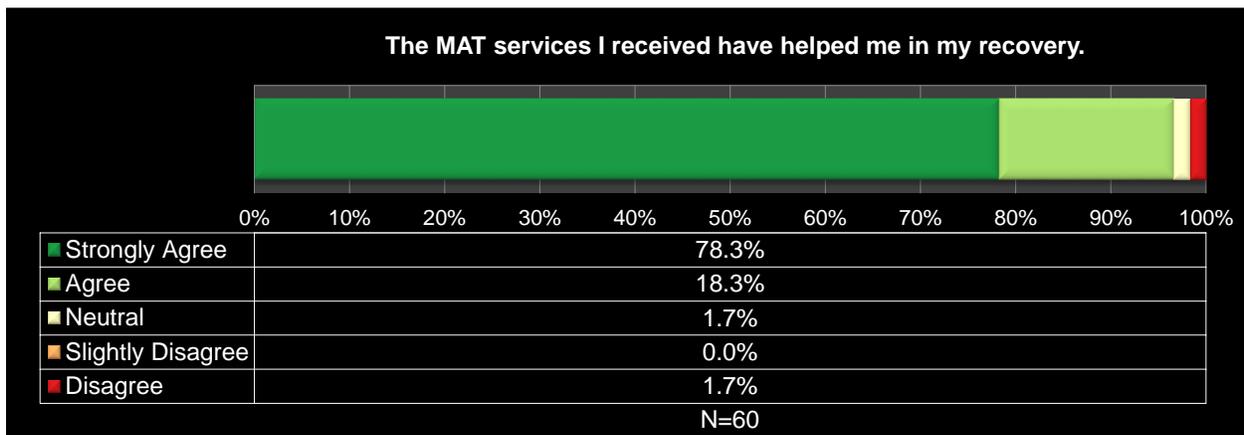
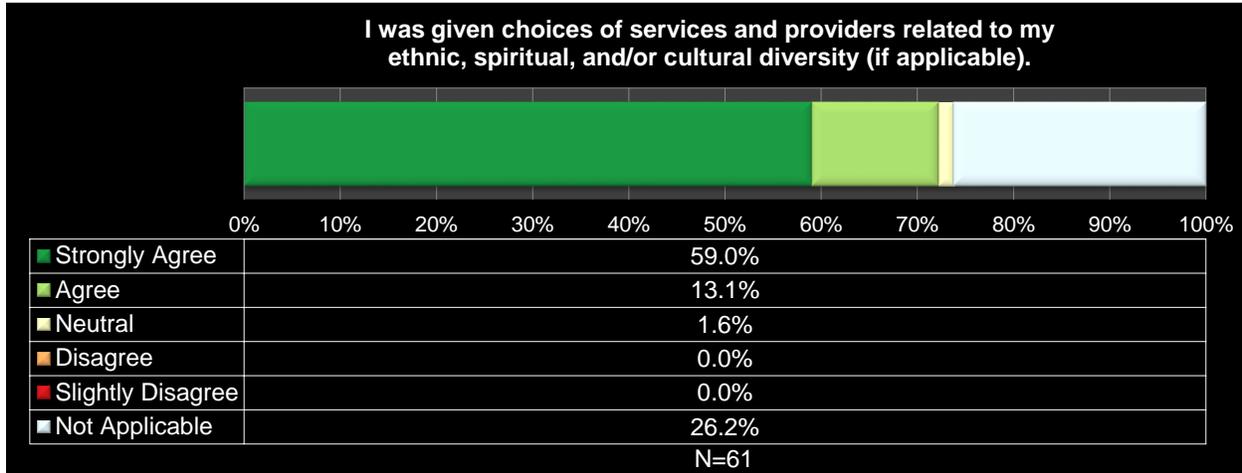


Figure 13 shows the majority of clients (72.1%) responded they “strongly agree” or “agree” when asked to indicate how they felt about being given choices of services and providers related to their ethnic, spiritual, and/or cultural diversity in the MAT Iowa grant. Over one-quarter of the clients (26.2%) responded this question did not apply to them.

Figure 13. Cultural Competency



Clients are asked three additional questions on the client satisfaction survey.

- During your involvement with medication assisted treatment, what services have been or were most helpful for you?
- During your involvement with medication assisted treatment, what services would have been helpful for you in your recovery?
- Are there any other comments you would like to make?

Responses to these questions and all comments made by clients are presented in the Appendix on page 38. Clients had many positive comments about MAT Iowa.

MAT IOWA SERVICES

Services Provided to Clients

Table 33 shows the services funded by the MAT Iowa grant that were provided to clients through January 31, 2017.

Table 33. MAT Iowa Services Provided to Clients

MAT Iowa Services Funded by Grant	All Clients (N=202)
Medical Services: Number of Appointments	
Physician	1,111
Nurse	196
Treatment and Case Management Services: Number of Sessions	
Assessments	104
Care Coordination	870
Other Case Management Services	14
Alcohol and Drug Tests: Number Conducted	545

Table 34 displays the number of treatment sessions clients in the MAT Iowa grant attended through January 31, 2017. Treatment services are not funded by the MAT Iowa grant, however are being monitored to gauge use of best practices, because the combination of medication and treatment has been demonstrated to be more effective than either alone.

Table 34. Treatment Services

Treatment Services Provided to Clients	All Clients (N=202)
Individual Counseling	942
Group Counseling	3,450
Other Treatment Services*	548

*Other treatment services reported most commonly include attendance at voluntary meetings such as Alcoholics Anonymous and Narcotics Anonymous.



DISCHARGE AND LENGTH OF STAY

Discharge Status

There are two discharge categories on the Government Performance and Results Act (GPRA) discharge instrument: completion/graduate (successful discharge) and termination. The Consortium received discharge paperwork for 41 clients (20.3%) discharged from the MAT Iowa grant as shown in Table 35. Discharge information is subject to change as providers submit exception request forms to IDPH when clients return and are approved to re-start MAT.

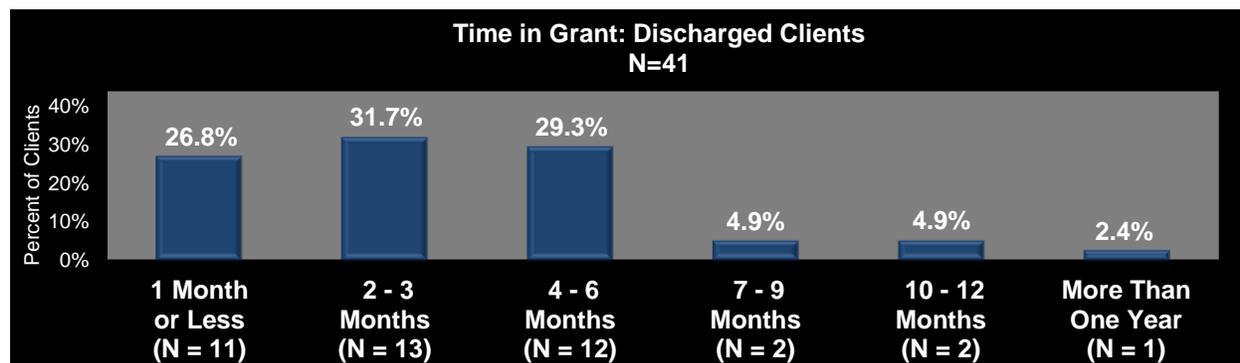
Table 35. Discharge Status

Discharge Status	Percent (N=41)
Successful	4.9 (2)
Terminated	95.1 (39)
<i>Reason for Termination</i>	
Client Never Returned	38.5 (15)
Client Discontinued Use of MAT	25.6 (10)
Client Continued Substance Use	12.8 (5)
Client Transferred /Moved	12.8 (5)
Client Incarcerated	5.1 (2)
Health Reasons	2.6 (1)
Client Deceased	2.6 (1)

Length of Stay in MAT Grant

The median length of stay in the grant for the 41 discharged clients was 62 days (range was 0 to 386 days). Length of stay is adjusted to reflect only the time grant services were provided for four clients who were discharged, returned to providers for treatment, IDPH granted an exception request for the clients to receive MAT Iowa grant services again, and were later discharged for their readmission. Figure 14 shows the length of time the 41 discharged clients spent in the MAT Iowa grant.

Figure 14. Length of Time Clients Received Grant Services



Clients Discharged from MAT Iowa

Table 36 shows 22 of the 41 clients (53.7%) discharged from the MAT Iowa grant are male and 19 clients (46.3%) are female. Thirty-nine of the discharged clients (95.1%) are White, one client (2.4%) is African American, one client is multi-racial (2.4%), and one client (2.4%) is of Hispanic or Latino ethnicity. Clients discharged from MAT Iowa range from 21 to 62 years of age with a median age of 31 years.

Table 36. Description of Discharged Clients

Demographics of Discharged Clients		percent (N=41)
Sex	Female	46.3 (19)
	Male	53.7 (22)
Gender	Female	46.3 (19)
	Male	53.7 (22)
	Transgender	0.0 (0)
Sexual Orientation	Heterosexual	95.1 (39)
	Lesbian	0.0 (0)
	Gay	0.0 (0)
	Bisexual	4.9 (2)
Race	White	95.1 (39)
	African American	2.4 (1)
	American Indian/Alaska Native	0.0 (0)
	Asian	0.0 (0)
	Native Hawaiian/Other Pacific Islander	0.0 (0)
	Multi-Racial	2.4 (1)
Ethnicity	Hispanic/Latino	2.4 (1)
	Not Hispanic/Latino	97.6 (40)

Table 37 shows the substances of use reported at grant admission and the MAT medications prescribed to the discharged clients when they began grant services. Heroin was the substance used by over half of the discharged clients (23 clients, 56.1%). Twenty discharged clients had been prescribed naltrexone (48.8%), 19 clients were prescribed buprenorphine (46.3%), and two clients (4.9%) was prescribed acamprosate.

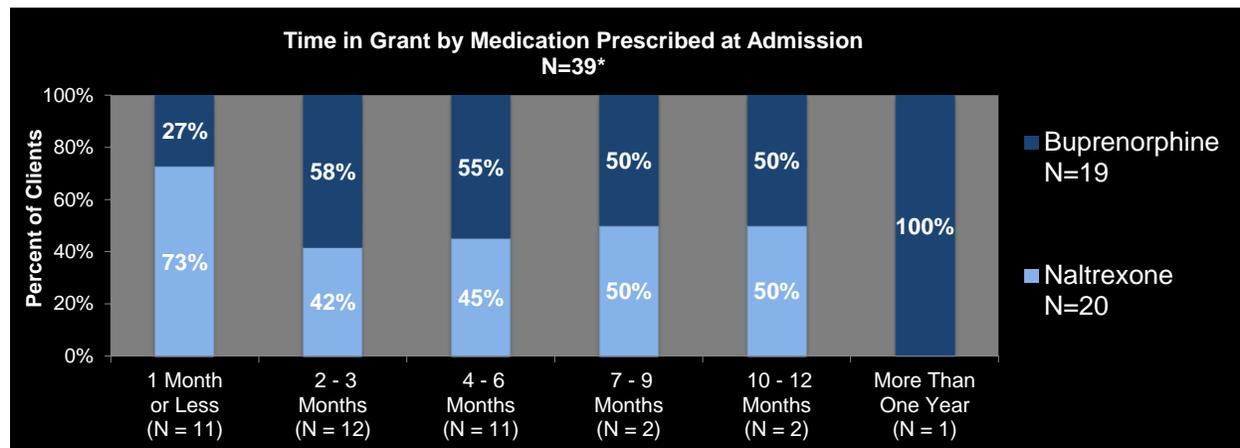
Table 37. Clients Discharged from Grant: Substance of Use and MAT Medication Prescribed

Discharged Clients			
Substance of Use	percent (N=41)	MAT Medication	
		Medication	N=41
Heroin	56.1 (23)	Buprenorphine	14
		Naltrexone	9
Heroin and Opioids	2.4 (1)	Naltrexone	1
Opioids	17.1 (7)	Buprenorphine	5
		Naltrexone	2
Alcohol	24.4 (10)	Acamprosate	2
		Naltrexone	8

As displayed in Table 6 on page 5, the two most commonly prescribed medications for the 202 clients admitted to the MAT Iowa grant are buprenorphine (70.8%) and naltrexone (26.7%). Of the 41 clients discharged, 39 clients were prescribed either buprenorphine or naltrexone (46.3% and 48.8% respectively). It is worth noting, of the 54 clients in the grant prescribed naltrexone, over one-third (37%) have been discharged compared to 13.3% of clients prescribed buprenorphine. Figure 15 on the following page presents the length of time the 39 discharged clients prescribed either buprenorphine and naltrexone received grant services.

Of the 11 clients discharged less than 30 days after beginning grant services, nearly three-quarters (73%) were prescribed naltrexone. Although this is not statistically significant (Mann-Whitney Test, $p = 0.09$), time in the grant by prescribed medication will be monitored and additional analyses will be conducted as more clients are discharged from the grant.

Figure 15. Length of Time Clients Received Grant Services by MAT Medication Prescribed



*Figure 15 excludes two discharged clients prescribed acamprosate.

As more clients are discharged from grant-funded services and if there are increased numbers of successful completions and minorities, additional analyses of factors associated with discharges will be conducted as appropriate and included in future reports.

STATUS OF PROJECT GOALS

The following provides a summary and examination of the status and progress being made toward achievement of the goals of the MAT Iowa project.

Project Goals

Goal 1. Coordinate expansion and enhancement of MAT services.

Status: Upon notification of award, IDPH distributed a Request for Proposals (RFP) to the ten highest-need counties in Iowa. The “Notice of Intent to Award” for MAT Iowa was released by IDPH on October 29, 2015. As previously stated, four substance use disorder treatment providers are providing MAT services for the grant as shown in Table 1 on page 1. IDPH hosted the first monthly provider call on November 30, 2015. Provider calls took place nearly each month during Year One and occur on a bimonthly basis in Year Two. The calls provide an opportunity for staff from all sites to ask questions, discuss obstacles and provide suggestions and solutions, describe marketing and outreach efforts, as well as convey client success stories. IDPH provides notifications of upcoming trainings, updates and reminders regarding billing, contracts, and processes to follow, and the Consortium provides an evaluation update.

Goal 2. Increase the number of individuals receiving MAT services.

Status: The goal is to increase the number of clients receiving MAT and integrated care by approximately 10%. When the grant was awarded to IDPH in August 2015, two providers contracted to provide MAT services for the grant were already providing MAT services. The grant assists these providers in expanding the type of MAT services they provide to clients. The grant provides resources for the other two providers to begin offering MAT services to clients. To assist with measuring this goal, providers submit monthly tracking forms to the evaluator that include the number of new clients receiving MAT services who are not in the MAT Iowa grant. As shown in Table 38, when the grant was awarded in August 2015, 486 clients were receiving MAT from providers.

Table 38. Number of Individuals Receiving MAT Services

Month	Number of Clients Receiving MAT Iowa Grant Services	Number of Individuals Receiving MAT Services from Providers Not in the MAT Iowa Grant
Baseline August 2015	0	486
Clients Receiving MAT After Grant was Awarded		
Year One (Aug 2015 – July 2016)	85	916
Year Two (Aug 2016 – January 2017)	117	252
Total	202	1,168

One of the two providers who implemented MAT services for clients also began providing MAT services for clients *not* in the grant. As of January 31, 2017 MAT was provided to 43 individuals who were not in the grant.

Goal 3. Decrease illicit drug use and improve client outcomes.

Status: The intent of this goal is to decrease illicit drug use at six month follow-up by 10% and to reduce disparities for women and other minorities through ongoing analysis of treatment outcomes among sub-populations. IDPH submitted a disparity statement to SAMHSA in November 2015. The target numbers for serving subpopulations are included in Tables 3 and 4 on pages 2 and 3.

Providers began completing GPRA follow-up interviews with clients in May 2016. Of the 61 clients with completed follow-up interviews, 42 clients (68.9%) reported use of alcohol or illegal drugs in the 30 days prior to grant admission; at follow-up, 15 clients (24.6%) reported alcohol or illegal drug use in the 30 days prior to the interview. The percentage of clients with past 30-day use at follow-up was reduced by nearly threefold compared to admission (McNemar's $\chi^2 = 23.52$, $df = 1$, $p < 0.0001$).



Twenty-six of the 61 clients (42.6%) with completed follow-up interviews are females. Table 39 shows abstinence at follow-up by sex. Nine of 35 males (25.7%) and six of the 26 females (23.1%) reported use of alcohol or at least one illegal substance in the 30 days prior to the follow-up interview. There are no statistical associations between sex and abstinence at follow-up (Chi Square Test, $p > 0.05$).

Table 39. Sex by Abstinence at Follow-Up

Abstinence at Follow-Up	N	Male percent (N=35)	Female percent (N=26)
Substance Use Reported	15	25.7 (9)	23.1 (6)
Abstinent	46	74.3 (26)	76.9 (20)

Very few racial (four clients) and no ethnic minorities have completed follow-up interviews. As more follow-up interviews are conducted with clients, data from follow-up interviews will be analyzed for minorities, sexual orientation, and other outcomes to provide the status of this goal.

MAT IOWA INTEGRATION PROCESS

The following information was obtained from provider reports submitted to IDPH, as well as information from provider calls and communication with providers.

MAT Integration and How System of Care is Coordinated and Integrated

ASAC

Clients eligible for MAT complete the Alcohol Use Disorders Identification Test (AUDIT), the Drug Abuse Screening Test (DAST), and the Diagnostic and Statistical (DSM-V). All clients receive the PHQ9; the Beck Depression and Burns Anxiety instruments are administered to clients in residential treatment. MAT Iowa clients are enrolled in one of the following levels of care: residential, intensive outpatient, extended outpatient, or continuing care. ASAC utilizes Hazelden's Living in Balance curriculum. Motivational Interviewing (MI) is also used to engage MAT Iowa clients. ASAC has an agreement with a local pharmacy to fill prescriptions and bills the cost to ASAC.

Jackson Recovery Centers

The Clinical Institute Withdrawal Assessment for Alcohol (CIWA) is administered to clients. Jackson Recovery is using the Matrix curriculum for the MAT program. Jackson Recovery developed an agreement with key pharmacy partners; a voucher system was developed for MAT Iowa participants to present a voucher issued by Jackson Recovery Centers for prescriptions to be filled and billed to Jackson Recovery. Weekly case review conferences between medical and therapy staff have been implemented to coordinate care.

Mercy Turning Point

Prior to the MAT Iowa grant, Mercy Turning Point had a Medical Director, however did not have physicians to actually see patients, provide medical evaluations, and prescribe medications. Therefore, few clients were receiving MAT. Three physicians were hired. Mercy Turning Point



provides evidence-based and integrated care including: cognitive behavioral therapy, MI, aggressive case management, and 12-step exposure. Mercy Turning Point uses the DSM-V, American Society of Addiction Medicine criteria (ASAM), the Clinical Opiate Withdrawal Scale (COWS), and the Clinical Institute Withdrawal Assessment of Alcohol Scale (CIWA-Ar). Mercy Hospital inpatient pharmacy and Mercy outpatient pharmacy distribute medications.

UCS

UCS is Commission on Accreditation of Rehabilitation Facilities (CARF) accredited and is a state licensed opioid treatment program. UCS provides co-located substance use disorder treatment, mental health services, and primary health services on site. Prior to the grant, UCS offered Suboxone and Methadone; MAT Iowa enables them to expand their MAT program to offer naltrexone and Vivitrol. UCS uses the Treatment Assessment Protocol (TAP) which is a biopsychosocial assessment that includes diagnosis for Axis 1 in the DSM-V and ASAM for level of care. They also use the COWS scale to screen and diagnose opioid dependence and for assessment of withdrawal. They have an on-site MAT clinic. They utilize a medical-behavioral approach including cognitive behavioral therapy, MI, group therapy, wellness and recreational activities, and physical care.

Program Staffing

ASAC: Medical Director, Certified Alcohol and Drug Abuse counselors, care coordinator.

Jackson Recovery Centers: Assistant Medical Director, primary therapist who also serves as case manager.

Mercy Turning Point: Medical Director, three physicians, MAT Services Coordinator, certified nursing assistant, four counselors.

UCS: Medical Director, supervising Nurse/MAT Program Coordinator, Certified Alcohol and Drug Abuse counselor (CADC), four prescribers on staff.

Trainings and Professional Development Related to MAT

Many techniques are used to increase awareness of MAT in Iowa. The following outreach has been conducted to educate and inform individuals in Iowa about opiate dependence, withdrawal, and MAT.

- Development of a MAT Iowa website by the Iowa Department of Public Health: <https://idph.iowa.gov/mat>
- Development of printed materials for conferences and various audiences.
- Numerous media interviews including radio, newspaper, and television with staff from IDPH and the providers.
- IDPH and providers have participated on panels for communities and legislators.
- Participation in town hall meetings.
- Joint presentations with the Eastern Iowa Heroin Task Force.
- IDPH and the providers are supplying information and conducting presentations to a variety of audiences including:
 - Other substance use disorder treatment providers.



- Federally qualified health centers, hospitals, emergency departments, physicians, nurses and nurse case managers, other medical practitioners, free medical clinics.
- Clinicians who may be aware of someone in need and social workers.
- The Department of Corrections including probation and parole officers, police and sheriff's departments, jail staff, police departments.
- Drug Court programs.
- Drug Task Force
- Department of Human Services.
- Mental health centers.
- The drug endangered children statewide workgroup.
- Community centers including a Native American center, Eastern Iowa Health Center, free medical clinics, Dubuque Area Substance Abuse Coalition.
- Local colleges and universities.

APPENDIX

The following comments were made by clients in response to additional questions asked on the client satisfaction survey. All comments made by clients are included.

During your involvement with medication assisted treatment, what services have been or were most helpful for you?

The medication, even though I didn't want to see myself as one of these people, I realized I was a functioning addict. I have gotten more out of the groups.

Suboxone and the counseling sessions.

1. Medication program. 2. Being involved in treatment. 3. Individual sessions.

Suboxone helps with cravings.

The groups and structure of all the programs.

Suboxone helped with the withdrawal, taking it away.

Doctor follow-ups and care coordinations.

Suboxone, it helped me focus on recovery.

The medication.

The Suboxone helped the most; it took away cravings and helped with curbing withdrawal.

Being able to talk to knowledgeable staff and being in treatment with others that are taking the same meds.

Going through treatment, family sessions, the medication provider, medication provided at no cost.

Turning Point outpatient. Group setting, individual settings, medication.

Group therapy, ATR program, medication, peer recovery support.

Medication, therapy sessions and having the combination.

Going to group, meeting with the doctor, and receiving the medication to help with cravings.

Getting the Vivitrol injection.

Group sessions. Medication would be the biggest.

One-on-one counseling and the groups.

Group therapy.

Close proximity of Suboxone to home treatment sessions.

Treatment.

The Suboxone was very helpful and the one-on-ones with <staff member name>.

Having someone to talk to has been very helpful. I am very thankful for the care.

Everything has been helpful, knowing I can call Turning Point anytime. I really appreciate that the counselors are more personal.

Assistance in getting the medication. The medication itself.

Meeting with the doctors and counselors.

The medication. I have been able to hold down a job.



My recovery and all the staff have been wonderful. I am happy and proud to be able to count on all the staff here.

This treatment center doesn't treat me like a drug addict and I like that.

The medication and treatment.

Got back on Suboxone when I had no insurance, gave me the option.

That the medicine was covered by the grant, otherwise it would be too expensive.

Counseling was the most helpful.

Voucher for medication and basically everything involved.

The groups.

Meeting with doctor.

Meeting with doctor and meeting with treatment team.

The structure and pattern of getting my medicine, the routine.

Attending groups.

Medication; everything helpful.

The medication, talking about problems, and a therapist to talk about everything.

Group sessions and counseling. Realizing I'm not alone and being able to open up and feel comfortable.

Meeting with doctor and having time to consult with the doctor.

Meeting with physician.

Individual sessions.

Vouchers.

Treatment and medication.

Whole program.

All of them.

Medication, treatment.

Suboxone took away withdrawal so I could focus and gain employment.

Individual sessions.

Residential was the most beneficial.

ATR, MAT program, vouchers.

The Suboxone being paid for.

Paying for the Suboxone, otherwise I wouldn't be able to afford it.

Individual sessions.

Paying for the Suboxone was a huge help.

Getting the medicine to help my cravings.

Talking with the doctor and counselors. Suboxone.



During your involvement with medication assisted treatment, what services would have been helpful for you in your recovery?

I think it is a pretty systemic approach to treatment. Maybe extended hours on weekends.

Family involvement, like groups, so they could better understand addiction.

Finding housing is difficult so that would be helpful.

Transportation, I have to get rides since I have no car.

Housing is difficult with a criminal history.

Possibly seeing a therapist.

Groups.

Having discussion about Campral, having quicker access to psychiatrist.

Housing assistance.

ATR possibly.

Attend more meetings (AA, NA).

Flexibility regarding work schedule is helpful.

Group sessions dealt with AA more than NA. Focus more on substances than alcohol.

More individual sessions.

Other groups with other people in MAT program would of benefited more from other groups, not just halfway house with different staff.

Probably ATR.

Transportation.

I preferred my treatment (IOP) to be longer.

If there was a Suboxone provider in Iowa City.

Individual sessions with my primary counselor.

Maybe more help with getting or finding jobs.

More one-on-one sessions, less group.

Clients made the following additional comments at the completion of the client satisfaction survey.

Just been awesome. Helped me immeasurably.

I wish I could have gotten help with my health issues because I am on disability and have limited income.

Thank you to the staff as you have helped me get my life back on track.

This has been an awesome experience for me.

Overall, I am very satisfied with the MAT services.

Class was good, staff nice and friendly.

Everyone was so encouraging and helpful.

Grateful for chances given and treated amazing here downtown.

Having the doctors be able to prescribe other medication.

I appreciate the ASAC programs, they were beneficial to my recovery.



I am in awe how much this program has helped us. It has helped to save our lives, I really have no words. I am so thankful.

I believe this whole program/agency saved my life, but I also believe you have to want it and work it.

I have been treated very nice and the doctors have been very nice.

I like the program. The Suboxone gives me hope that I'll be able to have a long recovery.

I really appreciate that you have worked with me to better my life.

I recommend it for anyone going through opioid addiction.

I think it has gone very well.

I'd like to figure out what is going on with UA's.

I'm grateful for the opportunity to get the Vivitrol shot. I have been sober since the second shot I received.

It has been very helpful to my recovery in more ways than one.

It is a great program. I thought it helped at the time.

Sometimes it was hard for me to run into other drug addicts at Turning Point. It really wasn't a trigger, just I didn't want to be around those people anymore.

Staff were very genuine and respectful.

The medicine has helped me have a better life.

The medicine probably saved my life and I am grateful.

The Suboxone care has been a Godsend. I love coming here.

Therapist was awesome.

This has been very helpful. I am looking for a job and I have my life back, thank you. All services are excellent and staff are very courteous.

I am pregnant now and will do the shot again after the baby is born.

