

The New York  
City RNR Gap  
Analysis  
Project

# ATI Report

DEVELOPED BY

The Center for Advancing Correctional  
Excellence (ACE!) at George Mason  
University

&

Maxarth LLC

for

The New York City  
Mayor's Office of Criminal Justice (MOCJ)

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# **Findings from the New York City Gap Analysis Project: Alternatives to Incarceration Report**

*Prepared for:*

The Mayor's Office of Criminal Justice

*Prepared by:*

Angie Balchi, M.A.  
Amy Murphy, M.P.P.  
Faye S. Taxman, Ph.D.  
Avi Bhati, Ph.D. (Maxarth LLC)

**The Center for Advancing Correctional Excellence (ACE!)**  
**George Mason University**  
4400 University Drive, STE 4100, MS 6D3, Fairfax, VA 22030  
ftaxman@gmu.edu  
(703) 993-8555  
[www.gmuace.org](http://www.gmuace.org)

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## Executive Summary

Since the 1980s, Alternative to Incarceration (ATI) programs provide defendants with community-based programming to divert individuals from the criminal justice system. The ATI diversion programs can reduce jail population in two ways: 1) individuals are diverted from the system where short jail stays are replaced with programming in the community; and 2) ATI individuals are provided with services to address needs that often are directly related to repeat involvement in the justice system. ATIs are critical to minimize justice interaction, and build community capacity to address the needs of ATI individuals. Some ATI programs in the city have contractual agreements with the NYC Mayor's Office of Criminal Justice (MOCJ). MOCJ has not assessed the ATI programs in terms of their ability to achieve the laudable goal of preventing future justice involvement, and addressing factors that lead to involvement in offending. Given the goals of reducing the use of Riker's Island Jail, the role of the ATI is even more important.

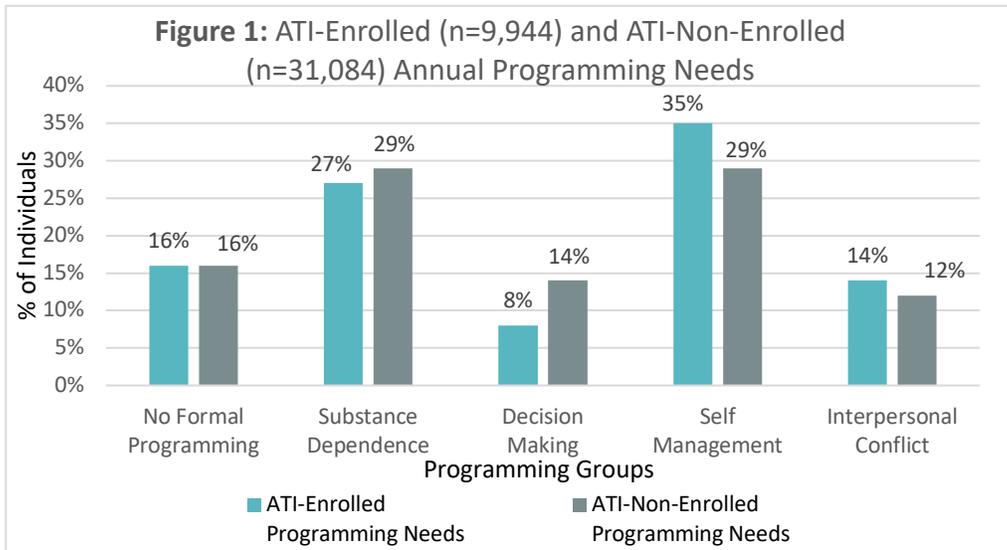
### **MOCJ partnered with the Center for Advancing Correctional Excellence (ACE!) at George Mason University to:**

1. Understand the risk and need factors of the nearly 230,000 individuals who encounter the criminal justice system in the city annually;
2. Understand the availability of community resources for ATI programs; and
3. Ensure that community resources are appropriate to address the risk and need factors of individuals that are eligible for ATI programming.

*This report presents the analysis of the 19 MOCJ-funded ATI Programs and the 41,000 individuals who were eligible to receive an ATI program in the last few years. ACE! used rigorous methodological approaches to examine: the needs of individuals who come into contact with the justice system; ATI program availability and quality; and ATI recidivism outcomes. The major finding of this study is that the existing structure (and contracts) of ATI programs are not designed in a way to maximize positive individual outcomes, and there is a service gap in terms of the type of programming needed to prevent recidivism and justice involvement.*

### **What are the Needs of ATI-Eligible Population?**

Nearly 41,000 individuals were eligible for an ATI referral based on MOCJ-criteria. Yet 9,950 (24%) individuals were enrolled in an ATI program (based on 2014-2016 data). ACE! examined the population of ATI-Eligible individuals and identified the factors that are linked to recidivism and stabilization in the community. Based on this analysis, ATI programming should address various needs ranging from no direct clinical programming to intensive Severe Substance Use Disorder programming to addressing cognitions. The highest need was to help individuals improve their daily functioning through Self-Improvement and Management skills (33%) followed by Severe Substance Use Disorder (28%), and case management and referrals to services (16%). Figure 1 below provides the breakdown of programming needs among the ATI-Enrolled and ATI-Non-Enrolled (but eligible) groups.



**Program Tool Results**

The study used the RNR Program Tool (developed by ACE! and available at [www.gmuace.org](http://www.gmuace.org)) to: 1) classify the programs based on the target behavior addressed and the approach used to address said behavior and 2) assess the programs’ adherence to evidence-based practices surrounding the RNR framework. MOCJ used the tool to understand what community resources are available, what resources are needed, and what resources have the capacity to improve individual-level outcomes.

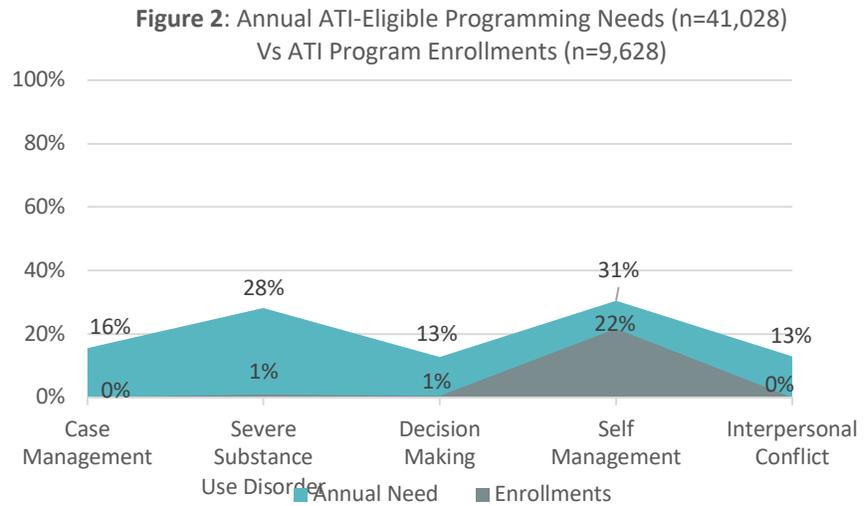
ATI programs received scores in the moderate range on the RNR Program Tool. Areas of strength include the use of a validated risk and need assessment, clear program eligibility and use of case plans. Nearly half of ATI programs utilize an external means to assess program outcomes including using evaluators, auditors, quality assurance or acquiring software to produce reports. Programs provide fewer clinical hours/less program intensity than what is needed for the typical ATI client. And, clinical hours are more often driven by legal mandate than the needs of the client. Overall, clients will benefit from receiving programming with greater intensity to address complex needs and achieve recidivism reduction. Additionally, while many programs indicated the use of incentives/rewards to acknowledge and encourage positive behaviors, most did not have a formal system in place. Structuring a formal incentive system (e.g., using contingency management) can assist with motivation to engage in treatment. And a formal system of incentives will provide a transparent structure to increase clients’ perceptions of procedural justice.

**Gap Analysis**

The study conducted a gap analyses to examine where there are unmet needs for programming by overlaying the programming needs of all ATI-Eligible individuals, and the type of ATI programs funded. ACE! used the average FY17 program enrollment data as well as MOCJ contracted ATI enrollment capacity to define ATI programs’ current capacity to serve the population. Figure 2 shows the type and amount of programming slots that would be needed in ATI programs to enroll more ATI-Eligible individuals. Several pronounced gaps occur in programming areas. More ATI clients need intensive services for Severe Substance Use Disorder programming (28%) or Self-Management programming (31%). The system currently funds fewer than 1% of the need for

Severe SUD programming; there is a better funding stream for Self-Management programming with capacity for nearly 22%.

None of the ATI programs were found to address Interpersonal Conflict Skills but 13% of ATI-Eligible individuals would be best served with this programming. Nearly 16% of the ATI-Enrolled group require case management and referrals to services only but this is not funded.



### **Recidivism Analysis**

Recidivism outcomes were measured for ATI-Enrolled and ATI-Non-Enrolled groups using one- and two-year follow-up periods of a re-arrest for any charge. Baseline recidivism rates for a rearrest for any offense within two years is 69% for ATI-Enrolled and 74% for ATI-Non-Enrolled. Propensity score re-weighting and propensity score matching was conducted to account for and balance attribute differences between the two groups. Accounting for this, two-year re-admission to jail reductions ranged from a low of nearly 8% (non-violent felony) to a high of around 18% (high misdemeanor). When individuals were recommended for and received Severe SUD programming, there was a 15% reduction in recidivism for a re-arrest compared to individuals who were recommended but received other types of programming, reinforcing the importance of treatment matching in reducing recidivism.

### **Recommendations**

This first study of the adequacy of current ATI programming based on the needs of the potential pool of clients reveals the need to adjust programming to meet the social and criminal justice needs of individuals eligible for ATI programs. The following recommendations are designed to strengthen the ATI programming to achieve key jail and recidivism reduction goals.

- 1. Allow Individuals to Continue to Participate in Programming after ATI Mandate Period.** Individuals in ATI programs have more complex needs than a short-term program and would benefit from additional programming once they have completed their mandated time in the program.
- 2. Address Gaps in Services.** The gap analyses, which examine the supply of programming in comparison to the demand for programming, can drive strategic planning and ensure that jurisdictions are able to meet the needs of the individuals in the system.
- 3. Improve Data Sources, Data Quality, and Data Sharing.** The research team encountered a number of challenges and barriers to obtaining necessary data for analyses. NYC can improve data quality and sharing include using standardized, universal data systems and assessment tools; encouraging collaboration among city agencies; and requiring data-sharing processes.

4. **Examine Diversion Processes in the Bronx.** The Bronx borough accounts for the largest proportion of people enrolled in ATIs. MOCJ would benefit from examining how Bronx treatment providers and justice professionals recruit individuals to participate in ATI programs.
5. **Conduct Quality Control on ATIs.** Programs tend to receive modest scores on the RNR Program Tool, indicating that programs can improve their adherence to evidence-informed practices and treatments. More attention should be given to improving use of treatment services.
  1. **Use Risk-Need Information to Identify the Right Program.** Information from risk and need assessments as well as other, target-specific assessments should drive both the decision to refer a person for diversion and the specific program.
  2. **Add Objective Standards to Contracts.** Contracts with ATI programs currently focus on numbers of participants served. More attention should be focused on the actual content of programming to ensure standards and consistency across programs and to achieve recidivism reduction.
  3. **Increase Program Intensity.** Many ATI programs do not provide sufficient treatment hours and intensity of programming needed to achieve recidivism reduction for individuals with serious or complex needs.
  4. **Encourage Training, Technical Assistance, and Coaching for Service Providers.** Increased fidelity to the program model leads to improved outcomes, and the best way to achieve this is through increased support for program staff.
  5. **Promote Quality Assurance Monitoring.** MOCJ can work with programs to ensure they have appropriate processes in place to ensure quality implementation.
  6. **Use Incentives in a Systematic Manner.** Many programs indicated that they use incentives/rewards, and incentives are a powerful motivational tool. Most of the current incentive systems are not done systematically; programs would benefit from having formal processes to provide incentives.
6. **Create Specialized Programming for Individuals with Violent Felony Charges.** Individuals charged with a violent felony who participated in an ATI had higher rates of recidivism than those who did not take part in an ATI. MOCJ should consider developing alternative programming for violent felony offenders to increase their chance for success.
7. **Prioritize Women’s Mental Health Needs.** Women were more likely to have a mental health disorder. Treating mental health disorders is critical to individual functioning, especially for those who also experience substance use disorder.
8. **Prioritize Attention to Motivation for Engaging in Treatment.** Motivation to engage in treatment is crucial and ever changing, and treatment providers and corrections professionals can influence motivation. A practice guideline is available on motivation readiness strategies.

The study team developed a series of practice guidelines to improve programming in target areas and to facilitate attention to offering programming that is focused on strengths-based and individual growth and development. The guidelines are intended to act as a primer on the following topics and are available [here](#):

- **Motivation and Treatment Readiness Techniques** are important to develop during the short ATI program mandate to help individuals see the value in continuing to engage in services after the mandated program has been completed.
- **Promoting Healthy Living** as an aspect of treatment should be considered to assist the person in developing daily functioning habits.
- **Developing Healthy Relationships** with family and friends can provide individuals with a network of support and thus reduce the likelihood of future criminal justice involvement.
- **Using Incentives** to engage people and sustain behavior change through positive reinforcement rather than a deficit-based sanctions approach.
- **Medication Management** approaches to address behavioral health issues.
- **Assertive Case Management**, a comprehensive approach to developing community capacity and services for individuals most at-risk for psychiatric crisis and hospitalization and involvement in the criminal justice system.

## Acknowledgments

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This report focuses on MOCJ-funded Alternative to Incarceration programs; a forthcoming report will focus on additional programs.

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<sup>1</sup> 173 programs completed the full Program Tool (program classification and analysis), and 24 programs completed the Abbreviated Program Tool (program classification purposes only).

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**SECTION ONE:  
Introduction**

## Introduction

Amidst a national and local atmosphere focused on reducing the use of incarceration, New York City is invested in utilizing community-based resources to promote effective diversion and reentry to reduce the demand on the justice system, safely reduce the jail population size, and ultimately replace Rikers Island Jail with smaller and safer borough-based jails. The New York City Mayor's Office of Criminal Justice (MOCJ) has been making concerted efforts to achieve this goal. As nearly 230,000 individuals encounter the criminal justice system every year in New York City, MOCJ's initiative has the potential to affect many people.

On a 400-acre island, Rikers serves as the principal jail complex for New York City. It currently consists of 11 active jails, including facilities for women and adolescents. While New York City has a relatively low rate of incarceration compared to other large U.S. cities, approximately 44,000 people cycle through the NYC DOC in a 12-month period. The majority of individuals housed at Rikers are pre-trial defendants, and there is a culture of pervasive, well-documented violence (New York Times, 2014). Efforts to close Rikers have come from both inside the New York City administration and grassroots organizations. In 2017, Mayor Bill de Blasio announced a ten-year plan to close Rikers and replace it with facilities that are "smaller, safer, and fairer" (City of New York, 2018).

Jail diversion refers to efforts to reduce incarceration through the use of community supervision and programming. Given the national and local climate focused on decreasing incarceration and undoing the harms caused by mass incarceration, diversion programs are receiving increased attention, particularly for low-level offenses. Not only do individuals who would otherwise be incarcerated benefit from diversion programs, but the court system does as well, as diversion programs reduce their burden, allowing courts to focus on more serious crimes.

Authorized since the 1980s, Alternative to Incarceration (ATI) programs in Manhattan, Brooklyn, Queens, Staten Island, and the Bronx are intended to reduce short jail sentences and to meet the service needs of defendants to prevent recidivism. In 2017, 7,000 people received jail sentences that were fewer than 30 days; however, many of these individuals have complex needs such as homelessness, mental health, and substance use disorder, and have high utilization of services such as shelters, emergency services, and jail. The ATI programs include services to address these needs such as, "residential and outpatient mental health and substance use treatment, vocational development, literacy and educational support, counseling, mentoring, physical healthcare, family support, entitlements enrollment, restorative justice processes, interpersonal skills training, and wraparound case-management" (City of New York, 2018). However, programming for individuals is not entirely based on level of need. Individuals with misdemeanor charges may only receive up to a few months of legally mandated programming based on the legal proportionality of the charge, while individuals with felony charges can be mandated to programming for more than a year.

Despite successfully diverting thousands of people from jail through ATI programs each year, MOCJ sought to better understand the needs of individuals enrolled in and eligible for ATI programs. The question is what type of programming and services would reduce their future involvement in the criminal justice system and improve their quality of life in the community?

This includes better understanding the landscape of existing programming that serves justice-involved individuals throughout the city.

This report presents data both on individuals involved in the criminal justice system in New York City and currently available programming to meet their needs. It further examines how the criminal justice system can better utilize existing resources to ensure that individuals receive programming and services that will decrease their likelihood of returning to the criminal justice system and increase their stability in the community. This research study identifies gaps in existing programming and provides recommendations for improving the quality and content of programming and the process of matching individuals with the right services to address their needs.

### **Effective Practices in Making Programming and Services Referrals**

The Risk Need Responsivity (RNR) framework asserts that jurisdictions can reduce recidivism and increase individuals' stability in the community by using individuals' risk levels, needs, and responsivity factors to drive supervision, controls, and programming.

- “Risk level” refers to the static factors related to criminal history (factors will vary based on the instrument used) that impact individuals' likelihood of repeat criminal justice involvement. Individuals who are higher-risk benefit from more controls, such as curfews or frequent contacts with a supervision officer, and should be a primary target for programming and services when they present with needs.
- “Needs” refers to dynamic factors that increase an individual's likelihood of repeat criminal justice involvement. Needs include criminogenic factors, such as certain thinking patterns or severe substance use disorder, which are directly correlated with criminal behavior. Needs encompass non-criminogenic factors as well, such as lack of secure housing, which may not contribute directly to criminal behavior. These factors can, however, impact an individual's stability in the community, thereby indirectly putting them at greater risk for continued criminal justice involvement. Higher need individuals should receive more structured programming.
- “Responsivity” refers to ensuring that criminal justice supervision and clinical interventions use cognitive, behavioral, and social learning models and focus on age, gender, literacy level, history of trauma, level of motivation, personality, and other factors to ensure programming is appropriate for each individual. Validated assessment tools can be used to identify individuals' risk level, strengths, needs, and important demographic characteristics such as age to determine appropriate levels of supervision and treatment.

While current practice in many jurisdictions relies on the legal charge to dictate the type of treatment or programming a person receives, individuals respond better to programming that is based on their clinical needs. For example, a person with drug charges does not necessarily require treatment for substance use disorder if they sell or casually use drugs; rather, they may require programming to address a decision-making need. In addition to matching individuals to programming that will address their clinical needs, jurisdictions should ensure that programs are of high quality. This requires programs to provide adequate intensity of treatment, use evidence-based curricula, provide support for staff, and use appropriate fidelity measures to ensure programming is delivered as intended.

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**SECTION TWO:  
Methodology**

This section provides a brief overview discussion of the steps and methodology used in this project. A more detailed discussion of each methodology is described further in the corresponding section. The ATI analysis methodology included the following components: 1) collect and analyze data about the content of ATI programs to determine program strengths and areas for improvement; 2) collect need data from various sources to determine the programming and service needs of ATI-Eligible individuals; 3) collect and analyze program utilization data and compare to need data to determine where gaps exist; 4) review the MOCJ-funded ATI contracts to determine if the current structure and requirements facilitate appropriate provision of services; and 5) measure recidivism outcomes to explore what impact the ATI programs may have had.

### **1. Collect and Analyze ATI Program Data**

[The RNR Simulation Tool](#), developed by ACE! and partners with support from the Bureau of Justice Assistance (BJA: 2009-DG-BX-K026), operationalizes the RNR framework. The toolkit assists criminal justice supervision agencies and treatment providers to determine the forms of programming that will be most effective in reducing recidivism and improving outcomes for their population. The tool is also designed to guide resource allocation and help jurisdictions identify service provision gaps. The RNR Program Tool for Adults is a 60-minute online program self-assessment completed by staff from service provider organizations and agencies. The RNR Program Tool's underlying algorithms use the information provided to: 1) classify programs into one of six program groups based on the self-selected primary target behavior: Severe Substance Use Disorder, Decision-Making, Self-Improvement and Management, Interpersonal Skills, Life Skills, and Punishment only/other; and 2) assess programs' adherence to essential features of effective programs to reflect the overall quality of the program (these domains are defined in Section Three). Programs that adhere more closely to evidence-based practices relative to the defined primary target behavior will receive higher scores. All programs then receive feedback in the RNR Program Tool output to improve the quality of the program in each of the six domains.

The tool is intended to help criminal justice agencies better understand available resources and create a system that is responsive to justice-involved individuals' specific risk-need profiles. Providers can use this information to make changes to their programs and improve client outcomes. Criminal justice agencies' planning departments can use this as decision support for planning and implementation. For this project, ACE! tailored the underlying RNR framework to the specific nature of programming in New York City, which included modifying program classifications and domain areas. Programs completed the standard RNR Program Tool, after which ACE! researchers reviewed each program's responses individually to ensure correct category placement. ACE! further honed program component requirements for program grouping than the RNR Program Tool requires. ACE! then provided an analysis of ATI program components. See Section Four for further discussion of the Program Tool data collection methodology.

### **2. Collect and Analyze Data on the Needs of Individuals who were ATI-Eligible**

ACE! researchers received data on the needs of individuals involved in the criminal justice system from the New York City Criminal Justice Agency (CJA), NYC Department of Corrections (DOC), NYC Correctional Health Services (CHS), NYC Mayor's Office of Criminal Justice (MOCJ), and numerous service providers. Data on all arraignments between January 2014 and December 2016 was the core cohort of analysis, due to the fact that ACE! received DOC data through 2017 but only received CJA data through 2016. Case information available in the data included arrest dates

and charges, arraignment dates and charges, disposition dates and type (where available), and borough of case. Client information available in the data included demographics (age, race, ethnicity and gender), some family information (marital status, number of children, whether currently living with children), and information from assessment tools (including information about living arrangement, employment, education, prior misdemeanor or felony arrests, risk score computations, pretrial release recommendation). Data from Correctional Health Services and the numerous service providers were used to impute client needs (substance use disorders, mental health, criminal thinking, leisure activities, housing needs, education, and employment). All data files that needed to be merged across sources (e.g., CJA, DOC, and ATI) were de-identified by MOCJ prior to sharing with us, with the exception of CHS data, which ACE! received directly from CHS. See Section Three for further discussion of determining needs.

### **3. Compare Client Need Data with Program Utilization Data to Determine Gaps**

One of the major goals of this project was to determine the types and quantity of treatment and services that are available for individuals with criminal justice involvement and compare that information to the needs of the individuals. Essentially, comparing need data to program capacity data allows ACE! to identify where gaps exist and which programming areas are needed to best meet the needs of individual's and produce successful outcomes. MOCJ provided a detailed list of ATI participants and the corresponding ATI program they received in FY17. The ATI programs' actual enrollment data was compared to the programming needs of the clients in order to show: 1) if individuals who received an ATI program received the appropriate programming based on their identified need(s), and 2) the amount of programming that would be required to address the needs of the ATI-Eligible population.

### **4. Review MOCJ-funded ATI Contracts**

MOCJ holds contracts with numerous non-profit organizations to provide ATI programs for individuals with cases in Criminal and Supreme Court throughout New York City. MOCJ provided 20 contracts for ATI programs, which the ACE! team coded for key pieces of information such as assessments, treatment approaches, fidelity measures and performance metrics- further detailed in Section Six of this report. Information collected from the contracts, such as assessment instruments used, client retention goals, and curricula used, was compared to the programs' self-reported information that was input into the RNR Program Tool. The purpose of this exercise was to determine whether programs were adhering to their contracts and to determine if MOCJ would benefit from changes to their contracting process.

### **5. Measure Recidivism Outcomes**

A recidivism analysis was conducted to determine 1) what recidivism reduction effects, if any, did the ATI programs produce, and 2) how correct/incorrect placement of individuals into programming can have an effect on recidivism. For this study, measures of recidivism are: one- and two-year follow-up periods for a re-arrest for any charge, re-arrest for a violent charge, re-admission to DOC as city sentenced, and re-admission to DOC as city sentenced or detainee. Further discussion on the methodology and findings of the recidivism analyses is found in Section Seven.

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**SECTION THREE:  
ATI-Eligible Needs**

This section discusses the estimated needs of the ATI-Eligible population and estimates of current MOCJ-funded ATI program enrollment capacity. The estimates of needs include two categories: programming needs and service needs. Programming needs are tied to reductions in recidivism, and individuals were placed into only one programming group based on their identified needs. The programming needs align with program group classifications that have been found to reduce recidivism: Severe Substance Use Disorder, Decision Making, Self-Improvement and Management, and Interpersonal Conflict Skills. Additionally, it was found that some individuals do not have a need for psychological based programs, as they don't have any specific criminogenic needs (except for education or employment) and tend to be low to moderate risk levels. This level of programming need is described as "Case Management/No Formal Programming," which can include case management and referrals to services in order to address service needs.

Service needs are not directly linked to reductions in recidivism but are critical for improvements in functioning and quality of life. These service needs are not mutually exclusive and were pulled from service providers' data/assessments, CHS data, and CJA self-report data. Service needs include needs such as education (e.g., not having a high school diploma or GED), employment (e.g., having a spotty work history and not having full-time work), mental health (i.e., being diagnosed with a mental health disorder), and stable housing (e.g., being homeless, moving frequently, not feeling your housing is secure), etc. The data sources and definitions for determining service needs can be found in Appendix A. Addressing these services service needs can help stabilize a person or provide protective factors to prevent criminogenic needs. Table 1 defines terms that will be used throughout the rest of the report.

<b>Table 1: Definitions</b>		
<b>ATI-Eligible</b>	Annual average N=41,028. Includes individuals enrolled in an ATI program and individuals who had legal eligible criteria to receive an ATI but were not enrolled in an ATI Program. (ATI Enrolled + ATI Non-Enrolled)	
<b>ATI-Enrolled</b>	Annual average N=9,944. Individuals who were enrolled into an ATI program.	
<b>ATI-Non-Enrolled</b>	Annual average N=31,084. ATI-Eligible individuals who received a jail or prison sentence instead of an ATI mandate.	
<b>Charge Categories</b>	<b>Violent Felony</b>	Felony charge codes provided by MOCJ (see Appendix B) (based on arraignment charge).
	<b>Non-Violent Felony</b>	All other felonies not included in violent felony group (based on arraignment charge).
	<b>High Misdemeanor</b>	Misdemeanor charge codes that typically render a jail sentence of more than 30 days (based on arraignment charge).
	<b>Low Misdemeanor</b>	Misdemeanor charge codes that typically render a jail sentence of 30 days or less (based on arraignment charge).
	<b>All Other Charges</b>	All other charges not included in the above groups (including violations; based on arraignment charge).
<b>MOCJ Enrollment Capacity</b>	The average annual (FY16 and FY17) MOCJ contracts' intake goals (data from MOCJ contracts) (N=4,354; Note: CIRT intake data not included).	
<b>Actual Enrollments</b>	The average FY17 actual number of intakes into ATI programs (data from MOCJ) (N=9,628; Note: CIRT intake data included).	

<b>Program Tool</b>	ATI programs' self-reported estimated number of clients served in the 12 months (data from Program Tool) (includes funding from all sources, not just MOCJ portion) (N=10,646; Note: includes CIRT data).
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## Needs Analysis Methodology

Data sources included NYC Criminal Justice Agency (CJA), NYC Department of Corrections (DOC), NYC Correctional Health Services (CHS), NYC Mayor's Office of Criminal Justice (MOCJ), and numerous service providers. (For more information on data sources, see Appendices A and C). Based on the data provided, all arraignments between January 2014 and December 2016 were part of the core cohort of analysis. This data were provided by CJA and included a number of case and client attributes. Case information included arrest dates and charges, arraignment dates and charges, disposition dates and type (where available), as well as NYC borough of residence. Client information included demographics (age, race, ethnicity and gender), some family information (marital status, number of children, whether currently living with children), and risk assessment information (including information about living arrangement, employment, education, prior misdemeanor or felony arrests, risk score computations, pretrial release recommendation).

Data from DOC included all admissions and releases from DOC between 2007 and 2017. The data was primarily used to determine clients who were City Sentenced and, among those, the length of time they served in DOC prior to release. In addition, the data was also used to develop recidivism measures of DOC re-admission.

Data from Correctional Health Services and numerous service providers were used to impute client needs (substance use disorders, mental health, criminal thinking, housing needs, education, and employment). These imputed needs were used in the stratified propensity score analysis used for balancing the ATI and comparison samples. For a further description of the methodology used to impute needs, refer to Appendix C.

MOCJ provided a detailed list of ATI participants and their corresponding ATI program. These data were merged with the CJA data and ATI information was merged to the core 2014-2016 arraignment cohort. All data files that needed to be merged across sources (e.g., CJA, DOC, and ATI) were de-identified by MOCJ prior to sharing with us. A set of random pseudo-identifiers was provided instead. Hence, all data merges were conducted without any actual personally identifying information.

The ATI-Enrolled group was defined by linking the ATI data provided by MOCJ to the CJA data file. A potential comparison group was created by selecting all arraignments that resulted in the client entering DOC as city sentenced after arraignment. Hence, the comparison group was all clients who were not in an ATI program but who were sentenced and were ATI-Eligible. Further, propensity score analysis was conducted to finally balance the ATI and potential ATI samples on several attributes *within each charge group* strata. The balancing variables include client demographics (age, race, gender), client risk information (risk category, CJA risk score, number of prior arrests within the last 5 years, number of prior violent arrests within the last 5 years) and client needs information (substance use disorder, criminal thinking need, mental health need, lack of leisure activities, housing needs, education need, and employment need). For further details on the propensity score balancing analysis, see Appendix J.

## Needs Analysis Discussion

This section examines and discusses the findings of the programming and service needs of individuals who were ATI-Eligible. The average annual number of ATI-Eligible clients is 41,028, 9,944 (24%) of which were enrolled in an ATI program. The remaining individuals received a jail or prison sentence. Individuals were classified into five main programming areas based on their *primary* area of need. These programming needs are mutually exclusive (i.e., individuals are only placed in one category). Essentially, an individual may present with needs in multiple categories, but the model places them in the area of their most pressing clinical need.

Figure 1 provides the programming needs for the ATI-Eligible group as a whole. Nearly one-third (31%) of the population has a self-improvement and management programming need, indicating that these individuals have a lesser degree of substance use disorder than the 28% of individuals who require severe substance use disorder programming. Approximately 13% of the population requires programming that targets decision making, and 13% requires interpersonal conflict programming only. While 16% of the population does not require any formal programming, these individuals might benefit from case management services to address other service needs such as housing, education, and employment.

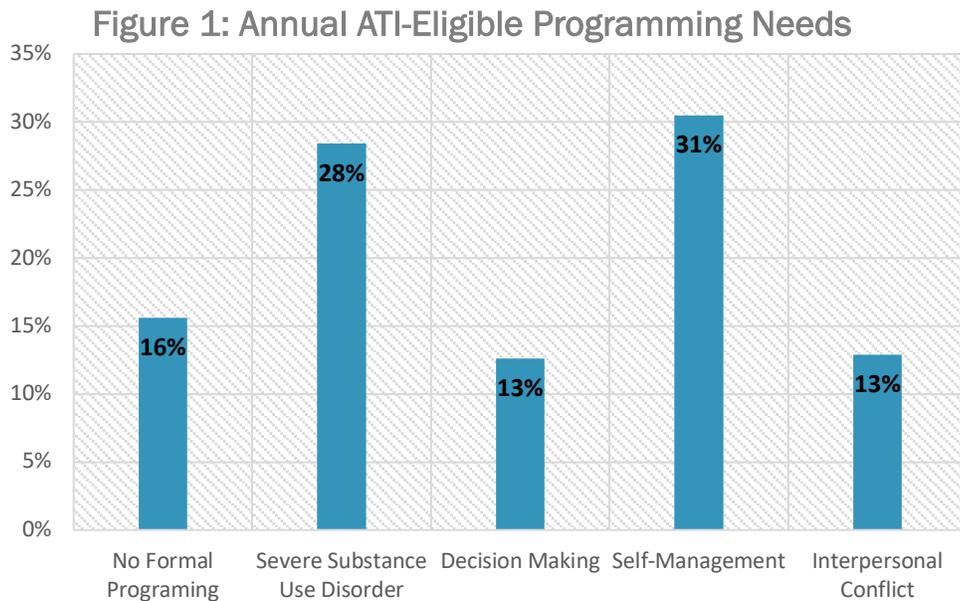
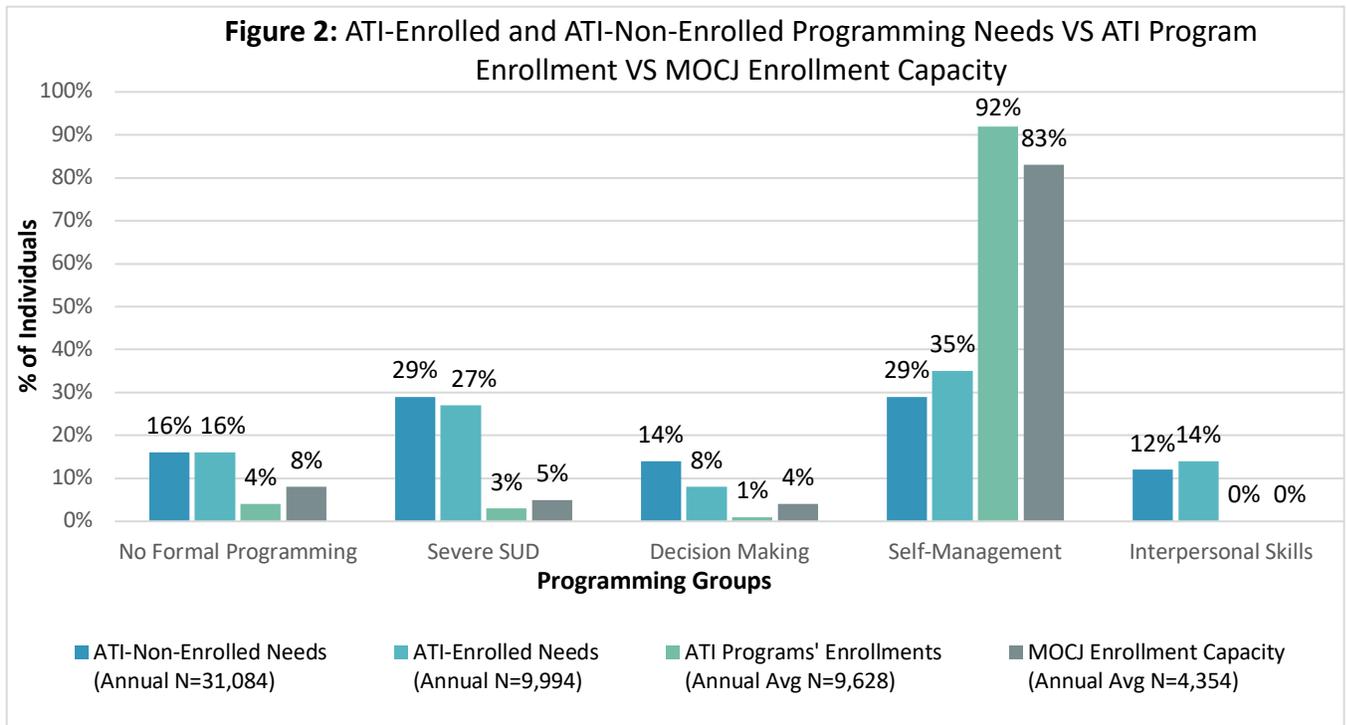
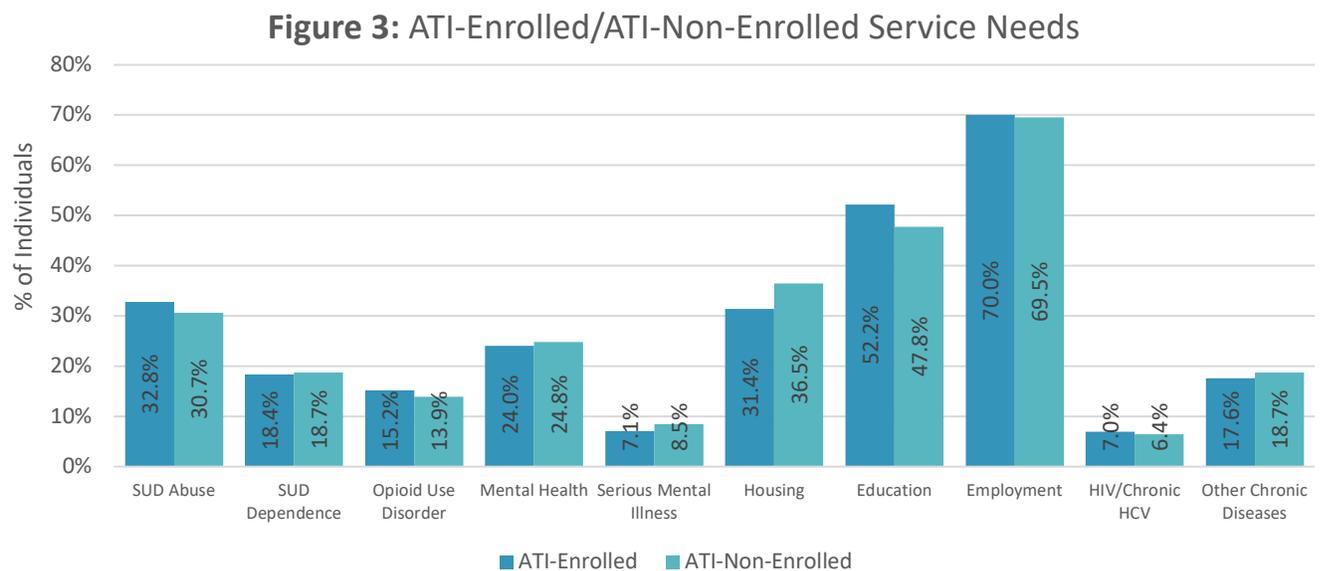


Figure 2, below, shows the programming needs of the ATI-Enrolled and ATI-Non-Enrolled groups, compared to the ATI-Enrolled group's actual program enrollment and program enrollment capacity based on MOCJ contracts. Overall, the breakdown of programming needs among ATI-Enrolled and Non-Enrolled individuals is similar to that as a whole. There is a higher prevalence of self-management need within the ATI-Enrolled group and decision making within the ATI-Non-Enrolled group. The majority of individuals who were enrolled into an ATI program received self-management programming.

**Figure 2:** Distribution of ATI-Enrolled and ATI-Non-Enrolled Programming Needs VS Programs' Actual Enrollment (includes CIRT Intakes) and MOCJ Enrollment Capacity (does not include CIRT Intakes).



The graph below (Figure 3) shows the prevalence of additional service needs that the ATI-Eligible population presents with, b. These needs are not mutually exclusive (i.e., individuals may have one or all of these needs). ATI-Eligible individuals, on average, have between one to three service needs to be addressed (18% have one need, 31% have two needs, 25% have three needs).

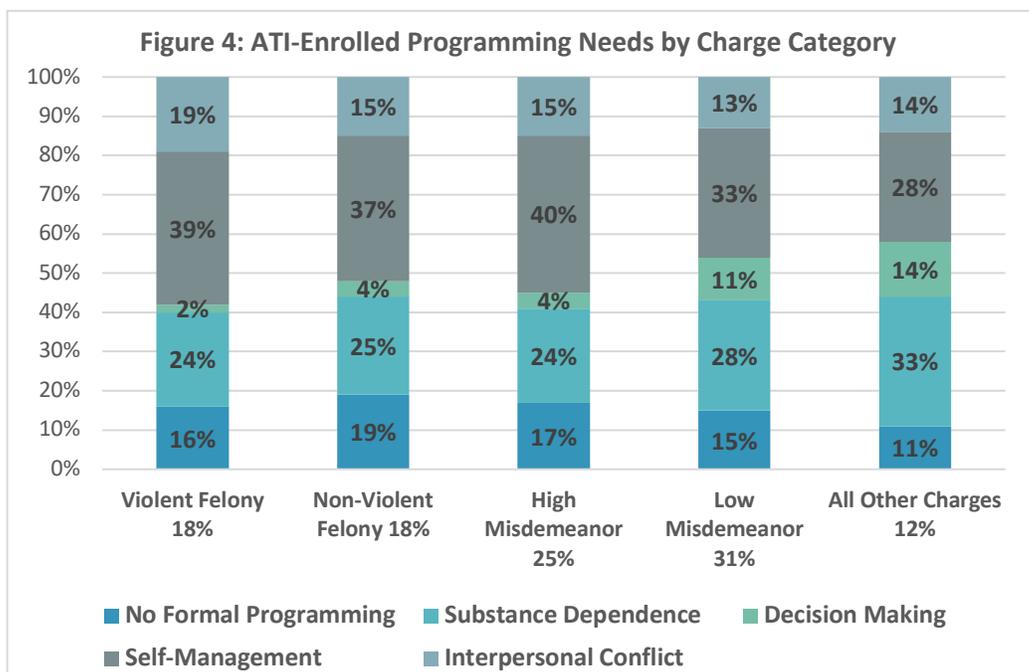


Addressing these needs are not likely to have a direct recidivism reduction effect based on the available literature regarding effective programs for individuals involved in the justice system; however, these are important to address as they may affect an individual’s stability. Stable individuals are more likely to actively participate in the ATI program and to gain more benefits from this programming. These service need areas are also linked to improvements in quality of life. The data that were examined provided good measures for the need areas of mental health, serious mental illness, education, employment, housing, and treatment for HIV and/or Hepatitis C (HCV). More than two-thirds (70%) of the ATI-Eligible population have a need for employment services and 49% have an education need.

The primary programming needs of the population were also broken down by the ATI-Enrolled (see Figure 4) and ATI-Non-Enrolled (see Figure 5) groups, as well as by five charge categories: Violent Felony, Non-Violent Felony, High Misdemeanor, Low Misdemeanor, and All Other Charges. The ATI-Enrolled group has an annual *n* of 9,944 and the ATI-Non-Enrolled annual *n* of 31,087. The charge category breakdown is similar for the ATI-Enrolled and ATI-Non-Enrolled. Individuals with low-level misdemeanors represent most of the population: 31% of ATI-Enrolled and 43% of ATI-Non-Enrolled. Violent felonies were more prevalent in the ATI-Enrolled group (18%) than the ATI-Non-Enrolled (11%). While there was some variation, the ATI-Enrolled and ATI-Non-Enrolled have similar primary programming needs by charge category.

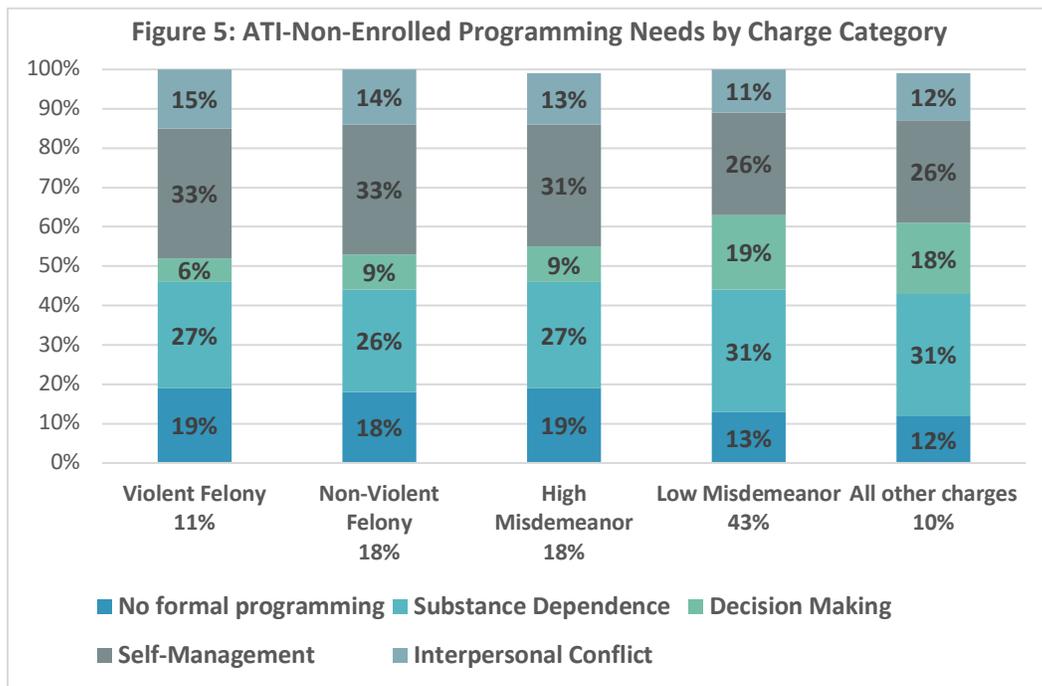
For the ATI-Enrolled population, the greatest number of individuals who fell under the “No Formal Programming” category were those in the Non-Violent Felony group, suggesting that 19% of individuals in that charge category presented with no serious service needs.

Roughly one-quarter or more of each charge group would benefit from programming to address a severe substance use disorder, with 33% of the ATI-Enrolled All Other Charges group struggling with substance use disorders (SUD). This is slightly higher than the severe SUD need typically



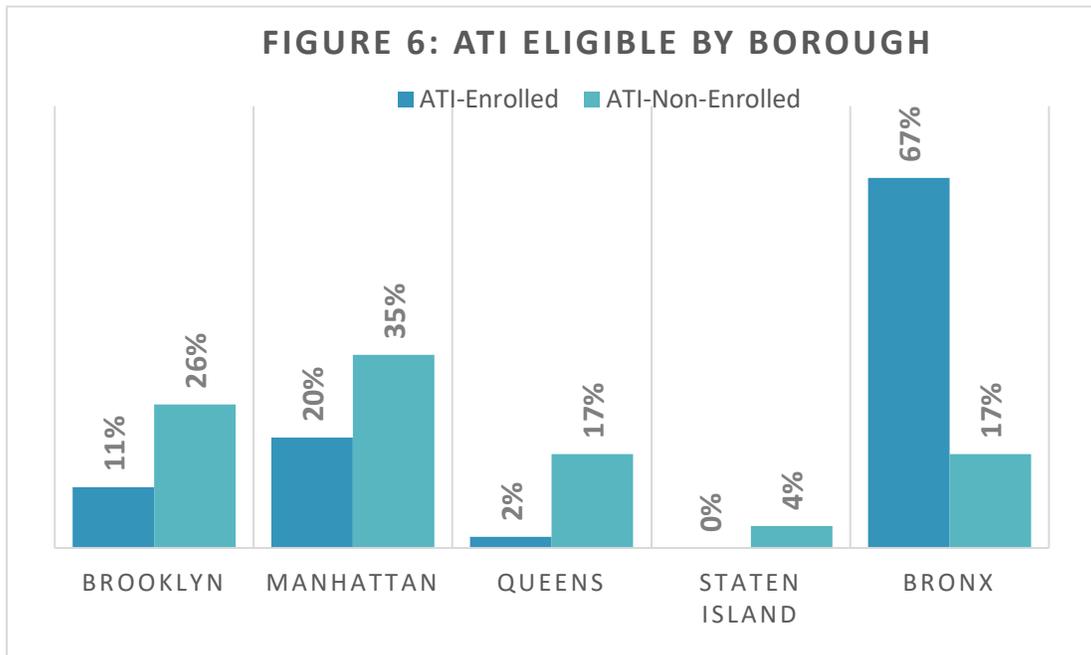
seen in jurisdictions, with around 20% of the population requiring programming to address a severe substance use disorder. Decision-making makes up the smallest programming need among all charges within ATI-Enrolled and ATI-Non-Enrolled; 14% of low misdemeanor ATI-Enrolled and 19% of Non-Enrolled have a need for decision making or CBT-based programming. In working with other jurisdictions, ACE! has found approximately 40% of the population has a need for decision-making using CBT-based approaches.

Self-Improvement and Management programming is the most prevalent need in the violent and non-violent felony and high misdemeanor categories for ATI-Enrolled and ATI-Non-Enrolled, as well as low misdemeanor ATI-Enrolled. The ATI-Enrolled High Misdemeanor charge group has 40% of the population with Self-Management as their primary need, while Violent Felony and Non-Violent Felony ATI-Enrolled charge groups both have just under 40% of individuals with this need. The need for Interpersonal Skills programming ranges between 11%-19% of the ATI-Eligible population in every charge group. The ATI-Enrolled Violent Felony charge group has the largest number of individuals with this need at 19%.



The breakdown of the programming needs reinforces the need for ATI referrals to be based on the severity and type of need, rather than the legal mandate based on the individual’s charge. While MOCJ may be limited in this area due to the legal mandate, MOCJ and ATI programs can use need assessment information to ensure appropriate determination of programming once enrolled, as well as developing client motivation so they can continue to seek services after their mandate is complete.

An analysis of the ATI program intakes by borough (Figure 6 below) shows that individuals from the Bronx were disproportionately funneled into ATI programs compared to other boroughs, 67% of the total population enrolled in an ATI came from the Bronx. Twenty percent (20%) of ATI-Enrolled were in Manhattan while 11% were in Brooklyn. While 16% of the ATI-Eligible population is in Queens and Staten Island, only 2% and 0% were admitted into a MOCJ-funded ATI program, respectively. MOCJ should ensure that all boroughs are similarly marketing and utilizing the ATI programs, and provide role guidance for all parties involved. See Appendix E for further breakdown of the ATI population by borough and by demographics.



**Center for  
Advancing  
Correctional  
Excellence (ACE!)**



**SECTION FOUR:  
Program Review**

## **Introduction to the RNR Program Tool**

The RNR Program Tool's underlying algorithms uses the information provided by the program to, 1) classify programs into one of six program groups based on the self-selected primary target behavior: Severe Substance Use Disorder (SUD), Decision Making, Self-Improvement and Management, Interpersonal Skills, Life Skills, and Punishment Only/Other; and 2) assess the program's adherence to each of the six essential features of effective programs: Risk principle, Need principle, Responsivity principle, Implementation, Dosage, and Structure, as well as a total score to reflect the overall quality of the program. Programs that adhere more closely to evidence-based practices relative to the defined primary target behavior will receive higher scores. All programs then receive feedback in the RNR Program Tool output to improve the quality of the program in each of the six domains.

In order to accurately assess programs and identify the most appropriate treatment/programming for individuals with complex needs, the RNR Tool uses four general program models that have an impact on recidivism reduction: Severe Substance Use Disorder, Decision-Making, Self-Improvement and Management, and Interpersonal Skills Development. The programming areas are built on the criminological and behavioral health literature on programs that reduce the likelihood of recidivism, based on meta-analyses where there is an accumulation of evidence to support a particular program model. Typically, each of the underlying studies will report a treatment effect (or the outcome for the treated and the untreated groups and their standard errors or variances) and sample sizes used. Meta-analysis combines these pieces of data from individual studies into a single estimate of the effect of the program/policy. However, there are different quantitative measures that can be used. In recidivism research, for example, different base rates, follow-up periods, and definitions (re-arrest versus re-conviction) can make comparing across studies difficult. Providing a single measure across these studies is often difficult because the underlying outcome can mean different things. A common practice is to present a single standardized measure - termed effect size - that can be computed from a number of different studies, outcomes, or definitions. The effect size is a standardized measure of the difference between the treatment and control groups. Given an effect size, one can then apply the equations in reverse and develop estimates in terms of reductions in recidivism rates. Hence, an effect size produced by a meta-analysis is a convenient measure that can be applied to different base rates or different outcomes when making inferences about different populations.

A description of each programming model and the reported effect sizes are described below. While a person may present with multiple needs, their primary program placement is established in only one area based on their severity of need. Also, it should be noted that the estimated effect size that we use is for moderate to moderate-to-high quality programs; higher quality programs can generate slightly higher effect sizes.

### **Group A – Severe Substance Use Disorder**

Individuals with Severe Substance Use Disorder (SUD) require intensive (daily) programming with high levels of structure that occur over a longer period of time due to the nature of their drug use and the patterns of recovery. Many also present with a co-occurring mental health disorder. Some of the common types of treatment for severe SUD include residential treatment, therapeutic

communities (TCs), and intensive outpatient treatment (IOP). Individuals who use opioids or alcohol often benefit from medication assisted treatment (MAT), such as buprenorphine, naltrexone, or methadone, but the MAT must be accompanied by behavioral interventions that help individuals address the underlying causes and correlates and identify strategies for relapse prevention.

Crimesolutions.gov rates 16 programs and 4 practices as “effective” for treating substance use disorder (2018). Some of the effective interventions and practices include MAT, contingency management, drug courts, Multidimensional Family Therapy, and Trauma Affect Regulation: Guide for Education and Therapy (TARGET). Many curricula that address severe SUD are cognitive-behavioral therapy (CBT)-based.

Programs in this category fall under American Society of Addiction Medicine (ASAM) levels of care 2.1 (Intensive Outpatient Services) to 4 (Medically Managed Intensive Inpatient Services). Residential programs such as TCs should provide anywhere from 15-30 hours of treatment per week and should last for 9-16 months. Intensive Outpatient Services should include a minimum of nine hours/week. For example, participants attend three times per week for three hours per day. Dosage in Group A programs may also vary by program phase. For example, phase 1 is the most intensive with participants attending anywhere from three to seven days a week. The next phase may entail going to treatment for two days per week.

The estimated effect size is moderate with a  $d=.30$ . That is, it is possible that the average person who completes the 12-18-month program would have a reduced probability of recidivism of around 20-25%. Individuals with severe SUD often present with multiple additional needs or destabilizers. They often benefit from additional programming around cognitive restructuring techniques. Group A programs should include clinical staff and use evidence-informed curricula.

### **Group B – Decision-Making**

Group B programming emphasizes cognitive restructuring to change maladaptive thinking and behavior patterns. Individuals in this programming group often have a number of lifestyle and cognitive errors that affect impulsive decisions and risky behaviors and should receive programming multiple times per week and have moderately high structure. This programming is generally geared to individuals that are moderate to high risk, and that display poor cognition skills.

Programming tends to be cognitive behavioral therapy (CBT)-based. Some curricula that address decision-making include Thinking for a Change, Moral Reconciliation Therapy, Decision Points, and Counterpoint. Individuals placed in this category tend to be moderate-high risk with multiple needs. In addition to the CBT program, individuals may need additional assistance in other areas such as housing, social support, or mental health maintenance. The estimated effect size is moderate with a  $d=.30$ . That is, it is possible that the average person who completes the 12-18-month program would have a reduced probability of recidivism of around 20-25%.

### **Group C – Self-Improvement and Management**

Group C programming helps individuals develop social and problem-solving skills to address mental health, mild or moderate SUD, and self-control to learn to self-regulate behavior, manage emotions and manage conditions (substance use, mental illness, coping skills, etc.). Individuals

receive programming weekly or several times per month, but the level of dosage will vary based on whether the individual has a mental health disorder and the severity of the mental health disorder. Restrictions in these programs should be low. Individuals in this category may present with co-occurring mental health and substance use disorders or have risky behaviors that affect their decision making but do not reach the level of having a severe substance use disorder or engage in abnormal decision-making skills. Dosage of Group C programs depends on the severity of the behavioral health and developmental issues. Individuals who receive programming in this category should receive an evaluation from a mental health professional for professional clinical judgement on program dosage.

SUD programs in this category fall under American Society of Addiction Medicine (ASAM) levels of care 0.5 (Early Intervention) to 1 (Outpatient Services). Individuals in Group C often need medication management in conjunction with therapy. Some common curricula that address SUD include the Matrix Model, Helping Women Recover, Helping Men Recover, Kathleen Carroll's CBT, and Cognitive Behavioral Intervention for Substance Abuse. The estimated effect size is small with a  $d=.20$ . That is, it is possible that the average person who completes the three- to four-month program would have a reduced probability of recidivism of around 10%.

#### **Group D – Interpersonal Conflict Skill Development**

Group D programs are those that provide structured counseling and modeling of behavior to reduce interpersonal conflict and develop more positive interactions, as well as to develop social and communication skills especially with peers and loved ones. Programming is typically infrequent (e.g., monthly), and there are few restrictions on liberty.

Programs in this category generally target lower-risk individuals or individuals with few needs/multiple strengths. For higher-risk individuals, programs in this category may be completed in conjunction with other treatments (A, B, or C group programs) that target an individual's prevailing criminogenic needs. Programs in Group D may range from very brief interventions of only a few hours to up to 40 hours, and can last anywhere from a few weeks to up to 1 year. The estimated effect size is small with a  $d=.20$ . That is, it is possible that the average person who completes the 3 to 4-month program would have a reduced probability of recidivism of around 10%.

#### **Assessing Programs with the RNR Program Tool**

After the RNR Program Tool categorizes programs into the appropriate program group, the underlying algorithms provide a score based on the program's adherence to evidence-based practices revolving around the RNR framework. The scoring algorithms also consider the level of programming. A description of the essential features of each domain is discussed below.

**Risk** includes two main items: the use of a validated risk assessment and target of a specific risk level. The Risk Principle asserts that risk for recidivism can be predicted using a validated assessment instrument and service intensity should be matched to this risk (Andrews & Bonta, 2010). The Risk Principle suggests that dosage should vary by risk level and individuals of different risk levels should not be treated together.

*Need* includes three items: behaviors associated with offending, tools to assess needs, and secondary needs. The Need Principle suggests that if recidivism reduction is the goal of an intervention then dynamic needs should be targeted (Andrews, Bonta, and Hoge, 1990). Andrews and Bonta (2010) describe eight dynamic needs: history of offending, personality patterns, cognitive distortions, destructive associates, family or marital circumstances, school or work conditions, leisure and recreational activities, and substance use disorder. Programs that focus on criminogenic needs receive higher scores than those that focus on needs that are not as closely associated with continued criminal justice involvement. Programs that attempt to target too many needs (or target behaviors) are likely to water down their program effectiveness.

*Responsivity* refers to matching the correct type of programming based on modality/content/approach for targeting behavior to an individual based on his or her risk and needs profile (Crites & Taxman, 2013). The Responsivity Principle suggests that programs (and recidivism reduction efforts) will be more effective if they are consistent with individuals' learning style, use cognitive-behavioral or social learning techniques, and address characteristics of an individual's personality that affect amenability to treatment (Andrews & Bonta, 2010; Andrews, Zinger, et al., 1990).

*Implementation* refers to the manner in which a program is carried out. Fidelity to the program model has been strongly linked to program effectiveness (Andrews & Dowden, 2005; Lipsey & Landenberger, 2005). Key measures include: how the treatment is delivered; staff credentials; staff training, quality assurance measures; program evaluation; technical assistance received; and inter-agency communication.

*Dosage* is the total amount of treatment an individual client receives. This may include a number of different indicators: total number of clinical hours; duration of the program (in weeks); frequency (number of days per week), amount (hours per week); whether the program includes phases; and aftercare. Dosage should be matched to risk and need (Bourgon & Armstrong, 2006; Mitchell et. al, 2012).

*Structure* includes controls placed on the individual as part of the program. These controls are used to help constrain individual behavior and/or movements. Constraining the movement of individuals can include: electronic monitoring, curfews, or day programs to support treatment goals (Drake, Aos, & Miller, 2009; Padgett, Bales, and Blomberg, 2006; Pattavina, Tusinski-Miofsky, & Byrne, 2009).

## **RNR Program Tool Data Collection Methodology**

Between June 2017 to March 2018, ACE! worked with program administrators in non-profit service provider organizations throughout the five boroughs to complete the RNR Program Tool through in-person or webinar sessions. During these sessions, ACE! facilitated completion of the online assessment and provided support and clarification where needed. Providers were instructed to gather pieces of information about their programs, such as number and demographics of individuals served, programming delivery models, and staffing. For a complete list of information collected in the Program Tool see Appendix F. ACE! researchers made multiple attempts to contact programs to collect unknown or missing information to complete the Program Tool, but some

programs did not respond. For documentation, reference Appendix G. The resulting data uses solid research approaches to ensure that the estimates are accurate and reflect patterns for MOCJ funded ATI programs. One-hundred ninety-four (194) programs, most of which were not funded by MOCJ, completed the RNR Program Tool. This section only discusses the analysis of the 19 MOCJ-funded ATI programs<sup>2</sup> based on information provided by the programs in their Program Tool.

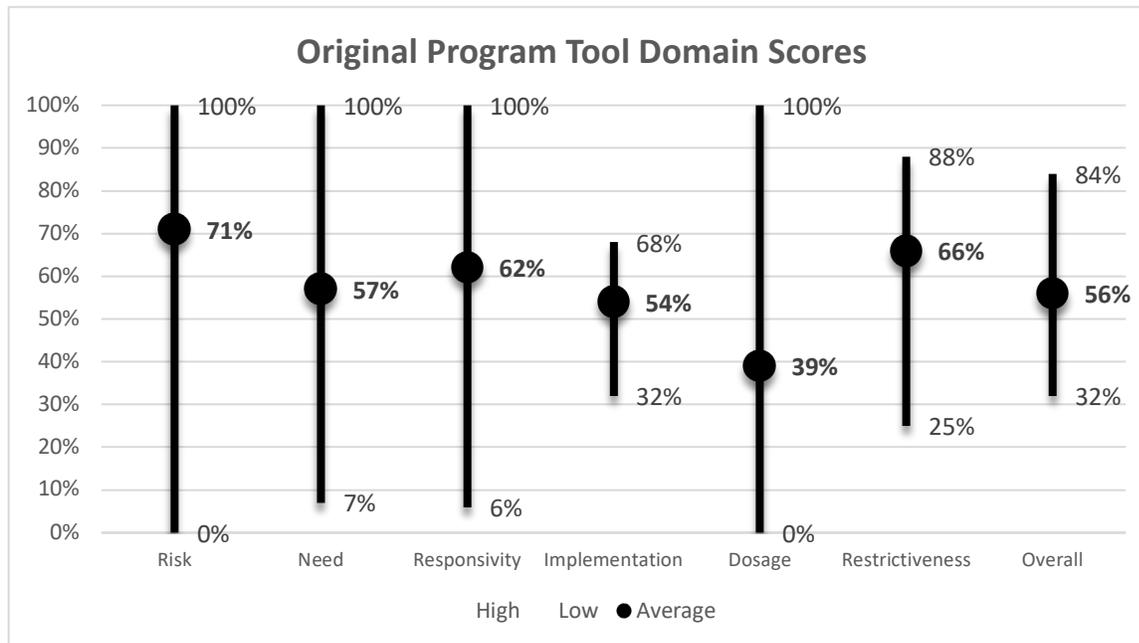
ACE! researchers reviewed each Program Tool individually to ensure that it was appropriately categorized based on the information they provided in the Tool. Table Two shows the additional criteria ACE! developed for programs to remain in the self-selected program group. This was done to ensure accurate categorization of programs to measure capacity and to ensure all programs within the program group met the same standards. Program groups are mutually exclusive, programs are only placed in one programming group based on the target behavior they address and the criteria specified below. Severe SUD and Decision-Making programs must utilize relevant assessment instruments, use an appropriate approach and or curriculum, provide at least 100 hours in dosage, and provide group and/or individual therapy by credentialed clinical staff. Self-Improvement and Management programs must provide relevant approach/curriculum, group/individual therapy and clinical staff. Case Management (No Formal Programming) requirements are less restrictive. Programs should use relevant assessments and make referrals based on the assessments.

Program Category	Table 2: Minimum requirements for program group placement						
	Self-identifies target behavior	Use of relevant assessment instrument(s)	Use relevant approaches and/or curriculum	Dosage ≥ 100 hours	Provides group and/or individual therapy	Clinical staff with education and experience	Makes referrals based on assessments, no direct services
<b>A – Severe Substance Use Disorders</b>	X	X	X	X	X	X	
<b>B – Decision Making</b>	X	X*	X	X*	X	X	
<b>C – Self-Improvement and Management</b>	X	X*	X		X	X	
<b>D – Social and Interpersonal Skills</b>	X	X	X**		X		
<b>G – Case Management</b>	X	X					X
<p>*Exceptions on a case-by-case basis with other program components taken into consideration  **Program tool indicates that most programs in these categories utilize a curriculum, but not required for category placement  ***Group E programs provide classes, groups, workshops, or individual meetings  Purple=Highest Level of Recidivism Reduction Programming; Blue=Critical for Stabilization (Indirect Relation to Recidivism Reduction)</p>							

<sup>2</sup> There were 20 MOCJ-Funded ATI Programs, however Bronx and Staten Island CIRT completed one Program Tool

Figure 8, below, shows the original scores that the MOCJ-funded ATI programs received upon completion of the RNR Program Tool. Programs scored highest in the areas of risk and structure. However, new scales, detailed below under Methodology, were created for this project in order to address the specific features of the ATI programs. Therefore, only the new Program Tool scores will be discussed, below.

**Figure 8: ATI Programs’ Original RNR Program Tool Scores Received**



Based on discussions with program staff and analyses of the completed RNR Program Tools, ACE! researchers found that the MOCJ-funded ATI programs included distinct program elements that were not being captured in the Program Tool score results. For example, most of the ATI programs utilize a service provision framework, in which they provide case management services for clients and use service networks for referrals. ACE! wanted to ensure the Program Tool scoring considered and addressed these elements. Therefore ACE! created new scoring domain sub scales to include relevance to the functions that the ATI programs serve.

Program Tool data from 2013-2018, which included roughly 1,800 Program Tool entries from over 200 jurisdictions across the US (including NYC) were used to complete the dimensionality, item grouping, and scale reliability analyses. The Program Tool entries used in the analysis were completed, first-time assessments and possessed minimal levels of missing data. The purpose of this methodology was to improve the scales in the Program Tool to enhance data collection and feedback provision. Principal Component Analysis (PCA) was used to identify items within the Program Tool that grouped together in a meaningful manner. Specifically, items were grouped together because they collectively measured the same overarching construct, such as case planning or use of rewards and sanctions. Based on the PCA results, several new constructs emerged within the Program Tool, which included different variables and more specific categories to enable ACE! to better focus the feedback provided to programs on how to improve their practices. Once the

items were grouped together, a reliability test was conducted to verify that these items did indeed collectively measure the intended construct. Results from the reliability test indicated strong to excellent reliability, meaning that these scales do in fact measure their intended constructs. Table Three below shows the Cronbach’s Alpha value reliability for each program domain.

**Table 3: Findings: Domain Cronbach’s Alpha Value Reliability**

Domain		Domain Reliability
<b>Risk</b>		0.807
<b>Need</b>		0.762
<b>Responsivity</b>	Severe SUD	0.940
	Decision making	0.861
	Self-Improvement and Management	0.869
	Interpersonal Skills	0.855
	Life Skills	0.863
	Case Management	0.874
<b>Dosage</b>		0.814
<b>Implementation</b>	Clinical Standards	0.838
	Rewards and Sanctions	0.937
	Quality Assurance	0.941
	Drug Testing	0.919

The following changes within the Program Tool scoring domains incurred from the findings of the Scale Reliability Analysis. Responsivity items were made specific to the program group. The most weighted domain in the Program Tool—Implementation—was broken down into sub-scales representing the key areas of implementation measures. Finally, the domain—Structure/Restrictiveness—was removed due to a lack of reliability, and the drug testing items previously scored in this domain were included as a sub-scale measure of Implementation. Below is a brief description of the newly developed Implementation sub-scale domains.

**Adoption of Clinical Standards:** Program uses clinical standards including appropriate staffing, number of hours of programming, type of programming, and use of different clinical tools. Includes measures of *staffing patterns* to ensure the appropriate type of staff given the goals of the program, and *management of the program*, which entails having sufficient supervisors and leaders to manage the program.

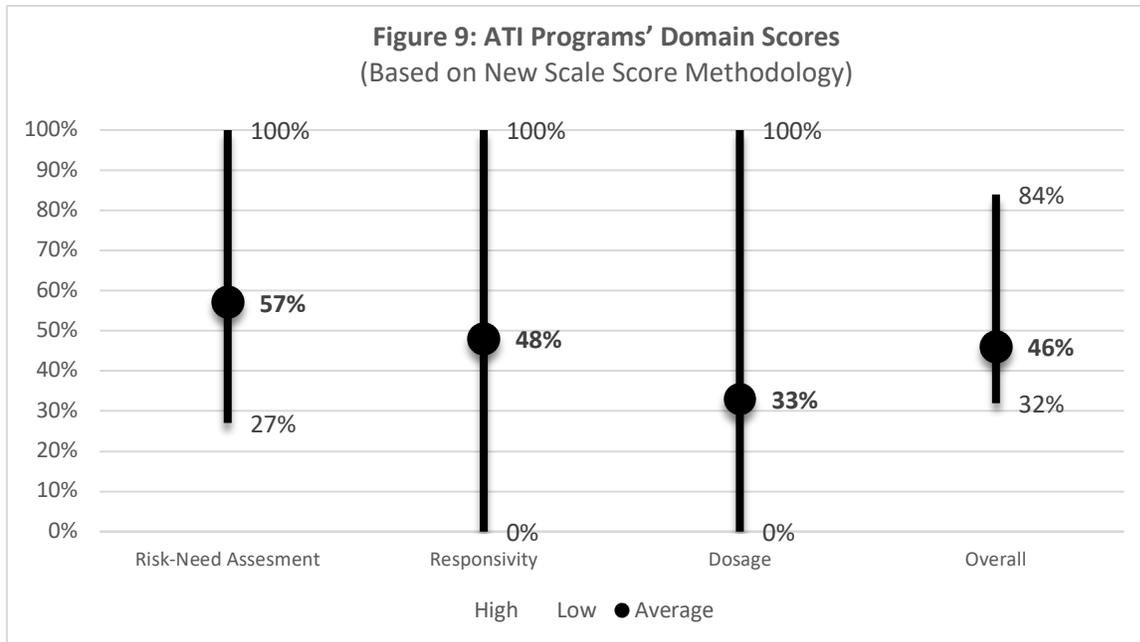
**Rewards and Sanctions:** Program utilizes a system of structured rewards and sanctions. Rewards are based on targeted and relevant behaviors to the client’s case plan/goals.

**Quality Assurance and Fidelity:** Has a process in place to measure that program components and staff are following program procedures. Adherence to core concepts for a program in terms of key program components. Interagency Agreements are in place with other agencies to network services to ensure that clients have access to services.

**Drug Testing:** Programs that target substance use should utilize drug testing as a measure of success. Drug testing should be random.

## Program Tool Scale Results

This section discusses the analysis of the MOCJ-funded ATI Programs' Program Tool Results, based on the new scoring methodology, aforementioned. Programs' responses to key items scored within each domain are discussed in terms of evidence-based practices and the RNR framework. Figure 9 shows the range and average scores for the domains of risk, need, responsivity, dosage, and the overall score, while Figure 10 under implementation breaks down the implementation domain sub-scale scores of clinical standards, case management, rewards and sanctions, quality assurance and fidelity, and drug testing.

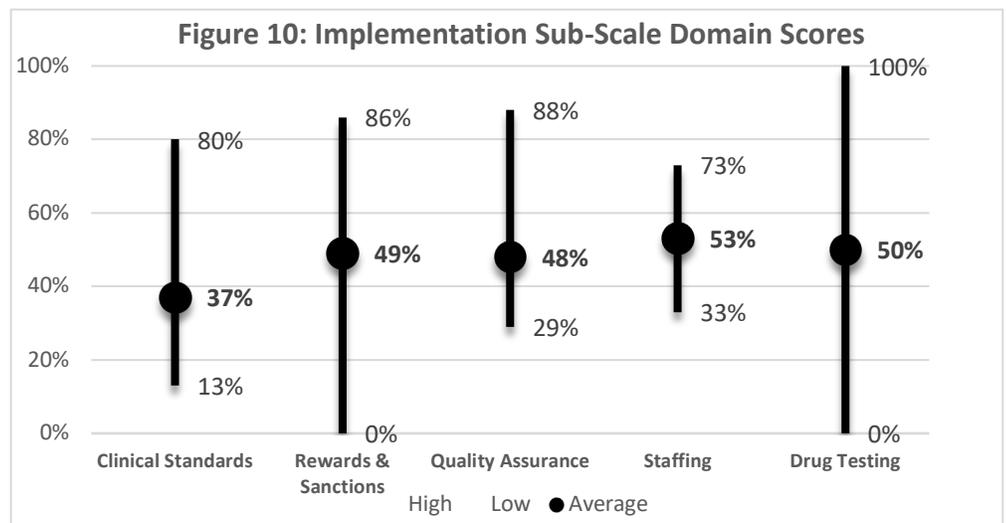


**Risk Need Assessment.** In the risk domain, which captures programs' adherence to the Risk Principle ( e.g., use of a validated risk assessment tool and focus on high- and moderate-risk individuals) four programs scored a high of 100%, while one program scored 0%, indicating great variance in adherence to the risk principle. Programs averaged 61% in the risk domain. While most programs conduct more than one method for screening eligibility, a risk and need or target-specific assessment should be used to determine if a client's need level is appropriate for the program, and to determine the level and intensity of services and referrals within a program. Four programs (21%) do not use a risk and need assessment and 10 programs (53%) do not use a target specific assessment to determine eligibility. Target-specific assessment instruments that ATI programs use include: DSM V, LOCADTR, MHSF-III, and PHQ-9. Risk and need assessments used by ATI programs include LSCMI, WRNA, and COMPAS. Most (89.5%) ATI programs determine eligibility through a combination of methods (16% use 2 methods, 21% use 3 methods, and 26% use 4 methods). While the eligibility procedures of professional or clinical judgment (74%), based on offense (58%), based on legal status (47%), or court mandate (58%) make sense due to the legal mandate of ATIs, programs should also collect their own information regarding clients' risk as well.

The other aspect included in the risk principle is knowing the risk level of individuals in the program and ensuring that each risk level is matched with the appropriate level of programming. Two programs (10.5%) stated that they do not consider risk level at all, whereas eight programs (42%) collect risk information, but accept all risk levels into the program.

**Responsivity.** The responsivity domain is specific for each program group. This domain refers to the program’s adherence to the Responsivity principal, considering learning styles and personal characteristics. The Severe Substance Use Disorder programs averaged 57%, Decision Making averaged 85%, Self-Improvement and Management (where the majority of programs fell) averaged 47%, and No Formal Programming averaged 44%. Overall, this indicates that the approach used by the Decision-Making programs are more sound at addressing criminal thinking behavior, whereas Severe Substance Use Disorder and Self-Improvement and Management programs should use more effective approaches or models to address the target.

**Implementation.** The implementation sub-scale scores provide more targeted information about the program’s efforts in key areas of implementation (see Figure 10). The Quality Assurance section scores ranged from 29% to 88%, with an average of 48%. Programs scored lower in the Clinical Standards (average 37%) and slightly higher in Rewards and Sanctions (average 49%) domains.



Where drug testing was previously scored in the Restrictiveness/Structure domain, it was found to be a better fit as a sub-scale measure in implementation. Programs scored an average of 50%, ranging from 0% to 100%.

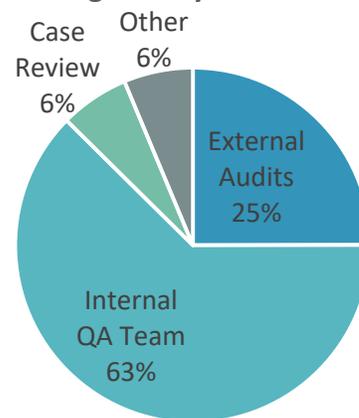
**Clinical Standards.** Programs that score high in this domain have formalized processes in place. These processes include using a manual, having information sharing protocols, having standardized relationships with treatment providers and the CJ system, as well as indicating appropriate staffing credentials. The ATI programs in the study have an average staff turnover of 25% a year. While this level of staff turnover is average among most service programs, providing consistent training for staff may be able to lower the turnover. 15% of programs state that they have no specialized training that is required for staff. The majority of ATI programs, (17 programs) have staff with advanced degrees (10 of these programs have more than 50% of staff with an advanced degree). Additionally, 53% of programs have staff who are Certified Addiction Counselors, and 32% have staff with medical degrees, which is important for medication management and severe substance use disorder programming. 58% of the ATI programs do not utilize a program manual, and those that do, use an internally developed manual. When ATI programs share information with the criminal justice system, 26% of programs have a standard

release of information in place and 11% have weekly contact with criminal justice partners. ATI programs should consider implementing a standardized process to share information between programs and MOCJ, as 21% of programs only share information as needed. ATI programs do have formal relationships in place: 68% have HIPAAs to share information, 15% have a Memorandum of Understanding, and 21% have contracts in place.

**Rewards and Sanctions.** 16 (84%) ATI programs utilize rewards and 14 (74%) programs utilize sanctions. Developing a set system of rewards and sanctions can be beneficial to motivate individuals (Stitzer, Petry, & Peirce, 2010). A structured system of rewards and sanctions should be used within the program so that it is consistent. Therefore, it is optimal for programs to develop a rewards plan with clients in the case plan process; only five (31%) programs utilizing rewards do so currently. The remaining 69% of programs notify clients during general orientation or a supervision meeting or provide a handout or a sign. Programs should ensure that the behaviors they are rewarding are relevant to the overall goals of the program and should only focus on three behaviors at time. Three (19%) programs reward three or fewer behaviors, while the remaining 16 programs (81%) reward four or more behaviors. As clients progress through the program, case managers can review their rewards structure in the case plan and make changes as necessary. 11 programs (69%) state that they reward clients based on their individual case plan and goals. The ATI programs provide a mix of social and material rewards. Social rewards, such as a letter to the individual or an authority figure, or reduced treatment or supervision can reduce costs for programs while providing meaningful rewards for clients.

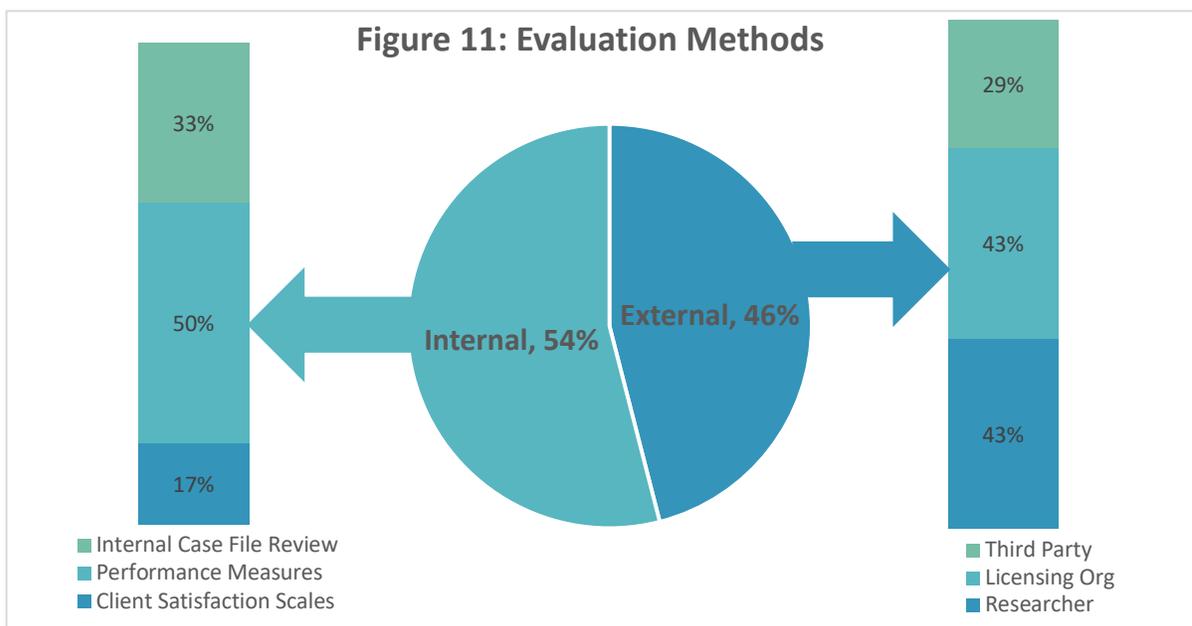
**Quality Assurance.** Quality assurance and program fidelity should be measured to ensure that the program is adhering to standards, and to ensure that staff are carrying out the program in the same way. An external quality assurance audit is the best way to measure this, however only 25% of ATI programs utilize this method. 63% of programs use an internal quality assurance team or supervisor, which is the next preferred method (see Figure 11). 46% of ATI programs utilize an external method to evaluate program outcomes, the preferred method, of which, 43% utilize a researcher, while 43% utilize a licensing organization. 54% of ATI programs use an internal method, the most common of which is through performance measures (50%) and internal case file review (33%) (see Figure 12). Another aspect that ensures quality assurance and fidelity is continual staff training. Only 10% of programs received any technical assistance in an area of need over the last year, but almost all (95%) of programs provide specific training for staff preparation. Another aspect that can ensure program fidelity among staff is to incorporate a system of coaching staff to provide feedback on their use of skills and adherence to the program model. 79% of programs stated that they coach staff. 26% of programs use external coaches, while 42% use supervisors. Care should be taken to ensure that there is an established system of coaching and feedback, rather than informal supervisory oversight.

**Figure 11: Primary Method of Measuring Quality Assurance**



**Drug Testing.** 14 (74%) programs include drug testing in the ATI program. Of those, only two programs (14%) conduct random drug testing, which is the preferred method. Five programs (36%) conduct drug testing through a nonrandom method of scheduling, while the remaining seven programs (50%) only conduct drug testing as needed. Additionally, three programs (21%) have no set procedure in place to handle inconclusive tests.

**Dosage.** To be noted, the Dosage domain scores did not differ from the original Program Tool Results Output and the revised scales, as described above. Many programs did not receive high scores in dosage due to the focus on individualizing sessions to client need, and the variability of the court mandate; 37% of programs did not specify dosage hours in the Program Tool. Two programs scored 100%, and two programs scored a low of 0%, averaging 39%. To score high in dosage, programs should provide more than 100 hours of dosage, and provide a duration and frequency of programming that is appropriate for the program group. While ATI programs are restricted to an extent on dosage due to court mandate, attention should be brought to the literature on effective program models and appropriate dosage to address certain behaviors. Programs should incorporate a curriculum directed towards the target behavior regardless of the length of the legal program mandate, which could include providing voluntary services after a program mandate has been completed. 32% of the ATI programs do not use a curriculum. More information on use of curricula can be found in Section Seven. Programs that target more serious needs should include phases and aftercare. More than half (58%) of programs do not have phases, and two-third (68%) do not provide aftercare. Phases and aftercare are especially important in substance use disorder programming, as individuals will experience fluctuating symptoms during the recovery process



and will need additional, less intensive supports even after the formal programming is completed. Information on engagement and motivation are provided in Appendix L.

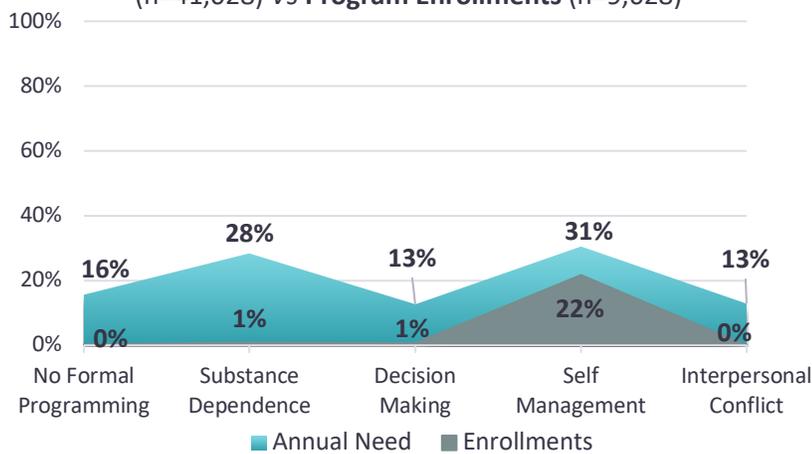
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**SECTION FIVE:  
Gap Analyses**

Gap analyses were conducted in order to visually compare the need for certain programming compared to the actual placement of individuals in programming. Figures 13 and 14 show the gap in programming that exists based on the needs of the individuals and the FY17 program enrollments by programming group. The grey area is the *distribution* of where individuals were actually enrolled in programming. The ATI-Eligible population and the ATI-Enrolled present with similar programming needs. However, the ATI-Enrolled group has a slightly higher prevalence for Self-Management (35%) and slightly lower Severe SUD (27%) and Decision-Making (8%) needs than the ATI-Eligible group (31%; 29%; and 13%, respectively). There are pronounced gaps between the need for treatment for Severe SUD and Interpersonal Skills and actual enrollment into these programming areas for the entire ATI-Eligible

**Figure 13: Annual ATI-Eligible Programming Needs (n=41,028) Vs Program Enrollments (n=9,628)**



The gap analysis in Figure 13 examines the programming needs of the ATI-Eligible population compared to the placement of individuals into ATI programs. The gaps provide insight into the amount of programming that would be needed in order to serve more ATI-Eligible individuals. 22% of the 41,028 individuals eligible for an ATI received programming in the area of Self-Improvement and Management.

**Figure 14: Annual ATI-Enrolled Programming Needs (n=9,944) Vs Program Enrollments (n=9,628)**

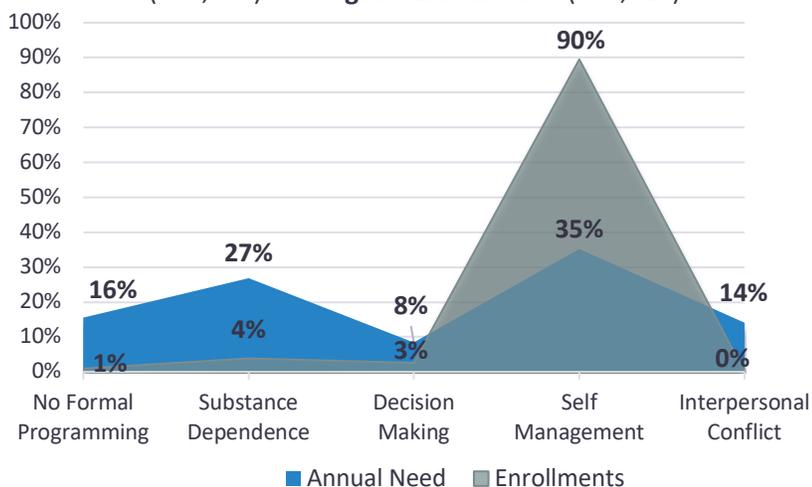


Figure 14 examines the programming needs of individuals who were enrolled into an ATI program compared to the actual placement of these individuals. The gaps that exist show the lack of appropriate treatment matching based on the needs of individuals. 90% of the individuals enrolled into an ATI program received Self-Improvement and Management, whereas only 1% of individuals received Severe SUD programming, despite a 16% need.

Figure 15 shows the gap in programming that exists based on the needs ATI-Enrolled individuals, and MOCJ's capacity to address the needs based on the funding provided (as specified within MOCJ ATI Contracts). The area in grey represents the distribution of MOCJ's capacity among programming groups. MOCJ funding allows for more capacity in self-management programming, however within all other programming groups, the capacity is negligible. Table 4 below provides a breakdown of these gaps in terms of numbers

**Figure 15: Annual ATI-Enrolled Programming Needs (n=9,944) Vs MOCJ Capacity (n=4,042)**

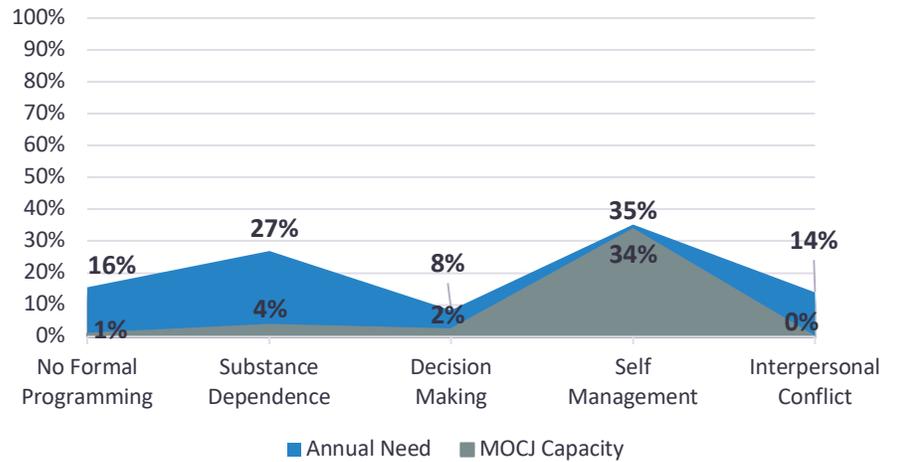


Table four, below, provides the raw numbers used in Figures 14 and 15. 5,400 more people received self-improvement and management programming than needed. Often, individuals who have severe SUD are not placed in the appropriate programming group to address their level of need. This shows a need for better use of assessments to identify needs, and using the assessment data to drive programming eligibility.

<b>Table 4: Gaps and excess programming due to lack of treatment matching based on the needs of individuals accepted into an ATI program and the actual enrollments and MOCJ capacity.</b>					
	<b>ATI-Enrolled needs</b> (9,944 CIRT Not included)	<b>Actual enrollments</b> (9,628 CIRT included)	<b>Gap based on actual enrollments</b>	<b>MOCJ Capacity</b> (4,042 CIRT Not included)	<b>Gap based on MOCJ capacity</b>
Severe SUD	2,675	379	-2,296	365	-2,310
Decision Making	835	256	-579	231	-604
Self-Management	3,500	8,900	+5,400	3,356	-144
Interpersonal Conflict	1,283	0	-1,283	0	-1,283
No Formal Programming	1,551	93	-1,458	90	-1,461

## Special Populations' Programming Needs

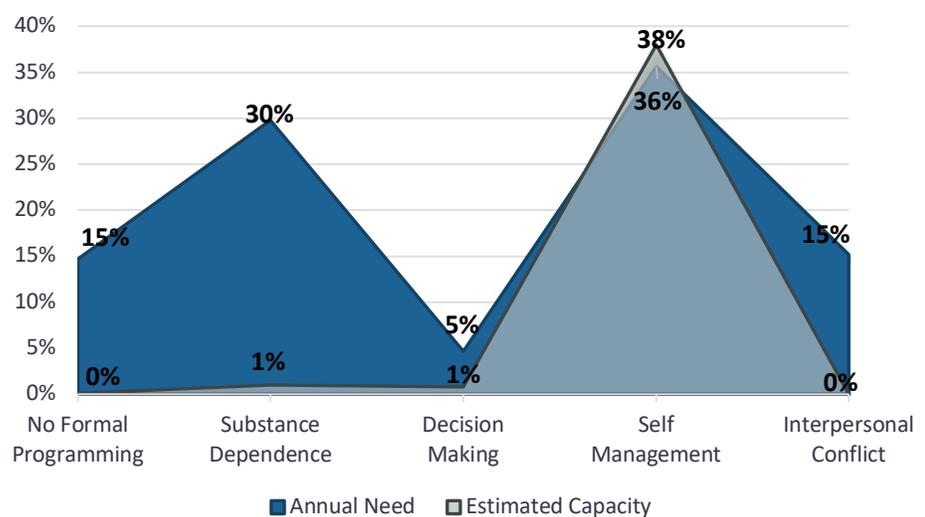
MOCJ wanted to examine programming needs and availability for special populations of individuals, to determine how well the ATI programs' are meeting their unique needs. ACE! conducted separate gap analysis for ATI-Eligible women, youth age 16-17, young adults age 18-24, adults age 25-39. This section also shows differences in programming and service needs by racial/ethnic groups. The programming and service needs by charge history for the ATI-Eligible population can be found in E.

### Women:

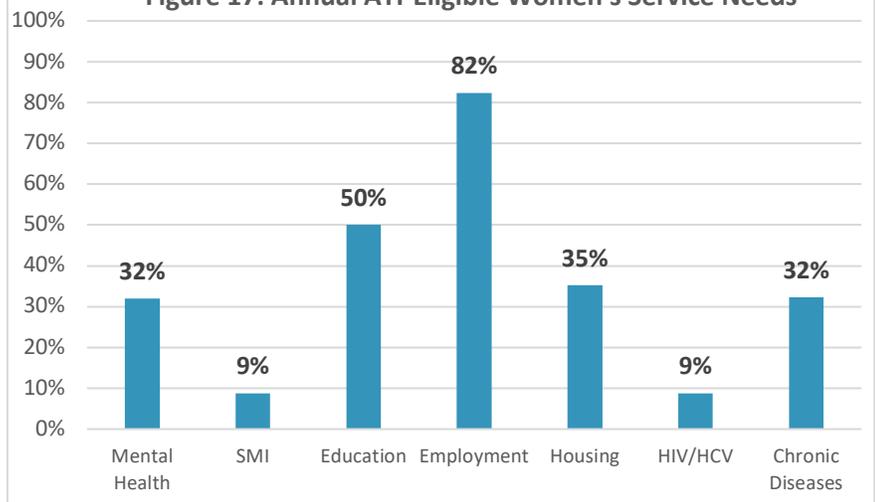
Women represent about 8% of the entire ATI-Eligible population; of this group, 25% were enrolled in an ATI program. The programming needs of women mirrors that of the overall ATI-Eligible population. The estimated capacity to serve women was calculated using the programs' self-reported number of clients served in the last year, multiplied by the reported percentage of women in the program. Two of the 19 MOCJ-Funded ATI programs are specifically designed for women. There is adequate self-improvement and management programming available to serve women; however, there is a pronounced gap in severe SUD programming to serve the 30% need. Fifteen percent (15%) of women require interpersonal conflict programming, which is less intensive and less clinically-based. Additionally, 14% of women would be best served by case management to address service needs through No Formal Programming. Figure 16 provides a gap analyses of the ATI-eligible women's programming needs compared to the estimated capacity that was derived from the ATI programs' RNR Program Tool data.

Figure 17 illustrates the service needs among women. Women have more mental health needs (32%) compared to that of the general ATI-Eligible population (25%), however women have about the same serious mental illness needs compared to the general

**Figure 16: Annual ATI-Eligible Women's Programming Needs (n=3,447) Vs Estimated Program Tool Capacity (n=~1,376)**



**Figure 17: Annual ATI-Eligible Women's Service Needs**



population (9% vs 8% respectively). Women also had a higher need for employment services compared to the ATI-Eligible population (82% vs 70% respectively). Addressing these service needs, specifically for those who fall under no formal programming and interpersonal conflict, can be beneficial to improving success.

**Youth/Young Adults:**

MOCJ has many initiatives around youth and young adults in the criminal justice system. Many of the ATI programs’ target populations indicate that they target youth and/or young adults. 16-17 year-olds represent 5% of the ATI-Eligible population (N=1,887), young adults ages 18-24 represent 24% of the population (N=9,724), and adults 25-39 represent 37% of the population (N=15,198). Figure 18 shows that the programming areas of need among the individuals who were ATI-Eligible varied by age group. Individuals age 16-17 were most likely to present with self-management or severe substance use disorder as their greatest programming need, while individuals age 18-24 most frequently fell into the severe substance use disorder category, followed by self-management. Because self-management encompasses less severe substance use disorder, it appears substance use is a major issue for this age group. For individuals age 25-39, the greatest need was for self-management programming, followed by severe substance use disorder.

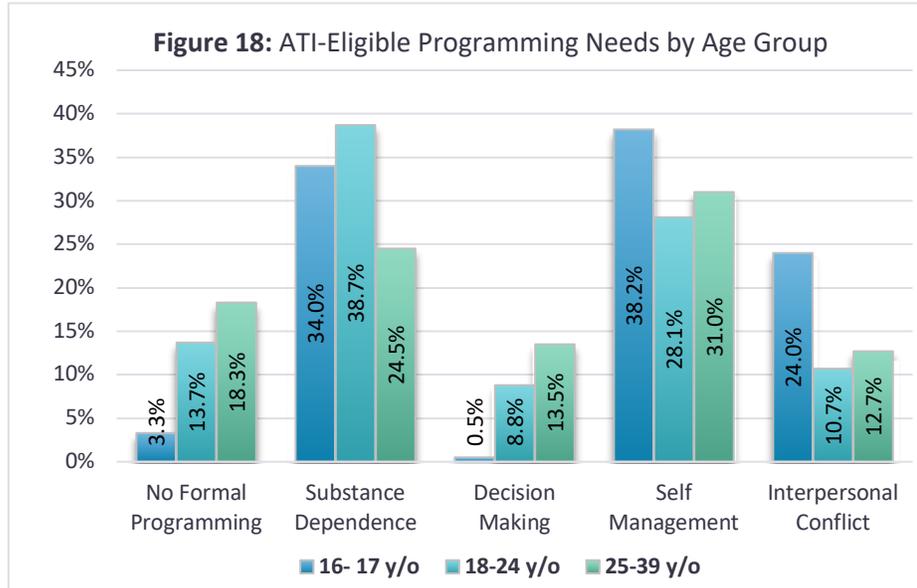
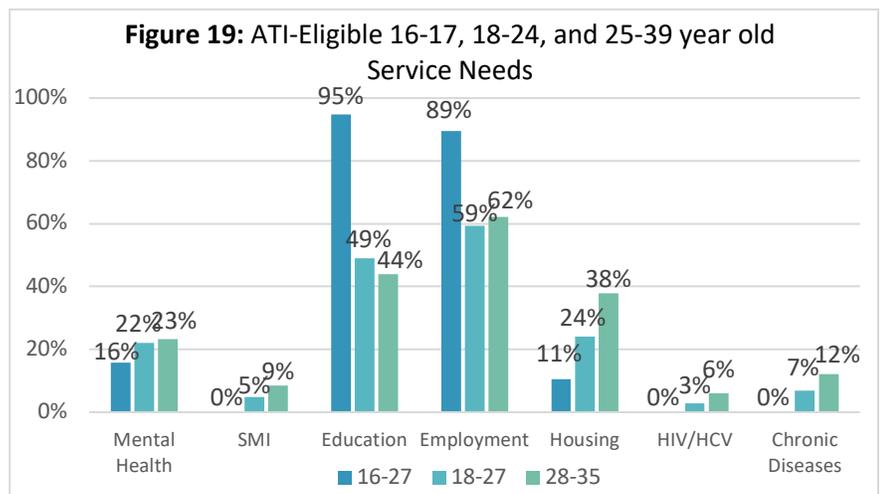
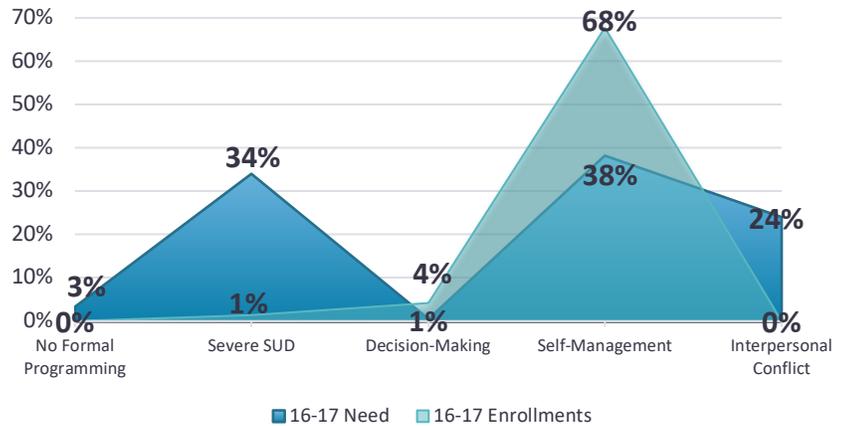


Figure 19 provides the services needed by individuals ages 16-17, 18-24, and 25-39. Consistent with other jurisdictions and due to their young age, youth ages 16-17 do not have high areas of need other than education and employment. None of the individuals age 16-17 presented with needs in serious mental illness, HIV/HCV, or chronic diseases. Comparatively, less than 50% of the 18-27-year-old population and 28-35-year-old population have an education need. However, the need for mental health services and housing are higher in these age groups.



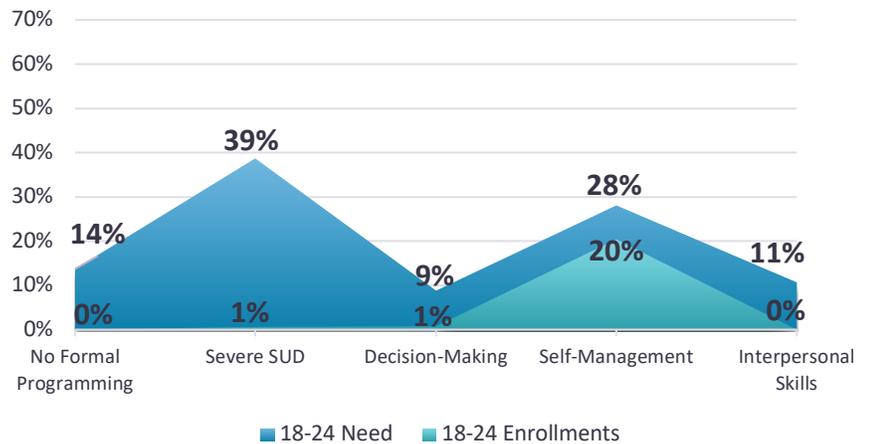
The following graphs illustrate the gaps between programming needs among all ATI-Eligible individuals, and enrollments into an ATI program by client age. There were pronounced gaps in programming for youth age 16 to 17 in the categories of Self-Management, Severe Substance Use Disorder and Interpersonal Conflict (figure 20). The majority of youth received self-management programming, in which more than half of the individuals were inappropriately placed into this programming.

**Figure 20: Annual ATI-Eligible 16-17 Yr Old Programming Needs (N=1,856) Vs. 16-17 Yr Old Enrollments (N=1,383)**

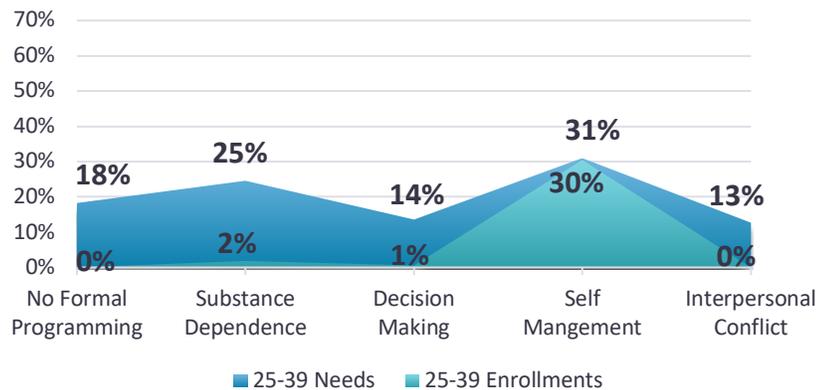


This points to a need for more robust assessment of client needs and using the assessment data to drive programming referrals. Interestingly, in the young adult population, the gaps in enrollments for ATI programs that address Self-Management and Interpersonal Skills are less pronounced, but fewer than 1% of individuals enter ATI programs that address Severe Substance Use Disorder even though more than one-third (36%) present with this need (Figure 21). Similar to the young adult population, with individuals over age 28, there is not a pronounced gap between the need for Self-Management programming and intake into a program (figure 22). However, many clients with needs in Severe Substance Use Disorder and Decision-Making are not entering appropriate programs.

**Figure 21: ATI-Eligible 18-24 Yr Old Programming Needs (N=9,724) Vs 18-24 Yr Old Enrollments (N=2,945)**

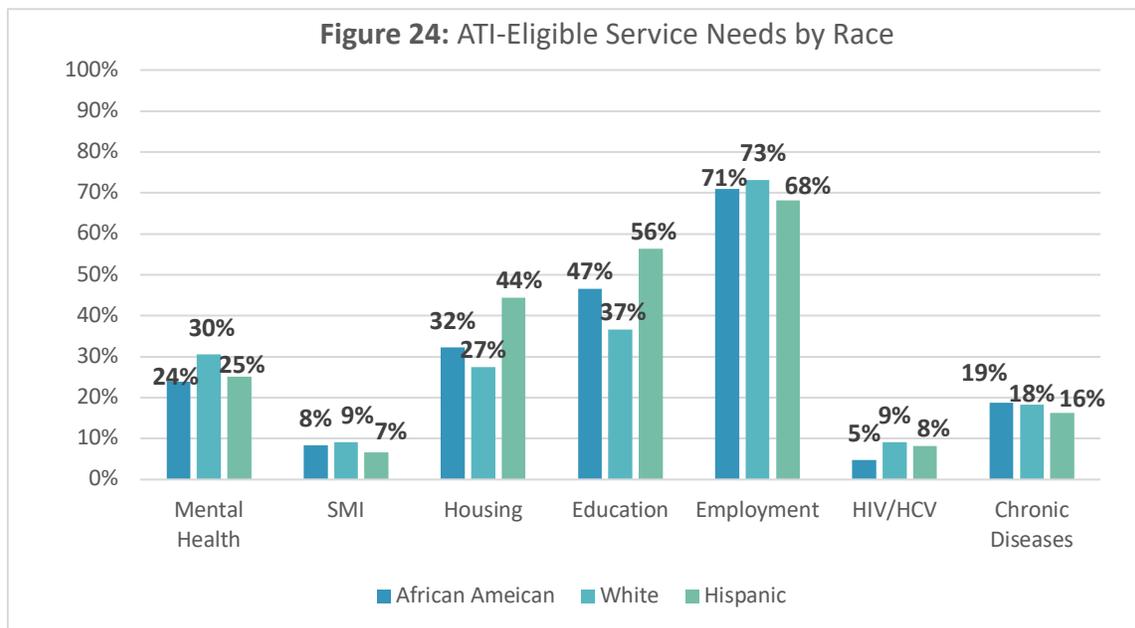
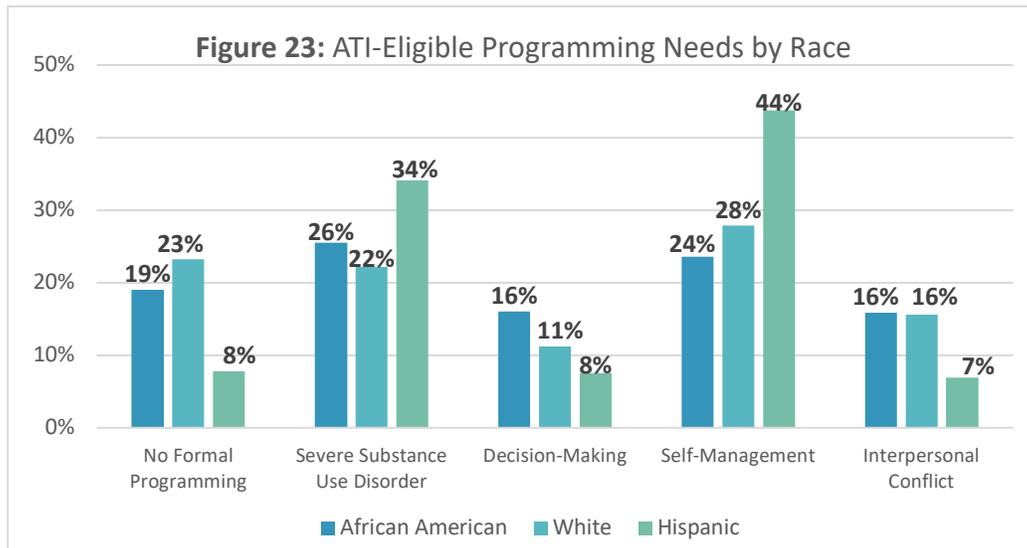


**Figure 24: ATI Eligible 25-39 Yr Old Programming Needs (n=15,198) Vs 25-39 Yr Old Enrollments (n=2,664)**



**Race/Ethnicity:**

African Americans represent 56% of the ATI-Eligible population; Whites represent 8% of the population; Hispanic/Latinx represent 33% of the population; and the remaining 3% were of some other or multiple races/ethnicities. Of those enrolled into an ATI, 51% were black, 5% were white, 42% were Hispanic/Latinx, and 2% were other or multiple races/ethnicities. Figure 23 shows the distribution of programming needs within each racial and ethnic group. For each racial/ethnic group, the two areas of greatest need were severe substance use disorder and self-management programming. The need for services were similar across all races (Figure 24). The areas of greatest service need were education and employment for all racial/ethnic groups, followed by mental health and housing.



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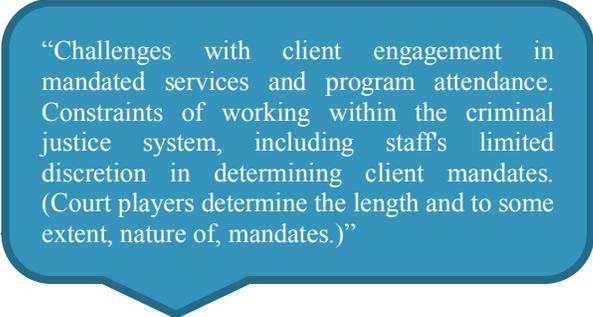


**SECTION SIX:  
Regulatory Review**

## Programs' Perspectives on Delivering Services

The RNR Program Tool provides programs the opportunity to report any concerns that they may be having or have had in the past with the open-ended text field question, "Please describe common issues you encounter when implementing the program". Seventeen of the nineteen MOCJ- contracted ATI programs responded, citing multiple issues. Twenty-seven (27) of the comments were classified as client concerns while twenty (20) were classified as criminal justice and/or systems concerns.

The most frequently cited concern was the complex needs of clients and the limited resources to address these needs (53% of programs that responded stated this was a challenge for them). Clients' needs included any issues that would make the clients' participation in the program difficult. Complex needs such as homelessness, noncompliance with medication, lack of supports, lack of understanding of needs, lack of understanding of mental health population by court staff—all of these affects how well the client can do in a program. This is consistent with the findings of this study that many clients need more intensive services. For example, two respondents indicated difficulty finding stable and appropriate housing for individuals and one mentioned noncompliance with medication as well as a lack of social supports to assist the individual. Overall, programs stated that their clients have complicated needs, which is difficult to address given the services available by the programs and programs' limited discretion to address client's needs.



"Challenges with client engagement in mandated services and program attendance. Constraints of working within the criminal justice system, including staff's limited discretion in determining client mandates. (Court players determine the length and to some extent, nature of, mandates.)"

For system-related concerns, six programs highlighted problems with clients' court mandates. Programs expressed concern that court mandates were too restrictive given the needs of the clients; and these mandates do not inspire attendance or participation in program. In addition, programs noted their limited discretion to treat the needs of the clients based on the legal mandate. In other words, a concern was that the mandates could be counterproductive.

Staffing constraints were also mentioned by six programs as a common issue. This response was usually related to the court mandate given that staff must follow the judicial order even if it conflicts with their own professional judgement. This tension between judicial and clinical issues affects how programs interface with the clients.

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**SECTION SEVEN:  
Recidivism Outcomes**

## New York City ATI Program Recidivism Analysis

### Definition

The baseline cohorts include arrestees from 2014-2016. Recidivism was defined for two follow-up periods and from two sources: re-arrest using CJA data and DOC readmission measure (using DOC data). In both cases, one complicating factor was that, by definition, a majority of the ATI-Enrolled clients did not enter DOC and were at risk of recidivism almost immediately after entering the ATI program. However, the ATI-Non-Enrolled (the comparison) group was defined by clients who entered DOC. Therefore, they were not at risk of recidivism until their exit from DOC. The length of stay measure was created for each client and this was used to determine a date on which the client was at risk of recidivism. Recidivism measures were then defined over a period of either one or two years starting from that date. Because of this extended follow-up window for each client, and because of limited data availability (all CJA and DOC data only captured criminal activity only through 2017), eligibility measures were created for each client.

These variables flagged whether or not a particular client had sufficient data to define a one- or two-year follow-up window. If a client did not have sufficient data to define a full 2-year window but only a 1-year window, then this client would only contribute to the 1-year recidivism analysis and not the 2-year version. Table 7 shows the sample used for the analysis, the various strata, and the number of eligible clients for the 1- and 2-year recidivism analysis.

	Full Sample	1-year Follow-up	2-year Follow-up
<b>All</b>	123,084	99,010	59,667
<b>ATI-Enrolled</b>	29,824	27,999	18,126
ViolFel ATI-Enrolled	2,193	1,872	1,039
NonViolFel ATI-Enrolled	3,046	2,658	1,617
HighMisd ATI-Enrolled	5,535	4,941	2,815
LowMisd ATI-Enrolled	17,832	17,341	11,801
All other charges ATI-Enrolled	1,218	1,187	854
<b>ATI-Non-Enrolled</b>	93,260	71,011	41,541
ViolFel ATI Non-Enrolled	10,293	7,357	3,928
NonViolFel ATI Non-Enrolled	17,043	12,564	7,132
HighMisd ATI Non-Enrolled	16,962	12,235	6,738
LowMisd ATI Non-Enrolled	40,066	31,761	19,408
All Other Charges ATI Non-Enrolled	8,896	7,094	4,335

There are a total of 29,824 ATI-Enrolled clients and a total of 93,260 ATI-Non-Enrolled clients in the 2014 to 2016 arraignment sample. A full one-year follow-up was possible for most of the ATI-Enrolled (27,999 of the 29,824) but for proportionally fewer of the ATI-Non-Enrolled (71,011 out of 93,260) group. A full 2-year follow-up was possible only for 18,126 ATI-Enrolled and only for

41,541 ATI-Non-Enrolled. Table 7 also provides a similar break down for each of the charge group strata.

Using the eligible samples, one- and two-year recidivism variables were created that flagged re-arrest for any charge, re-arrest for a violent charge, DOC re-admission for a new city sentence, or DOC re-admission for either a new city sentence or a new detention.

The research design was to compare these recidivism outcomes between the ATI-Enrolled and ATI-Non-Enrolled *within each* stratum. Despite conducting the analysis by strata, it is very possible that some client attributes (possibly related to recidivism) are different across the ATI-Enrolled and ATI-Non-Enrolled groups. This would render a simple recidivism rate comparison between the two groups misleading. To avoid this possibility, the research design further balanced the ATI-Enrolled and ATI-Non-Enrolled samples using stratified propensity score analysis before drawing inferences. Appendix J describes the underlying methodology. Here we briefly describe the steps involved.

STEP 1: Within each charge category (stratum), estimate a logistic regression model that predicts the probability of each observation being ATI-Enrolled (the propensity score).

STEP 2: Within each stratum, use the estimated propensity scores to (i) compute inverse propensity score balancing weights and (ii) identify matched samples for the ATI-Non-Enrolled and ATI-Enrolled samples from the other group using propensity score similarity.

STEP 3: Within each stratum, compute the weighted or matched differences in recidivism outcomes between the ATI-Enrolled and ATI-Non-Enrolled groups.

## Findings

Table 8 shows the distribution of the recidivism outcomes among the various strata for the one-year follow-up period and Table 8 shows the same for the two-year follow-up period. The one-year re-arrest rate among the ATI-Enrolled was about the same or slightly lower than the ATI-Non-Enrolled (58.4% any re-arrest rate and 10.7% violent re-arrest rate for the ATI-Enrolled group compared to 60.3% any re-arrest rate and 10.7% violent re-arrest rate for the ATI-Non-Enrolled group). DOC re-admission rates were more varied. The ATI-Enrolled city sentenced jail re-admission rate was 19.6% while the ATI-Non-Enrolled city sentenced DOC re-admission rate was 32.7%. Similarly, the DOC re-admission rate (to serve a city sentence or being detained) was 40.2% among the ATI-Enrolled but 52.7% for the ATI-Not Enrolled clients. These differences were all statistically significant. Table 9 shows a similar trend—the overall recidivism rates among ATI-Enrolled was lower than that of the ATI-Non-Enrolled. Moreover, the difference was much larger for rates of re-admission to jail than for rate of re-arrest.

The overall differences in re-arrest and jail re-admission rates hide some charge-specific nuances, however. For example, typically, the re-arrest outcomes were *higher* among the violent and nonviolent felony ATI-Enrolled than the corresponding ATI-Non-Enrolled. On the other hand, the re-arrest outcomes were *lower* among the high and low misdemeanor ATI-Enrolled than the corresponding ATI-Non-Enrolled. Hence, for re-arrest as the outcome, the charge category is important. The jail re-admission outcomes were, with one exception, lower among the ATI-Enrolled than corresponding ATI-Non-Enrolled across all charge categories. The only exception was the city sentenced and detained re-admission outcome for the violent felony category. Here, the ATI-Enrolled group had slightly higher re-admission rates than the ATI-Non-Enrolled group.

**Table 8: Recidivism outcomes for the 1-year eligible sample.**

Analysis Groups		Re-arrest		Readmission to DOC	
Charge Categories	N	Any	Viol	CS	CS+DE
<b>All</b>	99,010	59.7%	10.7%	29.0%	49.2%
<b>ATI-Enrolled (Combined)</b>	27,999	58.4%	10.7%	19.6%	40.2%
ViolFel ATI-Enrolled	1,872	48.8%	15.7%	11.1%	33.0%
NonViolFel ATI-Enrolled	2,658	48.9%	10.1%	12.6%	34.2%
HighMisd ATI-Enrolled	4,941	46.9%	12.1%	10.2%	27.6%
LowMisd ATI-Enrolled	17,341	63.4%	9.7%	24.0%	45.0%
All other charges ATI-Enrolled	1,187	69.8%	13.3%	23.8%	47.1%
<b>ATI-Non-Enrolled (Combined)</b>	71,011	60.3%	10.7%	32.7%	52.7%
ViolFel ATI-Non-Enrolled	7,357	30.5%	8.5%	13.9%	26.3%
NonViolFel ATI-Non-Enrolled	12,564	44.6%	7.4%	23.4%	41.4%
HighMisd ATI-Non-Enrolled	12,235	57.8%	12.8%	26.8%	49.9%
LowMisd ATI-Non-Enrolled	31,761	72.3%	11.3%	42.8%	63.4%
All Other Charges ATI-Non-Enrolled	7,094	68.9%	12.7%	34.0%	57.0%
<b>Differences between ATI-Enrolled/ ATI-Non-Enrolled</b>					
<b>Combined</b>		<b>-1.9%</b>	0.0%	<b>-13.1%</b>	<b>-12.5%</b>
ViolFel		<b>18.3%</b>	<b>7.1%</b>	<b>-2.8%</b>	<b>6.7%</b>
NonViolFel		<b>4.3%</b>	<b>2.7%</b>	<b>-10.7%</b>	<b>-7.2%</b>
HighMisd		<b>-10.9%</b>	-0.7%	<b>-16.6%</b>	<b>-22.2%</b>
LowMisd		<b>-9.0%</b>	<b>-1.6%</b>	<b>-18.8%</b>	<b>-18.4%</b>
All other charges		0.8%	0.6%	<b>-10.2%</b>	<b>-9.9%</b>

CS – City Sentenced; DE – Detained; Bold differences – statistically significant at 95%.

**Table 9: Recidivism outcomes for the 2-year eligible sample.**

Analysis Groups Charge Categories	N	Re-arrest		Readmission to DOC	
		Any	Viol	CS	CS+DE
<b>All</b>	59,667	72.6%	17.7%	40.4%	61.2%
<b>ATI-Enrolled (Combined)</b>	18,126	69.0%	16.5%	26.5%	49.6%
ViolFel ATI-Enrolled	1,039	63.7%	25.5%	18.9%	45.2%
NonViolFel ATI-Enrolled	1,617	61.2%	15.4%	20.4%	44.0%
HighMisd ATI-Enrolled	2,815	58.5%	19.0%	15.5%	37.2%
LowMisd ATI-Enrolled	11,801	72.3%	15.1%	30.1%	53.1%
All other charges ATI-Enrolled	854	80.1%	19.1%	34.1%	58.9%
<b>ATI-Not Enrolled (Combined)</b>	41,541	74.2%	18.2%	46.5%	66.3%
ViolFel ATI-Non-Enrolled	3,928	43.9%	15.6%	23.3%	38.7%
NonViolFel ATI-Non-Enrolled	7,132	61.2%	13.0%	36.6%	55.6%
HighMisd ATI-Non-Enrolled	6,738	72.0%	21.5%	38.8%	63.1%
LowMisd ATI-Non-Enrolled	19,408	84.1%	18.7%	56.9%	75.9%
All Other Charges ATI-Non-Enrolled	4,335	82.5%	21.4%	48.9%	70.7%
<b>Differences between ATI-Enrolled/ ATI-Non-Enrolled</b>					
<b>Combined</b>		<b>-5.2%</b>	<b>-1.7%</b>	<b>-20.0%</b>	<b>-16.6%</b>
ViolFel		<b>19.8%</b>	<b>9.9%</b>	<b>-4.4%</b>	<b>6.5%</b>
NonViolFel		0.1%	<b>2.4%</b>	<b>-16.2%</b>	<b>-11.6%</b>
HighMisd		<b>-13.5%</b>	<b>-2.6%</b>	<b>-23.4%</b>	<b>-25.9%</b>
LowMisd		<b>-11.8%</b>	<b>-3.7%</b>	<b>-26.8%</b>	<b>-22.8%</b>
All other charges		-2.4%	-2.3%	<b>-14.8%</b>	<b>-11.8%</b>

CS – City Sentenced; DE – Detained; Bold differences – statistically significant at 95%.

**Table 10: ATI -Enrolled and ATI-Non-Enrolled attributes, by charge group strata.**

	Viol Felony		NonViol Felony		High Misdemeanor		Low Misdemeanor		All Other Charges	
	ATI-Enrolled	ATI-Non-Enrolled	ATI-Enrolled	ATI-Non-Enrolled	ATI-Enrolled	ATI-Non-Enrolled	ATI-Enrolled	ATI-Non-Enrolled	ATI-Enrolled	ATI-Non-Enrolled
	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %
<b>Total</b>	2,193	10,293	3,046	17,043	5,535	16,962	17,832	40,066	1,218	8,896
<b>Gender</b>										
Male	1,720 78.4%	9,796 95.2%	2,537 83.3%	15,985 93.8%	4,467 80.7%	16,135 95.1%	15,092 84.6%	37,180 92.8%	1,139 93.5%	8,692 97.7%
Female	473 21.6%	497 4.8%	509 16.7%	1,058 6.2%	1,068 19.3%	827 4.9%	2,740 15.4%	2,886 7.2%	79 6.5%	204 2.3%
<b>Race</b>										
Black	1,229 56.0%	6,132 59.6%	1,433 47.0%	8,888 52.2%	2,723 49.2%	9,775 57.6%	9,244 51.8%	23,077 57.6%	713 58.5%	5,566 62.6%
White	77 3.5%	691 6.7%	161 5.3%	1,679 9.9%	237 4.3%	1,530 9.0%	954 5.3%	4,274 10.7%	60 4.9%	695 7.8%
Native Am.	1 0.0%	5 0.0%	2 0.1%	5 0.0%	2 0.0%	4 0.0%	6 0.0%	20 0.0%	0 0.0%	8 0.1%
Asian	16 0.7%	140 1.4%	26 0.9%	239 1.4%	51 0.9%	279 1.6%	101 0.6%	547 1.4%	20 1.6%	247 2.8%
Hispanic	845 38.5%	3,205 31.1%	1,393 45.7%	6,076 35.7%	2,454 44.3%	5,117 30.2%	7,347 41.2%	11,737 29.3%	411 33.7%	2,268 25.5%
Other	25 1.1%	120 1.2%	31 1.0%	156 0.9%	68 1.2%	257 1.5%	180 1.0%	411 1.0%	14 1.1%	112 1.3%
<b>Risk Level</b>										
Low	803 36.6%	2,007 19.5%	822 27.0%	2,421 14.2%	1,742 31.5%	1,719 10.1%	2,502 14.0%	1,689 4.2%	107 8.8%	396 4.5%
Moderate	925 42.2%	3,530 34.3%	1,252 41.1%	5,645 33.1%	2,166 39.1%	5,521 32.5%	6,151 34.5%	9,323 23.3%	381 31.3%	2,042 23.0%
High	465 21.2%	4,756 46.2%	972 31.9%	8,977 52.7%	1,627 29.4%	9,722 57.3%	9,179 51.5%	29,054 72.5%	730 59.9%	6,458 72.6%
<b>Substance Use Disorder</b>										
None	1,126 51.3%	5,177 50.3%	1,523 50.0%	8,777 51.5%	2,596 46.9%	8,415 49.6%	8,752 49.1%	20,211 50.4%	570 46.8%	4,624 52.0%
SUD	675 30.8%	3,074 29.9%	996 32.7%	5,284 31.0%	1,981 35.8%	5,344 31.5%	5,739 32.2%	12,368 30.9%	378 31.0%	2,546 28.6%
Severe SUD	392 17.9%	2,042 19.8%	527 17.3%	2,982 17.5%	958 17.3%	3,203 18.9%	3,341 18.7%	7,487 18.7%	270 22.2%	1,726 19.4%
<b>% Sample with Need</b>										
Criminal Thinking	3.2%	10.9%	7.3%	15.8%	7.1%	16.8%	18.1%	32.0%	24.6%	31.0%
Mental Health	22.2%	21.6%	23.7%	24.4%	20.3%	22.9%	25.5%	26.6%	24.1%	25.0%
Leisure	13.6%	14.4%	14.0%	15.1%	13.6%	15.2%	17.2%	18.4%	16.8%	19.8%
Housing	20.7%	28.1%	27.5%	35.4%	24.8%	32.0%	35.4%	40.8%	32.6%	38.2%
Education	66.4%	52.3%	50.6%	44.0%	55.6%	46.7%	49.3%	47.5%	58.5%	53.6%
Employment	71.0%	65.6%	66.8%	66.8%	62.3%	60.9%	72.3%	73.9%	78.6%	75.2%
<b>Mean Demographics</b>										
Age (years)	23.42	30.54	30.74	36.69	28.13	32.82	34.12	37.06	31.73	34.98
Point score (CJA risk)*	3.66	-0.82	0.86	-2.41	1.85	-1.94	-2.47	-4.21	-2.41	-3.81
Any prior arrests (5yr)	2.20	4.99	3.49	5.92	3.19	6.24	6.19	9.43	7.47	9.71
Violent prior arrests (5yr)	0.31	0.69	0.28	0.44	0.31	0.62	0.30	0.46	0.41	0.51

\* Range -12 to +12 with lower numbers indicating higher pretrial risk

As noted above, some of these recidivism differences could be attributable to the ATI program, but they could also be because of feature imbalance (differences in the attributes of the clients). To assess that possibility, Table 10 shows the attributes (demographics, risk and need) for the ATI-Enrolled and ATI-Non-Enrolled groups, by strata. Irrespective of strata, ATI-Enrolled samples generally had higher proportions of women, lower FTA risk clients, clients with fewer substance use disorders, younger clients, and clients with fewer criminal histories. The ATI-Enrolled also had clients with slightly fewer criminal thinking, leisure, housing, and mental health needs, than the ATI-Non-Enrolled samples. However, the ATI-Enrolled had slightly higher education and employment need clients.

Given that many of the demographic, risk and needs attributes are good predictors of recidivism, it is no surprise that the recidivism rates among the ATI-Enrolled were, by and large, lower (as reported in Tables 8 and 9). Hence, the next step was to develop propensity scores to balance the samples. For further discussion of the propensity score balancing analysis methods, see Appendix J. Table 11 shows the results from the propensity score analysis for the 1-year recidivism outcomes while Table 12 shows the same for the two-year recidivism outcomes.

Once the attribute differences in Table 10 are considered (i.e., balanced), the differences in recidivism outcomes look less promising. Several of the large (double-digit) differences from Tables 8 and 9, which were statistically significant, are much smaller in magnitude and are sometimes statistically insignificant, and the signs on several of the negative ATI effects (where ATI-Enrolled has lower recidivism than the ATI-Non-Enrolled) are switched.

Several strategies are available for computing the average treatment effects using propensity score balancing. Two common estimators are the Average Treatment Effect (ATE) and the Average Treatment Effect on the Treated (ATT). The ATE is a measure of the effect of ATI on the average client in the population (average across ATI-Enrolled and ATI-Non-Enrolled populations). In other words, it estimates the difference in recidivism if the average client was treated versus if this same client was not treated. However, it may be more policy relevant to ask what would have been the recidivism outcome of the average ATI client had they not received treatment, this is operationalized as the Average Treatment Effect on the Treated (ATT). In addition to the differences in definitions, the estimated propensity scores can be used to either *match* clients in the two groups or *re-weight* clients in both groups. All four alternative models were developed and estimated and detailed findings are presented in Appendix J. To ease exposition, here we discuss only the matched ATT estimates.

Table 11 shows that, when analyzing recidivism outcomes over a one-year horizon, the ATI clients have about the same re-arrest rates or slightly higher than matched non-ATI clients. The ATT effects are all either positive and statistically significant (e.g., 7.6% for violent re-arrest among violent felony clients) or statistically insignificant. A positive ATT estimate indicates that the ATI enrolled clients had a *higher* re-arrest rate than the matched non-ATI enrolled clients. This general finding holds for either outcome—any re-arrest as well as violent re-arrest. While there are some negative effects (i.e., ATI enrolled clients have lower re-arrest than matched non-ATI enrolled clients), these estimates are very small and statistically insignificant (e.g., High Misdemeanor group for any re-arrest and Low Misdemeanor group for violent re-arrest).

The last two columns of Table 11 shows the DOC re-admission ATT estimates for the same matched clients. The findings are more encouraging. With the exception of the Violent Felony group, the one-year DOC re-admission rates among ATI-enrolled clients is statistically lower than the same rate for the matched non-ATI enrolled clients. For example, the one year DOC admission by city sentence rate for ATI enrolled clients with low misdemeanor charges was 10% points lower than the same outcome for the matched non-ATI enrolled clients.

Table 11: Propensity score weighting and ATT matching estimator for 1-year recidivism rates, by charge group strata.				
Charge Group	Re-arrest		Readmission to DOC	
	Any	Viol	CS	CS+DE
ViolFel	15.4%	7.6%	1.4%	12.0%
NonViolFel	13.1%	2.1%	-3.3%	0.4%
HighMisd	-0.8%	2.2%	-8.9%	-12.8%
LowMisd	0.4%	-0.5%	-10.0%	-9.4%
All other charges	4.4%	0.4%	-6.9%	-5.0%

ATT – Average Treatment Effect on the Treated  
 CS– City Sentenced; CS+DE–City Sentenced or Detained.

Table 12 shows a similar analysis to table 11 but using a two-year window to define recidivism (both re-arrest or re-admission to DOC). The findings are qualitatively similar to what was discussed in table 11. The two-year re-arrest rates for the ATI-enrolled clients is typically higher or about the same as that of the matched non-ATI enrolled clients, with one exception. Among ATI clients charged with low misdemeanor charges, the two-year re-arrest rates (whether for any re-arrest or for violent re-arrest) is about 3% point lower than that of the matched non-ATI clients. The two-year DOC admission rate findings are also consistent with those shown in table 11. With the exception of those charged with violent felony charges, the two-year DOC re-admission rates among ATI clients of most charge groups is significantly lower than the same rate for matched non-ATI enrolled clients.

In general, the findings discussed in Tables 11 and 12 suggest that there appears to be consistent evidence that ATI program appears to reduce DOC re-admission rates but not re-arrest rates.

Table 12: Propensity score weighting and ATT matching estimator for 2-year recidivism rates, by charge group strata.				
Charge Group	Re-arrest		Readmission to DOC	
	Any	Viol	CS	CS+DE
ViolFel	21.9%	10.7%	4.1%	13.9%
NonViolFel	5.4%	2.1%	-7.8%	-5.5%
HighMisd	-3.0%	0.9%	-13.5%	-15.3%
LowMisd	-3.7%	-3.0%	-14.7%	-12.0%
All other charges	1.7%	-1.2%	-7.8%	-5.9%

ATT – Average Treatment Effect on the Treated  
 CS– City Sentenced; CS+DE–City Sentenced or Detained

## Examining Impact of Appropriate Program Placement on Recidivism Outcomes

To further understand why receiving an ATI program was not consistently associated with certain measures of recidivism reduction, further analyses were conducted to examine how ATI-Enrolled clients fared based on whether or not they were appropriately matched to the correct treatment program group. There were four match/non-match possibilities within each of the five programming groups:

**Recommended and received:** Individual was appropriately matched, as they were recommended and received the same programming group.

**Received and not recommended:** Individual was not appropriately matched, as they received X group but were recommended for a different group.

**Recommended and not received:** Individual was not appropriately matched, as they were recommended X group but received a different group instead.

**Not received and not recommended:** Individuals were not recommended nor did they receive that programming group.

The ‘received and recommended’ sample size for no formal programming, decision making and interpersonal conflict programming and the ‘received and not recommended’ sample size for interpersonal conflict programming were too small to compute and were therefore removed from analysis. For the full analysis and complete tables (including recidivism outcomes for each match group), see Appendix K.

Because the matching analysis produced multiple groups within the ATI enrolled population (by combining recommendation and actual placement), an analysis was conducted to compare matching results in multiple pairwise comparisons of the outcome. Appendix K provides the tables which show the direct pairwise comparisons. A series of multivariate models were also estimated that controlled for an additional set of attributes that might confound the effects of matching. These multivariate models allow us to produce the same pairwise comparisons while controlling for a set of relevant attributes such as demographics (age and gender), risk level (CJA’s FTA risk score), charge groups (violent felony, non-violent felony, high misdemeanor, low misdemeanor, and other), as well as important ATI information. ATI variables include the length of stay in the ATI program (exit date minus entry date) and type of exit from the ATI program (successful or not successful). Table 13, below, provides the differences in attributes for those who had a re-arrest for any charge within one year compared to those who did not. See Appendix K for the differences in attributes for all recidivism measures.

**Table 13: Controlling Attributes for Any Re-arrest within 1 Year**

	Any Re-arrest w/in 1 yr	
	None	At Least 1
<b>Female (%)</b>	22.60%	11.43%
<b>Age (Years)</b>	31.57	32.29

<b>Risk for Recidivism Point score (-12, +12)</b>	0.92	-2.48
<b>Successful ATI Exit (%)</b>	78.70%	51.31%
<b>ATI Length of Stay (days)</b>	123.2	113.9
<b>ATI Group ViolFel (%)</b>	8.23%	5.58%
<b>ATI Group NonViolFel (%)</b>	11.65%	7.96%
<b>ATI Group HighMisd (%)</b>	22.51%	14.18%
<b>ATI Group LowMisd (%)</b>	54.53%	67.21%
<b>ATI Group Other (%)</b>	3.08%	5.06%

The following is a summary of statistically significant differences in recidivism for a re-arrest for any charge within one year between match/non-match groups.

- Individuals who were recommended for Group A (Severe Substance Use Disorder) programming and *did not* receive Group A programming had 22% greater recidivism (statistically significant) for any re-arrest compared to those who were recommended and received Group A.
- Individuals who were recommended Group A and *did not* receive Group A had 27% higher recidivism (statistically significant) compared to individuals who received Group A programming even if they were not necessarily recommended it.
- Individuals who were recommended and received Group C (Self-Improvement and Management) programming had a 5.6% lower recidivism (statistically significant) for any re-arrest compared to individuals who received Group C programming but were not recommended for Group C.
- Individuals who received but were not recommended for Group C had 6.7% higher recidivism (statistically significant) for a re-arrest for any charge compared to individuals who were recommended for, but did not receive Group C.
- Individuals who were recommended but did not receive Group B (Decision-Making) had 6.5% higher recidivism (statistically significant) than those who received Group B but were recommended different programming.

This comparison shows the possible recidivism reduction effects that can be achieved with appropriate treatment matching. Other differences, those that were statistically significant in other recidivism measures, and those that were not statistically significant, can be found in Appendix K. These analyses are limited by the small percentage of clients that were recommended and placed in an appropriate category (34% of the ATI-Enrolled sample). The analyses are also limited in that the programs, as discussed earlier, tended to be lower dosage and the overall adoption of evidence-based practices is lower than expected.

The findings of the appropriate program placement analysis suggests: 1) individuals are not receiving the programming needed that would lead to reduced involvement in the criminal justice system; 2) individuals do not get assistance with improvements to their quality of life; and, 3) resources are used on individuals inappropriately so that those that need certain services are not provided with them.

## Summary

This recidivism analysis was designed to assess the public safety impacts of enrollment in an ATI program. Public safety was measured by recidivism—operationalized alternately as re-arrest for any charge, re-arrest for a violent charge, re-admission to DOC as city sentenced, and re-admission to DOC as either city sentenced or a detainee. All recidivism data was measured over either a one-year or a two-year follow-up period. The ATI-Enrolled sample was compared to an ATI-Non-Enrolled sample that was sentenced to DOC—meaning ATI-eligible individuals who went to jail instead of being given an ATI program. This is an appropriate potential comparison group because ATI programs are designed to provide an alternative to jail for clients who otherwise would go to jail (i.e., was jail-bound). The ATI-Enrolled and ATI-Not Enrolled samples were stratified into four charge categories (“strata”) and all comparisons were conducted within strata.

ATI-Enrolled clients were typically lower-risk, had fewer needs, and had demographic attributes typically associated with lower recidivism rates. As such, some strategy for accounting for or balancing these differences was needed. This research effort used propensity score re-weighting and propensity score matching as two alternate designs. While there are some differences in the inferences we can draw from the analysis, depending on the outcome, strata, design, and follow-up period, there are some consistent findings that are summarized as follows:

- ATI enrollment does not seem to consistently be associated with a reduction in re-arrest (either for any charge or for a violent charge).
- ATI enrollment does seem to reduce DOC re-admission rates for all charge categories except for violent felony cases. For the non-violent felonies and the misdemeanor categories, the estimated program effects (ATE or ATT) are consistently negative and statistically significant. Moreover, these effects are more pronounced and more visible by year 2. The one-year re-admission rate reductions using the ATT design ranged from a low of between 3% and 4% (non-violent felony) to a high of between 12% and 15% (high misdemeanor). The two-year re-admission reductions using the same design (ATT) ranged from a low of between 7% and 8% (non-violent felony) to a high of between 15% and 18% (high misdemeanor).
- ATI programs appear to work best for those that are placed in the appropriate programming area based on their needs. Placing individuals in the appropriate programming group, particularly with Severe SUD programming as demonstrated in this study, has the impact of reducing recidivism. Individuals who were recommended for Group A (severe SUD) programming and *did not* receive Group A programming had 22% greater recidivism (statistically significant) for any re-arrest compared to those who were recommended for and received Group A.

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**SECTION EIGHT:  
Recommendations**

## **Recommendations:**

Diversion of individuals from the criminal justice system is important because it preserves judicial and correctional resources for individuals that present a public safety risk, particularly a risk that involves harm to others. Diversion is a mechanism that requires an agreement that some other alternative can be appropriately used instead of using the justice system or incarceration. As nearly 300,000 individuals encounter the criminal justice system every year in New York City, expanding the use of diversion can have an impact on individuals and the system.

**Create Voluntary Programming after Completion of ATI mandate.** The study found that the ATI-Eligible population has a number of needs: 28% need severe substance use disorder programming, 13% need decision-making, 31% need self-improvement and management, and 13% need interpersonal skills; only 16% do not require intensive services. This presents a challenge to the system because the length of ATI programming is proportionate to the nature of the charges/offenses, but the needs of the individual reveal that many of the individuals would benefit from longer services. However, it would not be appropriate to extend the length of justice control over the individual due to these needs. Increasing the length of justice controls would not be proportionate to the offense committed and places the individual in jeopardy of not completing his/her sentence (which can have other consequences). Therefore, there is a need to develop a hybrid model that maximizes the opportunity to build an individual's motivation to change and address issues without mandating program participation. It is important to offer individuals the opportunity to address their needs in efforts that are likely to be effective. Extending the length of programming can be accomplished through MOCJ funding the program components during both phases—during the ATI legal mandate part and the non-mandate part. The ATI programs should work with individuals to motivate and help the person see the value of continued programming, both for themselves and to reduce the likelihood of further contact with the justice system. MOCJ should support the programming using this hybrid approach. Under this model, MOCJ would provide financial support for the programming during the period of time that the individual is involved in the legal mandate part of the ATI program as well as post-ATI programming. This will ensure that the programming is designed to maximize benefits to individuals without unnecessarily increasing the length of justice control. This framework should improve individual level outcomes, and reduce the justice demands.

**Improving Data Sources for the City.** This study relied upon data from many sources. While the study employed data harmonization strategies, we would be negligent if we did not begin with recommendations regarding the need for good quality data that can be used to improve the system. This study pieced together data from the New York City Criminal Justice Agency (CJA), NYC Department of Corrections (DOC), NYC Correctional Health Services (CHS), NYC Mayor's Office of Criminal Justice (MOCJ), and numerous service providers. Other data sources are available, and would have been useful, but we could never reach agreement regarding providing the data to this research team or obtain the legal agreements. This study relied upon deidentified data for identifying needs due to the barriers to receive identified data. Linking strategies are good for studies, but for the purposes of monitoring the system, identified data is easier to use. The Mayor's Office should consider an integrated data project that covers data from the state, local government agencies, and service provider to reduce some of the current barriers to data sharing for research projects.

By using data from various sources, data harmonization and imputation methods were used in this study. Harmonization allows for measures to be constructed from various similar data elements and imputation methods were able to develop estimates based on patterns of behavior. Based on this experience, the following recommendations are made for MOCJ to facilitate discussions and common measures of: 1) criminal history; 2) substance use disorders; 3) mental illness and serious mental illness; 4) criminal cognitions, attitudes, and behaviors; 5) educational accomplishments; 6) history of employment. Across the local government agencies and the service providers there are few common definitions, and even fewer consistent measures. It would be beneficial to have common instruments, or a core minimum data set, that government and nongovernment agencies use to advance the ability to understand the population and the population's needs.

*Specific recommendations on improving data quality and data sharing – lessons learned from the NYC RNR project.*

- **Quality of common citywide identifier (NYSID).** While different criminal justice and related agencies within the city process the same individuals, they mostly rely on localized ID numbers. For example, while the city has a specific finger print ID number (NYSID), all agencies in the city maintain and use other ID numbers. The CJA has a Docket Number and the DOC has a Booking and Case Number. These agencies do record the NYSID number. However, for their internal use, the local ID numbers are used. As such, the quality of the NYSID number can be in question when conducting cross-agency research. This will enhance further analysis, and understanding of how individuals use multiple services.
- **Service provider data architectures.** There are numerous private companies who provide essential services to the justice-involved population. There is little, if any, standardization in their data collection protocols. For example, providers' data storage capabilities range in sophistication from relational databases to excel spreadsheets. A requirement to standardize the data architecture would help make data collection protocols similar.
- **Service provider instruments.** The numerous service providers also collect risk and needs data using a variety of instruments and protocols. A standardization of these tools should help ensure that the same individuals are assessed for the same needs using identical tools. It is also easier to ensure that such standardized instruments are collectively validated for the NYC justice-involved population rather than to rely on each provider to validate their particular instrument.
- **Standardized definitions.** Even when data do not involve specific risk or need instruments, standardized definitions of demographic attributes (e.g., race or gender categories) or social attributes (e.g., marital status, employment status, or highest education attainment) would help combine information from multiple sources—both as a means of triangulating information and as a way to validating data quality.
- **Data sharing between city agencies.** Data confidentiality concerns certainly restrict the free sharing of data across agencies, especially when dealing with health or other such sensitive data. However, for purposes of facilitating city sponsored research, it would be advisable for all involved city agencies to have multi-tiered data sharing memoranda of understanding agreements in place. The multiple tiers could be devised to handle different type of data sharing needs. For example, in increasing order of confidentiality concerns, these tiers could involve sharing aggregated data; sharing historical data for a random subset of individuals without sharing their personally identifiable information (PII); sharing current data for a random subset of current clients (without sharing PII); sharing

data and PII for a subset of individuals; or sharing sensitive data for a particular individual. Different research or administrative needs may invoke one or another of these tiers. But having agreements in place would go a long way in facilitating the appropriate sharing of data in a timely manner.

## **Other Recommendations:**

**Formalizing Diversion Processes.** Nearly 93,000 individuals in the 2014 to 2016 arraignment cohort were eligible for an ATI but went through the adjudication process and were sentenced. Individuals who did not receive an ATI referral were more likely to be re-admitted to the Department of Corrections (DOC) compared to those who were referred to an ATI program. To ensure that individuals who would benefit from participation in an ATI receive appropriate referrals, New York City (NYC) should establish straightforward criteria about eligibility, and gain consensus among the judiciary, prosecutors and defenders, and individuals with criminal justice involvement. Given that many people who were not referred to an ATI have similar characteristics to those who did receive an ATI referral, a universal screening and assessment process is needed. Given that the ATI-Enrolled group tended to be lower-risk and had fewer needs on average than the ATI-Non-Enrolled, a more systemic process would create greater opportunities for participating in the ATI and reduce any “cherry-picking” that may be occurring.

The most effective way to ensure that people are screened for ATIs and enrolled in an appropriate ATI program is to have a formal system in place that identifies how and when to screen individuals, and how to share that information with all relevant parties. This system should identify: criteria for eligibility; how to screen/assess the individual for eligibility; when to conduct the screening/assessment; who conducts the screening/assessment; who receives the results of the screening/assessment; and who is responsible for ultimately making the decision to divert the individual. In addition, when an individual is determined to be eligible and the court system opts to sentence them instead, the court system should be accountable for providing justification for overriding that decision.

**Examining Diversion Processes in the Bronx.** The Bronx borough is disproportionately represented in the ATI-enrolled group, comprising 67% of the group, compared to 28% of the total sample. Manhattan, for example, has similar representation in the ATI-Eligible sample but lower rates of enrollment. MOCJ would benefit from examining how Bronx stakeholders are able to effectively drive the use the ATI programs and the processes that are used to achieve this milestone.

**Conducting Quality Control on ATI Processes.** More formalized quality assurance procedures would improve the quality of ATI processes and programming. MOCJ should continue to track whether individuals who were eligible received referrals and recidivism outcomes for both ATI-Enrolled and Non-Enrolled groups. While many contracts specify data reporting requirements such as intake, discharge, and length of stay, MOCJ should create a standardized data collection process, and use this information to determine whether programs are adhering to standards set forth in the contract, such as use of a validated assessment tool and the number of treatment hours. Given the lower than expected utilization of ATI, such procedures should be used to ensure that the ATI mechanism is being fully used.

**Using Risk-Need Information to Drive Program Placement.** Determining that an individual receives an ATI referral is the first step. But the referral needs to be appropriate for that person—with an emphasis on targeting dynamic need factors that can be changed. The use of validated screening and assessment tools to guide program placement is an evidence-informed practice and a vital piece of the Risk-Need-Responsivity framework. This system of appropriate program placement is not currently available. This study identified a common pattern that individuals do not receive programming that was appropriate for their risk-need profile. Individuals whose risk-need profile indicated they were appropriate for Group A and who received Group A had lower rates of: (1) re-arrest for any charge within one and two years, (2) re-arrest for a violent charge within one year, and (3) re-admission to DOC as CS within one year, compared to those who were recommended for Group A and did not receive Group A. Such findings point to the value of appropriately matching individuals to treatment programs, based on their risk and need profiles.

**Revisiting ATI Eligibility with Regard to Charge Codes.** One of the important findings of this report is that individuals who participated in appropriate ATI programs (based on their target needs) generally had lower rates of recidivism than those who did not. One exception is that individuals with violent felony charges who participated in an ATI had higher rates of recidivism compared to those who did not participate in an ATI. MOCJ should consider specialized programming for these violent felony offenders to address the recidivism rate since the current ATI programming is inappropriate for the person.

**Measuring Criminal Cognitions.** None of participating agencies adequately measure the construct of criminal cognitions. Criminal cognitions and criminal lifestyle are areas of emerging interest in criminal justice; however, they have not always been well-studied, and there are a limited number of both interventions and assessment tools that address criminal cognitions. If MOCJ or partner organizations were to include a formal measure of criminal cognitions, they would be better able to identify individuals who would benefit from programming in this area. This can be done through risk and need assessment tools that include a domain such as “Attitudes and Orientation” or through a target-specific instrument such as the Criminal Cognitions Scale.

**Treating Women’s Mental Health Needs.** 32% of women present with mental health needs compared to 25% in the overall population. This finding is similar to other jurisdictions and points to a need for services that address mental health for women, and those services should incorporate trauma-informed approaches. While mental health is not directly correlated with increased risk for continued criminal justice involvement, accessing appropriate treatment is critical to a person’s daily functioning and will contribute to their overall functioning. Also, mental health influences participation in treatment programming as well as employment and education. However, we should note that it would behoove the system to treat the mental health need of men too as a means of improving outcomes.

**Closing Gaps in Services.** Part of the reason individuals did not receive programming that was appropriate for them is that the ATI programs lack sufficient capacity to serve individuals with high needs. There are pronounced gaps in the need for services compared to services delivered in all categories, especially severe substance use disorder, interpersonal skills, and no formal programming (i.e., individuals who do not present with a need for intensive programming but do

have identified service needs). If MOCJ intends to increase referrals to ATIs, an important first step is to ensure that there are adequate programming/service needs slots. For purposes of prioritization and strategic planning, the need for treatment for severe substance use disorder is especially acute. A future report will address whether individuals with severe substance use disorder were able to access treatment through non-ATI programs.

**Adding Objective Standards to Contracts.** MOCJ would benefit from requiring more objective standards related to evidence-based practices (EBPs) in contracts. Currently, much of the contract focuses on retention numbers, and there needs to be more attention to the content of programs. Additional programming items that are tied to improved outcomes for individuals include:

- Dosage: include standards for the number of treatment hours participants will receive and how that dosage is spread over time, i.e., frequency of sessions, number of hours per week, total length of time in program, and use of phases and aftercare.
- Use of target-specific assessments and risk-need assessments: information-sharing between criminal justice and treatment agencies is an area where many jurisdictions fall short. It is therefore crucial that treatment providers conduct appropriate assessments on clients during the intake process, as well as during treatment to identify progress. These instruments give providers necessary information both to ensure the need is present and to determine the severity. Contracts should identify the instruments the program will use and the time points at which they will use it, as well as whether the assessment information will be shared with MOCJ and, if so, how will it be shared and with what frequency. The assessment should be appropriate for the target need. See examples:
  - **Substance use disorder:** Addiction Severity Index, American Society of Addiction Medicine criteria, Alcohol Use Disorders Identification Test, Rapid Opioid Dependence Screen
  - **Decision-making:** Criminal Cognitions Scale, Psychological Inventory of Criminal Thinking, TCU Criminal Thinking Scales, Measures of Criminal Attitudes and Associates, The Criminal Sentiments Scale-Modified, Measure of Offender Thinking Styles, The Criminal Thinking Profile
  - **Mental health:** Mood Disorder Questionnaire, Mini Mental State Examination, Mini-International Neuropsychiatric Interview, PTSD Checklist
  - **Interpersonal development:** Adverse Childhood Experience Quiz, MOSAIC, Orientation of Social Supports, biopsychosocial assessment, TCU Social Functioning
  - **Housing:** Housing First Assessment Tool, Vulnerability Index-Service Provision Decision Assistance Tool, Time Line Follow Back
- Curricula: any and all curricula used by programs should be evidence-based, appropriate for the target need, and spelled out in the contracts. Programs may use multiple curricula, and the contracts should specify what those curricula are and what percentage of the curriculum the program will use. If there are multiple curricula, MOCJ should ensure that the majority of the program will focus on the primary target. For example, a substance use disorder program may include life skills as part of their effort to deliver services that are focused on substance use disorder.
- Staffing: staffing standards will vary based on the type of program, and MOCJ should set standards for each program type, e.g., a substance use disorder program would include

management staff with advanced degrees and line staff who are certified addictions counselors.

**Increasing Dosage.** Data from the RNR Program Tool indicate that programs are not offering sufficient dosage; dosage was the domain in which programs' scores were lowest, averaging 39%. Programs also vary greatly in the amount of dosage they provide. NYC already has high standards for dosage in programs that address substance use disorder, and MOCJ should address the dosage standards for other programs that address serious needs, such as decision-making. MOCJ should also consider requiring programs to vary the dosage level they provide based on individuals' risk and need levels.

**Encouraging Training and Technical Assistance and Coaching in Programs.** Most programs indicated on the RNR Program Tool that they provide coaching. Programs should ensure that staff training continues to be a priority, especially given the staff turnover. Coaching should be done in a systematic way—programs should prioritize developing a system for coaching (to be included in their procedural manuals) to ensure that it is done on a regular basis and that there is a continual feedback loop. Few programs reported receiving any technical assistance in the past year; MOCJ should consider making programs aware of technical assistance resources that are available to them, as this can be a value-added way to increase staff skills. And, MOCJ should offer a series of training and technical assistance programs to assist agencies.

**Using Incentives in a Systematic Manner.** While the majority of ATI programs report using incentives, not all are using them in a systematic and consistent manner. For example, only five programs indicated they base the incentive plan on individual treatment plans. In addition, programs should ensure that they are transparent about how incentives are earned and distributed. The practice guidelines included in Appendix L of this report identify additional standards and guidelines for using incentives.

**Working with Individuals on Motivation.** Individuals who are more highly motivated are, of course, more likely to engage in treatment. It is important to remember that motivation is not stagnant—individuals' levels of motivation can increase or decrease over time, and programs can influence the level of motivation. Several programs in this study indicated that they employ practices like Motivational Interviewing or Motivational Enhancement Therapy. Due to the fact that the legal mandate determines the amount of programming an individual receives, developing motivation early in the program can ensure that individuals will be successful in the program and continue in other programming post-mandate. The practice guidelines contain more information about building motivation for treatment.

**Promoting Quality Assurance and Fidelity Monitoring.** Fidelity has been strongly linked to program effectiveness, and there are a number of ways programs can measure fidelity and/or assure program quality. The “gold standard” is an external quality assurance audit, which only 25% of ATI programs report using. Additional methods include reviews by an internal quality assurance team or supervisor, or having an external method to evaluate program outcomes either by an outside researcher or a licensing organization. More than half of the ATI programs report using an internal method, such as performance measures and internal case file review. MOCJ and partners would benefit from having standardized procedures for conducting quality assurance and fidelity

monitoring. Programs that address substance use disorder follow regulations stipulated by OASES; MOCJ should put in place similar reporting requirements for non-substance use disorder ATI programs and require that programs allow MOCJ to conduct periodic observations.

MOCJ demonstrates a deep commitment to reducing recidivism, improving lives, protecting public safety, and keeping individuals in the community. This report examines the needs of the individuals under supervision and the programs that are available to them. Through these analyses, ACE! determined that the above recommendations are crucial to ensuring MOCJ is able to meet its mission.

Additionally, the research team developed a series of practice guidelines to improve programming in target areas and to facilitate attention to offering programming that is focused on strengths-based and individual growth and development. Practice guidelines are provided on the following topics that are of special interest to MOCJ, service providers, and other stakeholders. The guidelines are intended to act as a primer on the importance of each topic and a starting place to address some of the aforementioned recommendations. Find the practice guidelines in Appendix L.

- **Motivation and Treatment Readiness Techniques** are important to develop during the short ATI program mandate to help individuals see the value in continuing to engage in services after the mandated program has been completed.
- **Promoting Healthy Living** as an aspect of treatment should be considered to assist the person in developing daily functioning habits.
- **Developing Healthy Relationships** with family and friends can provide individuals with a network of support and thus reduce the likelihood of future criminal justice involvement.
- **Using Incentives** to engage people and sustain behavior change through positive reinforcement rather than a deficit-based sanctions approach.
- **Medication Management** approaches to address behavioral health issues.
- **Assertive Case Management**, a comprehensive approach to developing community capacity and services for individuals most at-risk for psychiatric crisis and hospitalization and involvement in the criminal justice system.



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**SECTION NINE:  
Appendix**

## **Appendix A: Service Needs and Programming Needs Definitions**

### **Service Needs Definitions**

#### ***Substance Use Disorder –***

- Substance use disorder (alcohol/marijuana use that interferes with one’s life and therefore requires regulation): use of illicit substances in a manner that has minor impact on a person’s daily functioning but the use of the substance is supported by their lifestyle. Only has an impact on three or less aspects of one’s daily functioning, and does not involve drug seeking behavior. The substance use is not compulsive.
- Severe substance use disorder (compulsive use of hard illicit drugs such as opioids, heroin, methamphetamine, cocaine). Cognitive behavioral therapy is needed to address severe substance use disorder and the maladaptive nature of individuals’ thinking that drive their use of substances, and the environment that supports their use behaviors. CBT for severe substance use disorder is different than CBT for other disorders in that it is focused on addressing cravings, chronic patterns, and attitudes and behaviors that support substance use.
- This measure was created from numerous service providers’ data. A three-part variable was created that flags (1) No substance use, (2) Substance Use Disorder, or (3) Severe Substance Use Disorder. There are three ways these categories are defined:
  1. Where Service Providers data includes a scale, the scale was converted into three categories.
  2. Where Service Providers data includes 3 or more substance use groups, the groups were recoded into the three categories.
  3. Where Service Providers data only permitted a Yes/No flag for substance use, models were developed to impute the type of SUD using all other need measures, demographics, and criminal history data.  
Severe use disorder refers to disorders that interferes with the individual’s functioning, whereas substance use disorder has less of an impact on one’s life.

#### ***Opioid Use Disorder –***

- Medications for the treatment of opioid use disorders are often recommended to address the chronic nature of the addictions including cravings and neurobiological factors associated with use behaviors. Medications for opioid use disorders consist of methadone, buprenorphine, naltrexone. Medications are important companions to behavior treatment; like other chronic diseases medications are useful to manage the disorder.
- Obtained directly from CHS and imputed into CJA data. CHS definition is: “Opioid Use Disorder diagnosis: ICD9/10 codes (304.0#, 305.5#, F11.1#, or F11.2# where # can be other characters) + other confirmation (self-report, lab testing, clinical symptoms and assessment, medication orders)”.

#### ***Criminal Thinking –***

- Individual has maladaptive thinking patterns that predispose them to continued criminal behaviors. Some examples of criminal thinking include rationalizing and justifying behaviors, as well as denying the acts took place.
- Interventions that address criminal thinking are usually cognitive-based; common curricula include Moral Reconciliation Therapy and Thinking for a Change.

- Strong data not available from any sources and therefore we relied on an indicator of risk level where criminal thinking was flagged if the risk level = Very High and the person was not substance dependent.

***Mental Health –***

- Mental health indicates mental illness that interferes with daily functioning in a role as a parent, citizen, or employee. This can include trauma, post-traumatic stress syndrome, mental illness such as depression, anxiety disorders, and other illnesses that need treatment.
- This measure is created from data provided by several service providers. There were four ways in which this flag is defined:
  1. Where Service Providers data provided an assessment of MH, this was used directly.
  2. Where Service Providers data provided detailed information for a screener (e.g., BJMHS – Brief Jail Mental Health Screener), information about the screener (found by online research) was used to create the MH assessment flag.
  3. Where Service Providers data included MH assessment scores or totals from an instrument (e.g., PHQ – Patient Health Questionnaire), information about the screener (found by online research) was used to convert the scores into an assessment flag.
  4. Where Service Providers data included ad-hoc questions that speak to the client’s mental or emotional health issues, these questions were coded into MH assessment flags.

***SMI –***

- Serious mental illness schizophrenia-spectrum disorders, severe bipolar disorder, and severe major depression which requires medication and assertive case management. SMI need more intensive services than individual with mental illness
- Obtained directly from CHS data and imputed into CJA data. CHS provided a flag for SMI. Reflects presenting with serious MI.

***Physical Health Variables –***

- Physical health refers to chronic or infectious diseases that interfere with a person’s functioning. Physical health should be considered a chronic condition that requires attention by the service provider.

***HIV/HCV –***

- Obtained directly from CHS data and imputed into CJA data. CHS provided a flag for HIV/HCV.

***Other Chronic Diseases –***

- Obtained directly from CHS data and imputed into CJA data. Defined by CHS as anyone with asthma, diabetes, hypertension, or seizure disorders.

***Housing –***

- Housing (supportive, permanent). The individual does not have stability in their housing or residential situation. Instability is noted by frequent moves, not having a stable residence for six months or longer, failure to have a residence where the individual is a contributing member of the housing residents, and constant search for housing. The goal of housing stability is to assist an individual in obtaining housing that can be maintained.
- This measure is created from several Service Providers data. This measure was created in one of three ways:

1. The Service Providers data indicated a housing need;
2. The Service Providers data indicated client was homeless;
3. The Service Providers data indicated that client provided homeless or transitional housing as current living arrangement.

***Education –***

- Basic education (literacy, GED): The individual has not attained a high school diploma, if they have one (or a GED) they do not have an eighth-grade reading or math skills. The basic education is geared towards improving functionable reading and math skills which will have a positive impact on decision-making.
- Created from self-report data collected by CJA. Defined as anyone without a high school, HS equivalent, or higher degree.

***Employment –***

- Employment skills and training. The individual lacks employment skills as determined by lack of licit employment, failure to maintain employment for 90 days or more, frequent job changes, and other indicators of the ability to maintain gainful employment. The goal is to assist the individual in both obtaining and retaining employment.
- Created from self-report data collected by CJA. Defined as anyone who is not employed (either full-time or part-time).

**Programming Needs Definitions**

In order from the highest level of need for intensive programming to the lowest level of need and intensity of programming

***Severe Substance Use Disorder*** – Individuals present with a chronic substance use disorder that includes cravings for substances that interferes with daily functioning. Requires intensive (daily) programming with high levels of structure that occur over a longer period of time due to the nature of drug use and the patterns of recovery. Individuals may also present with a co-occurring mental health disorder. Some common types of treatment for severe substance use disorder (SUD) include residential treatment, therapeutic communities (TCs), problem solving courts, and intensive outpatient treatment (IOP).

***Decision Making*** – Individuals present with cognitive distortions or decision-making that shows maladaptive thinking. Cognitive restructuring programming can facilitate a change in thinking and behavior patterns. Individuals in this programming group often have a number of lifestyle and cognitive errors that affect impulsive decisions and risky behaviors, and should receive programming multiple times per week with high structure.

***Self-Improvement and Management*** – Individuals present with more moderate problem behaviors with a need for guidance in managing daily issues. Social and problem-solving skill programs can address self-management and control issues associated with mild to moderate mental health and substance abuse issues or impulsive behaviors by learning to self-regulate behavior, manage emotions and manage conditions. Individuals receive programming weekly or several times per month; level of dosage will vary based on whether the individual has a mental health disorder and the severity of the mental health disorder.

***Interpersonal Conflict Skills*** – Individuals present with interpersonal skill issues that affect relationships and quality of life. Structured counseling and modeling of behavior to reduce interpersonal conflict and develop more positive interactions. Emphasis is on social and communication skills, especially with peers and loved ones.

***No Formal Programming/Case Management*** – Individuals do not have a need that can be identified to drive behavior that is linked to justice involvement. Case management and referral to services is recommended to improve the individual's life functioning and quality of life.

**Appendix B: Felony Charge Codes:**

The following charge codes were used to define the Violent Felony analysis group

120.02	215.16	110-125.20
120.05	215.17	110-125.21
120.06	230.34	110-125.22
120.07	230.34.05A	110-130.35
120.08	230.34.05B	110-130.45
120.09	240.55	110-130.50
120.10	240.60	110-130.67
120.11	240.61	110-130.70
120.18	240.62	110-130.75
120.60	240.63	110-130.95
121.12	255.27	110-130.96
121.13	265.02	110-135.20
125.11	265.03	110-140.25
125.20	265.04	110-140.30
125.21	265.08	110-150.15
125.22	265.09	110-160.10
125.25	265.11	110-160.15
125.26	265.12	110-215.17
125.27	265.13	110-230.34
130.30	265.14	110-230.34.05A
130.35	265.19	110-230.34.05B
130.45	125.26	110-255.27
130.50	405.18	110-265.02
130.53	490.10	110-265.03
130.65	490.15	110-265.04
130.65	490.20	110-265.08
130.66	490.30	110-265.09
130.67	490.35	110-265.11
130.70	490.37	110-265.12
130.75	490.40	110-265.13
130.80	490.45	110-265.14
130.90	490.47	110-265.19
130.95	490.50	110-490.15
130.96	490.55	110-490.30
135.20	110-120.06	110-490.35
135.25	110-120.07	110-490.37
140.25	110-120.08	110-490.40
140.30	110-120.09	110-490.45
150.15	110-120.10	110-490.47
150.20	110-120.11	110-490.50
160.10	110-121.13	110-490.55
160.15	110-125.11	110-125.25

## **Appendix C: Need Imputation Methodology**

Client need data was obtained from two main sources. CJA provided detailed assessments data on all clients who were interviewed. The assessments include some detailed needs data. In addition, detailed assessments data were also collected from 11 different service providers in NYC (with one large service provider providing data on 25 different assessments). The service providers shared detailed client-level data from their repositories. These data sources contributed to a little under 100,000 different assessment records—with detailed but incomplete needs data (see Figure 1 below). These were all combined and merged with the CJA core analysis cohort to impute client needs. The imputation was conducted in two steps. Step 1 involved imputing need flags for all 100,000 service-provider data using available information (demographics, criminal history, and other need flags). Step 2 involved merging these data into the main CJA cohorts of interest using overlapping features.

The imputations step (Step1) included several sub-steps.

1. Develop a set of models to predict each attribute (risk or needs) with missing values using all the other attributes.
2. Use the models to predict cumulative probability distributions over the missing labels for each record with a missing value.
3. Use the inverse transform method to covert these probabilities into a label imputation.
4. Repeat steps 2 and 3 from above a number of times successively using imputations from the previous iteration in the next models. In our analysis, we repeated the steps 5 times to get a total of 5 imputations for each missing value.
5. Finally, use the most commonly predicted value from the last 3 imputations (i.e., pick the value that is imputed two out of three times in the last 3). This is the final imputed value.

Once the service-provider data had all missing values imputed, the next step was to merge these data into the CJA base cohort file. This merging step (Step 2) included multiple iterations. Since identifiers were not available in the service-provider data, all merging was done using *data hooks*—overlapping features in the CJA and service-provider data. Available data hooks included age, race, ethnicity, gender, criminal history (number of priors), risk level, education level, and employment status. Merging was done over 14 different iterations. In the first iteration, merges were done using exact matches on all data hooks. I.e., a data point from the service-provider data was only merged to one or more data points in the CJA data if it matched on all the attributes included as data hooks. Where links were found, the data was set aside. The remaining unlinked records were passed to the next iteration. In each of the subsequent iterations, one or more of the data hooks were dropped and data merges were attempted. The procedure resulted in mapping records from the service-provider data to one or more of the CJA records until we have imputed needs data for each of the CJA base cohort records. Clearly, the data merges get less and less accurate in latter iterations (with fewer hooks included). However, over 50% of the merges resulted in the first iteration, over 70% in the first two, and nearly 80% in the first four. In fact, the last six iterations only resulted in the last 5% of merges. Hence, almost all of the merges resulted from the first few iterations of the procedure.

**Figure 1: Data sources and variables received**

ACE! received data from 11 different data sources which included agencies and service providers. Data received included demographic variables (age, gender, race and ethnicity), criminal justice related information (prior arrests and convictions, risk classification), and finally social attributes and need areas (such as education, employment, housing, criminal peers and mental health). These data sources were harmonized into one dataset.

Data Sources	Records	Age	Ethnicity	Gender	Race	Prior Arrests (N)	Prior Convictions (N)	Prior Felony Convictions (N)	Prior Misd. Convictions (N)	Risk Classification	Criminal Thinking	Education	Employment	Family Related	Financial	Housing	Leisure Activities	Criminal Peers	Mental Health	Substance Use Disorders	
		All Data Sources	94,797	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Source A	924	X	X	X	X	X						X	X	X	X		X			X	X
Source B	1,098	X	X	X	X							X	X	X			X			X	X
Source C	18,730	X	X	X	X	X	X	X	X	X		X	X				X			X	X
Source D	11,215	X		X								X	X	X			X			X	X
Source E	9,296	X	X	X			X	X	X			X	X				X		X		X
Source F	140	X	X									X	X				X			X	X
Source G	692	X	X									X					X			X	X
Source H	5,044	X								X	X	X					X				X
Source I	257	X								X		X	X								
Source J	906	X										X	X								
Source K	46,495	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X

## **Appendix D: ATI-Enrolled and ATI-Non-Enrolled Programming and Service Need Data**

Table 1 shows the demographic breakdown of the ATI-Enrolled and ATI-Non-Enrolled groups by charge category (violent and non-violent felony, high and low misdemeanor and all other charges). The table also shows the programming needs by charge category, and breakdown of the charge categories for ATI-Enrolled and ATI-Non-Enrolled.

A higher percentage of individuals with violent felonies were found to be ATI-Enrolled (18%) than ATI-Non-Enrolled (11%). 25% of the ATI-Enrolled group have a high misdemeanor charge, compared to 18% of the ATI-Non-Enrolled group. Low misdemeanors made up 31% of the ATI-Enrolled group, but 43% of the ATI-Non-Enrolled group. The programming needs within each charge category were similar in the ATI-Enrolled and ATI-Non-Enrolled groups.

Within each charge category, individuals with no priors were more likely to receive an ATI program. ATI-Enrolled and ATI-Non-Enrolled individuals within each charge category had similar educational breakdowns, with 59-71% of the population holding a high school diploma or equivalent. More than half of the ATI-Enrolled group are under the age of 27. There were more women represented in the ATI-Enrolled groups, however the breakdown of race/ethnicity was similar between the ATI groups.

Table 2 shows the complete data on individuals' service needs by charge category and programming need. These service needs are not mutually exclusive (i.e., individuals can present with a number of needs). This table shows the additional needs individuals have that are not related to recidivism but can affect success in the program and quality of life. Programs should consider their capacity to address these needs in-house or through service referrals.

**Table 1: Demographic breakdown of ATI-Enrolled and ATI-Non-Enrolled programming needs by charge category**

	ATI-Enrolled (n=29,831/3yrs or ~9,944/yr)					ATI-Non-Enrolled (n=93,260/3yrs or ~31,087/yr)				
	Violent Felony 18% of ATI-Enrolled (n=2,200/3 yrs or ~750/yr)					Violent Felony 11% of ATI-Non-Enrolled (n=10,293/3 yrs or ~3,431/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>16%</b>	Severe SUD <b>24%</b>	Decision Making <b>2%</b>	Self-Management <b>39%</b>	Interpersonal Conflict <b>19%</b>	No Formal Programming <b>19%</b>	Severe SUD <b>27%</b>	Decision Making <b>6%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>15%</b>
Male	74.1%	82.9%	97.4%	74.7%	82.3%	95.7%	95.4%	98.6%	94.6%	91.7%
Female	25.9%	17.1%	2.6%	25.3%	17.7%	4.3%	4.6%	1.4%	5.4%	8.3%
16-17	5.2%	31.0%	5.3%	37.8%	46.7%	0.6%	8.7%	0.5%	5.1%	10.8%
18-27	54.2%	54.1%	60.5%	40.8%	35.3%	41.5%	57.0%	47.2%	41.8%	40.2%
28-45	30.9%	11.6%	21.1%	17.1%	13.2%	41.4%	24.1%	36.8%	37.1%	33.4%
46-60+	9.6%	3.3%	13.1%	4.4%	4.6%	16.5%	10.2%	15.6%	16.0%	20.4%
AA	71.4%	50.1%	73.7%	42.1%	77.4%	70.5%	56.9%	74.2%	45.6%	74.9%
White	4.7%	1.9%	5.3%	3.0%	5.3%	11.1%	3.6%	6.4%	6.1%	8.2%
Hispanic	21.3%	45.7%	21.1%	53.7%	14.9%	14.9%	36.3%	17.8%	46.7%	14.3%
No prior	73.8%	76.3%	18.4%	84.2%	84.0%	31.3%	30.3%	5.5%	35.9%	37.7%
Prior misd only	10.8%	9.2%	39.5%	7.8%	7.0%	15.0%	17.0%	3.9%	14.2%	11.8%
prior fel only	3.5%	3.3%	5.3%	1.9%	2.1%	15.0%	11.8%	3.0%	8.8%	9.6%
prior fel and misd	12.0%	7.9%	34.2%	4.8%	4.9%	38.6%	35.2%	57.8%	36.4%	36.4%
no HS	18.1%	77.8%	36.9%	68.4%	74.4%	14.4%	59.0%	37.8%	47.0%	58.3%
HS degree/equiv	59.2%	12.9%	47.4%	20.9%	20.9%	67.0%	26.7%	42.7%	35.6%	26.4%
Above HS	22.4%	4.7%	10.5%	7.6%	7.0%	18.4%	5.5%	8.3%	9.1%	7.1%
	Non-Violent Felony 18% of ATI-Enrolled (n=3,046/3 yrs or ~1,015/yr)					Non-Violent Felony 18% of ATI-Non-Enrolled (n=17,043/3 yrs or ~5,681/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>19%</b>	Severe SUD <b>25%</b>	Decision Making <b>4%</b>	Self-Management <b>37%</b>	Interpersonal Conflict <b>15%</b>	No Formal Programming <b>18%</b>	Severe SUD <b>26%</b>	Decision Making <b>9%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>14%</b>
Male	74.1%	82.9%	97.4%	74.7%	82.3%	94.4%	92.6%	98.3%	94.1%	91.7%

Female	25.9%	17.1%	2.6%	25.3%	17.7%	5.6%	7.4%	1.7%	5.9%	8.3%
16-17	2.9%	14.5%	0.8%	11.3%	19%	0.3%	2.5%	0.1%	1.5%	2.3%
18-27	39.6%	47.2%	42.6%	36.2%	38.4%	24.5%	35.5%	30.5%	24.5%	23.2%
28-45	40.1%	23.3%	34.4%	34.8%	26.4%	47.0%	55.9%	40.0%	44.3%	42.6%
46-60+	17.4%	15.0%	17.7%	17.7%	16.2%	28.2%	25.1%	29.6%	29.7%	31.8%
AA	60.6%	42.20%	73.8%	30.5%	71.4%	64.4%	46.5%	67.5%	41.2%	62.7%
White	9.40%	3.10%	0.80%	5.20%	5%	14.3%	7.1%	8.9%	8.6%	12.9%
Hispanic	26.8%	51.7%	24.6%	63.2%	22.5%	17.4%	43.9%	22.5%	48.5%	21.9%
No prior	57.0%	52.3%	13.9%	56.2%	67.9%	20.6%	16.9%	4.5%	21.1%	20.6%
Prior misd only	16.0%	15.3%	13.9%	56.2%	67.9%	17.2%	17.1%	24.3%	14.6%	14.8%
prior fel only	5.5%	4.8%	1.6%	3.5%	1.3%	12.1%	6.9%	1.5%	7.0%	7.9%
prior fel and misd	21.5%	25.7%	45.9%	23.5%	20.5%	50.0%	55.3%	67.5%	53.8%	52.3%
no HS	13.2%	62.2%	35.3%	52.2%	56.8%	9.8%	47.9%	33.9%	42.1%	41.5%
HS degree/equiv	63.8%	27.1%	44.2%	33.5%	28.4%	65.4%	34.6%	43.3%	38.8%	38.2%
Above HS	22.8%	6.6%	13.1%	10.5%	10.4%	24.4%	7.7%	12.3%	11.8%	11.2%
	<b>High Misdemeanor</b> 25% of ATI-Enrolled (n=5,535/3 yrs or ~1,845/yr)					<b>High Misdemeanor</b> 18% of ATI-Non-Enrolled (n=16,962/3 yrs or ~5,654/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>17%</b>	Severe SUD <b>24%</b>	Decision Making <b>4%</b>	Self-Management <b>40%</b>	Interpersonal Conflict <b>15%</b>	No Formal Programming <b>19%</b>	Severe SUD <b>27%</b>	Decision Making <b>9%</b>	Self-Management <b>31%</b>	Interpersonal Conflict <b>13%</b>
Male	79.6%	85.4%	94.8%	77.4%	79.5%	95.5%	95.1%	97.5%	94.7%	94.0%
Female	20.4%	14.6%	5.2%	22.6%	20.5%	4.5%	4.9%	2.5%	5.3%	6.0%
16-17	3.2%	19.4%	0.9%	19.7%	28.6%	0.5%	3.6%	0.2%	2.5%	4.8%
18-27	40%	51.6%	40.8%	40.6%	36.0%	17.3%	49.5%	41.0%	34.9%	30.4%
28-45	42.5%	19.7%	37.0%	29.4%	25.0%	49.3%	33.1%	40.5%	4470.0%	45.0%

46-60+	14.3%	9.3%	21.1%	10.3%	10.4%	18.0%	13.8%	18.3%	17.7%	19.9%
AA	68.8%	43.9%	68.1%	32.5%	74.8%	71.1%	51.7%	68.9%	45.9%	70.8%
White	6.7%	2.5%	5.2%	4.2%	4.4%	11.9%	7.0%	9.3%	8.4%	10.4%
Hispanic	21.8%	50.1%	26.3%	62.2%	18.0%	13.5%	37.0%	19.3%	43.9%	14.9%
No prior	61.5%	60.5%	11.3%	70.5%	71.5%	24.2%	24.4%	6.0%	26.8%	25.0%
Prior misd only	14.2%	16.1%	32.9%	11.7%	10.9%	21.1%	21.5%	32.0%	19.3%	17.0%
prior fel only	5.1%	2.6%	2.8%	2.4%	2.6%	12.3%	7.1%	2.4%	7.4%	8.8%
prior fel and misd	18.4%	18.0%	49.8%	14.4%	13.5%	43.0%	41.8%	56.4%	42.9%	44.3%
no HS	14%	59.6%	32%	55.2%	65.6%	13.7%	48.0%	43.6%	41.7%	47.5%
HS degree/equiv	57.3%	23.5%	44.1%	30.0%	20.2%	65.0%	32.0%	26.6%	38.4%	31.1%
Above HS	27.7%	6.9%	12.2%	10.7%	7.8%	21.0%	7.4%	11.8%	12.0%	9.5%
	<b>Low Misdemeanor</b> 31% of ATI-Enrolled (n=17,832/3 yrs or ~5,944/yr)					<b>Low Misdemeanor</b> 43% of ATI-Non-Enrolled (n=40,066/3 yrs or ~13,355/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>15%</b>	Severe SUD <b>28%</b>	Decision Making <b>11%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>13%</b>	No Formal Programming <b>13%</b>	Severe SUD <b>31%</b>	Decision Making <b>19%</b>	Self-Management <b>26%</b>	Interpersonal Conflict <b>11%</b>
Male	84.0%	84.8%	94.9%	82.2%	82.6%	95.4%	90.6%	96.3%	92.4%	91.9%
Female	16.0%	15.2%	5.1%	17.8%	17.4%	5.6%	9.4%	375.0%	7.6%	8.1%
16-17	2.0%	8.9%	0.3%	9.5%	11.9%	0.4%	2.6%	15.0%	2.3%	3.6%
18-27	33.6%	40.1%	21.3%	32.5%	29.5%	27.5%	33.7%	19.7%	24.1%	23.9%
28-45	37.5%	28.3%	20.7%	33.0%	32.8%	45.3%	36.0%	44.5%	41.0%	42.2%
46-60+	26.8%	22.6%	36.7%	25.0%	25.8%	26.7%	2785.0%	35.7%	32.6%	30.4%
AA	66.6%	45.4%	71.1%	38.0%	68.8%	66.6%	51.2%	71.1%	46.9%	67.0%
White	8.0%	4.3%	5.4%	4.8%	5.8%	16.8%	9.0%	7.8%	10.4%	13.7%
Hispanic	23.2%	48.1%	22.3%	56.4%	23.4%	13.9%	36.9%	19.2%	41.0%	15.8%

No prior	39.7%	25.7%	2.8%	42.5%	43.1%	18.9%	15.0%	2.5%	16.9%	19.8%
Prior misd only	20.7%	21.0%	32.8%	19.3%	18.1%	19.6%	22.9%	28.4%	20.7%	20.1%
prior fel only	5.3%	3.5%	0.7%	3.2%	4.3%	9.3%	4.6%	0.9%	5.0%	6.2%
prior fel and misd	34.2%	39.2%	62.0%	34.3%	33.8%	52.1%	56.0%	66.8%	56.0%	52.5%
no HS	11.6%	54.2%	33.6%	50.6%	49.8%	10.8%	44.8%	30.0%	39.8%	43.0%
HS degree/equiv	68.1%	30.2%	41.5%	34.5%	35.3%	69.5%	33.1%	42.7%	38.7%	28.7%
Above HS	20.1%	7.8%	13.0%	10.9%	10.2%	20.6%	8.5%	11.6%	10.5%	10.2%
	<b>All other charges ATI</b> 12% of ATI-Enrolled (n=1,218/3 yrs or ~404/yr)					<b>All other charges ATI</b> 10% of ATI-Non-Enrolled (n=8,896/3 yrs or ~2,965/yr)				
<b>% within in Program Group</b>	<b>No Formal Programming 11%</b>	<b>Severe SUD 33%</b>	<b>Decision Making 14%</b>	<b>Self-Management 28%</b>	<b>Interpersonal Conflict 14%</b>	<b>No Formal Programming 12%</b>	<b>Severe SUD 31%</b>	<b>Decision Making 18%</b>	<b>Self-Management 26%</b>	<b>Interpersonal Conflict 12%</b>
Male	90.9%	95.5%	98.8%	92.1%	88.5%	98.6%	97.3%	99.2%	97.4%	96.3%
Female	9.1%	45.0%	1.2%	7.9%	11.5%	1.4%	2.7%	0.8%	2.6%	3.7%
16-17	4.5%	13.6%	0.0%	10.8%	17.2%	0.5%	2.4%	0.2%	1.8%	3.4%
18-27	33.3%	51.0%	25.7%	36.7%	34.5%	32.7%	42.7%	24.1%	29.0%	26.3%
28-45	38.7%	20.1%	36.8%	31.7%	28.8%	45.7%	34.0%	45.8%	44.1%	45.9%
46-60+	23.5%	15.3%	37.4%	20.7%	21.7%	21.2%	20.9%	29.9%	25.0%	24.5%
AA	68.9%	59.3%	71.3%	37.0%	78.7%	76.1%	57.2%	73.0%	52.1%	69.1%
White	11.4%	2.5%	4.7%	5.8%	4.0%	11.4%	5.8%	7.2%	7.6%	10.7%
Hispanic	17.4%	34.9%	21.1%	55.7%	12.6%	9.6%	32.2%	16.3%	36.8%	14.2%
No prior	44.7%	44.2%	4.7%	51.3%	51.1%	21.3%	21.7%	4.0%	21.9%	23.8%
Prior misd only	22.0%	21.6%	39.8%	15.7%	13.8%	21.4%	25.5%	30.8%	21.7%	20.3%
prior fel only	5.3%	1.5%	0.0%	2.9%	3.4%	12.0%	5.4%	0.9%	6.7%	7.0%

prior fel and misd	28.0%	29.9%	54.4%	28.6%	28.7%	44.5%	45.5%	62.6%	47.2%	46.9%
no HS	11.3%	42.2%	31.6%	43.4%	53.4%	11.1%	41.4%	31.6%	37.3%	39.5%
HS degree/equiv	70.5%	24.6%	35.7%	32.4%	22.4%	69.5%	28.3%	37.7%	34.0%	28.7%
Above HS	17.5%	6.1%	9.9%	7.8%	7.5%	19.1%	7.3%	10.0%	9.0%	8.0%

**Table 2: Service needs by ATI-Enrolled and ATI-Non-Enrolled programming needs by charge category**

	ATI-Enrolled (n=29,831/3yrs or ~9,944/yr)					ATI-Non-Enrolled (n=93,260/3yrs or ~31,087/yr)				
	Violent Felony 18% of ATI-Enrolled (n=2,200/3 yrs or ~750/yr)					Violent Felony 11% of ATI-Non-Enrolled (n=10,293/3 yrs or ~3,431/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>16%</b>	Severe SUD <b>24%</b>	Decision Making <b>2%</b>	Self-Management <b>39%</b>	Interpersonal Conflict <b>19%</b>	No Formal Programming <b>19%</b>	Severe SUD <b>27%</b>	Decision Making <b>6%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>15%</b>
SUD	0.0%	24.5%	28.9%	62.2%	0.0%	0.0%	26.2%	22.3%	65.4%	0.0%
Severe SUD	0.0%	75.5%	0.0%	0.0%	0.0%	0.0%	73.8%	0.0%	0.0%	0.0%
Opioid Use Disorder	0.0%	14.8%	0.0%	0.0%	0.0%	0.0%	15.1%	0.0%	0.0%	0.0%
Criminal Thinking	0.0%	6.4%	100.0%	0.0%	0.0%	0.0%	17.5%	100.0%	0.0%	0.0%
Mental Health	6.1%	32.8%	23.7%	25.1%	16.0%	5.6%	33.2%	21.1%	23.4%	17.3%
Serious Mental Illness	1.2%	2.0%	5.6%	5.0%	4.8%	1.5%	6.1%	5.3%	6.9%	5.9%
HIV/HCV	1.5%	6.4%	0.0%	2.6%	1.7%	1.4%	7.2%	2.4%	3.5%	1.5%
Other Chronic Diseases	10.8%	13.1%	8.3%	14.2%	12.2%	12.9%	17.5%	13.2%	16.1%	13.9%
Housing	10.8%	20.6%	34.2%	29.3%	10.5%	9.6%	28.8%	39.5%	28.3%	23.1%
Education	18.4%	82.5%	42.1%	71.4%	77.4%	14.7%	67.8%	49.1%	55.3%	66.4%
Employment	40.2%	86.9%	60.5%	64.7%	90.0%	44.8%	79.8%	67.7%	56.8%	84.7%
	Non-Violent Felony 18% of ATI-Enrolled (n=3,046/3 yrs or ~1,015/yr)					Non-Violent Felony 18% of ATI-Non-Enrolled (n=17,043/3 yrs or ~5,681/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>19%</b>	Severe SUD <b>25%</b>	Decision Making <b>4%</b>	Self-Management <b>37%</b>	Interpersonal Conflict <b>15%</b>	No Formal Programming <b>18%</b>	Severe SUD <b>26%</b>	Decision Making <b>9%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>14%</b>

SUD	0.0%	29.4%	27.0%	65.6%	0.0%	0.0%	32.7%	21.2%	62.6%	0.0%
Severe SUD	0.0%	70.6%	0.0%	0.0%	0.0%	0.0%	67.3%	0.0%	0.0%	0.0%
Opioid Use Disorder	0.0%	19.6%	0.0%	0.0%	0.0%	0.0%	22.1%	0.0%	0.0%	0.0%
Criminal Thinking	0.0%	13.4%	100.0%	0.0%	0.0%	0.0%	25.5%	100.0%	0.0%	0.0%
Mental Health	5.8%	36.3%	13.9%	27.2%	20.1%	6.2%	37.6%	22.5%	25.8%	21.9%
Serious Mental Illness	2.3%	6.1%	4.1%	7.1%	5.9%	2.0%	7.3%	7.8%	8.5%	6.6%
HIV/HCV	1.9%	7.5%	2.5%	3.3%	2.4%	1.9%	11.1%	3.1%	4.2%	2.2%
Other Chronic Diseases	15.8%	19.1%	19.8%	18.6%	18.6%	17.0%	25.1%	20.0%	22.0%	19.6%
Housing	10.8%	29.6%	32.8%	36.6%	21.4%	11.6%	36.4%	47.0%	45.4%	33.3%
Education	13.7%	66.4%	42.6%	56.0%	61.1%	10.2%	57.6%	44.5%	49.4%	50.6%
Employment	48.0%	80.2%	67.2%	59.3%	87.8%	48.9%	77.9%	70.5%	59.3%	85.5%
	<b>High Misdemeanor</b> 25% of ATI-Enrolled (n=5,535/3 yrs or ~1,845/yr)					<b>High Misdemeanor</b> 18% of ATI-Non-Enrolled (n=16,962/3 yrs or ~5,654/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>17%</b>	Severe SUD <b>24%</b>	Decision Making <b>4%</b>	Self-Management <b>40%</b>	Interpersonal Conflict <b>15%</b>	No Formal Programming <b>19%</b>	Severe SUD <b>27%</b>	Decision Making <b>9%</b>	Self-Management <b>32%</b>	Interpersonal Conflict <b>13%</b>
SUD	0.0%	28.4%	23.5%	70.3%	0.0%	0.0%	30.5%	21.2%	67.5%	0.0%
Severe SUD	0.0%	71.6%	0.0%	0.0%	0.0%	0.0%	69.5%	0.0%	0.0%	0.0%
Opioid Use Disorder	0.0%	28.1%	0.0%	0.0%	0.0%	0.0%	26.8%	0.0%	0.0%	0.0%
Criminal Thinking	0.0%	13.6%	100.0%	0.0%	0.0%	0.0%	27.8%	100.0%	0.0%	0.0%
Mental Health	5.5%	30.9%	21.6%	21.3%	16.8%	5.2%	36.4%	21.9%	23.6%	19.7%

Serious Mental Illness	1.5%	6.1%	6.6%	7.1%	5.9%	2.0%	10.6%	8.7%	10.6%	8.8%
HIV/HCV	2.7%	13.5%	3.8%	4.9%	1.7%	2.8%	12.5%	3.0%	5.0%	2.3%
Other Chronic Diseases	11.4%	15.8%	10.4%	13.7%	11.9%	13.2%	17.6%	12.6%	15.5%	13.5%
Housing	13.1%	24.1%	38.5%	31.7%	17.4%	12.3%	32.9%	40.1%	42.0%	29.4%
Education	15.1%	69.5%	43.7%	59.2%	72.1%	14.0%	60.6%	47.0%	49.7%	59.4%
Employment	37.8%	78.5%	67.6%	54.1%	84.5%	42.8%	73.2%	68.3%	50.7%	82.5%
	<b>Low Misdemeanor</b> 31% of ATI-Enrolled (n=17,832/3 yrs or ~5,944/yr)					<b>Low Misdemeanor</b> 43% of ATI-Non-Enrolled (n=40,066/3 yrs or ~13,355/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>15%</b>	Severe SUD <b>28%</b>	Decision Making <b>11%</b>	Self-Management <b>33%</b>	Interpersonal Conflict <b>13%</b>	No Formal Programming <b>13%</b>	Severe SUD <b>31%</b>	Decision Making <b>19%</b>	Self-Management <b>26%</b>	Interpersonal Conflict <b>11%</b>
SUD	0.0%	33.5%	17.5%	62.6%	0.0%	0.0%	39.1%	18.1%	58.8%	0.0%
Severe SUD	0.0%	66.5%	0.0%	0.0%	0.0%	0.0%	60.9%	0.0%	0.0%	0.0%
Opioid Use Disorder	0.0%	31.1%	0.0%	0.0%	0.0%	0.0%	33.0%	0.0%	0.0%	0.0%
Criminal Thinking	0.0%	25.4%	100.0%	0.0%	0.0%	0.0%	42.3%	100.0%	0.0%	0.0%
Mental Health	4.2%	38.9%	22.8%	26.6%	19.9%	4.2%	39.8%	24.2%	26.9%	19.6%
Serious Mental Illness	1.0%	10.1%	10.2%	9.6%	7.3%	1.6%	12.5%	11.9%	12.6%	8.2%
HIV/HCV	2.7%	16.8%	4.4%	6.7%	3.4%	3.0%	16.0%	4.3%	6.5%	3.1%
Other Chronic Diseases	14.3%	22.8%	21.3%	18.9%	17.4%	14.6%	24.2%	20.7%	20.8%	17.3%
Housing	11.8%	36.7%	50.7%	42.1%	29.5%	10.2%	43.6%	49.4%	50.5%	30.9%
Education	11.8%	62.0%	45.5%	54.6%	54.6%	11.1%	58.4%	45.7%	50.7%	54.8%

Employment	54.1%	82.9%	79.4%	63.3%	87.3%	54.1%	82.4%	77.7%	65.2%	86.7%
	<b>All other charges ATI</b> 12% of ATI-Enrolled (n=1,218/3 yrs or ~404/yr)					<b>All other charges ATI</b> 10% of ATI-Non-Enrolled (n=8,896/3 yrs or ~2,965/yr)				
<b>% within in Program Group</b>	No Formal Programming <b>11%</b>	Severe SUD <b>33%</b>	Decision Making <b>14%</b>	Self-Management <b>28%</b>	Interpersonal Conflict <b>14%</b>	No Formal Programming <b>12%</b>	Severe SUD <b>31%</b>	Decision Making <b>18%</b>	Self-Management <b>26%</b>	Interpersonal Conflict <b>12%</b>
SUD	0.0%	32.2%	14.0%	65.9%	0.0%	0.0%	38.0%	14.6%	54.5%	0.0%
Severe SUD	0.0%	67.8%	0.0%	0.0%	0.0%	0.0%	62.0%	0.0%	0.0%	0.0%
Opioid Use Disorder	0.0%	17.4%	0.0%	0.0%	0.0%	0.0%	20.6%	0.0%	0.0%	0.0%
Criminal Thinking	0.0%	32.4%	100.0%	0.0%	0.0%	0.0%	40.8%	100.0%	0.0%	0.0%
Mental Health	3.8%	35.2%	25.1%	21.9%	17.8%	4.2%	37.0%	23.1%	25.9%	16.3%
Serious Mental Illness	0.0%	6.4%	9.9%	6.5%	4.9%	1.3%	7.1%	7.4%	8.5%	4.6%
HIV/HCV	0.8%	9.6%	3.5%	3.6%	4.9%	1.8%	9.6%	2.3%	3.7%	2.3%
Other Chronic Diseases	12.7%	15.1%	18.7%	13.1%	15.3%	11.0%	17.5%	15.4%	13.8%	14.3%
Housing	12.1%	31.2%	55.0%	38.2%	18.4%	12.1%	39.2%	49.2%	48.5%	24.1%
Education	12.1%	69.3%	54.4%	59.8%	70.1%	11.5%	64.3%	52.2%	57.0%	63.4%
Employment	56.8%	88.4%	87.1%	66.2%	88.5%	52.7%	82.7%	80.4%	67.5%	87.4%

## Appendix E: Borough Analysis

Figure 2 provides a breakdown of ATI-Eligible individuals within the five boroughs by charge category (each borough adds to 100%). In Brooklyn, Manhattan, Queens, and Staten Island, upwards of one-third of individuals were ATI-Non-Enrolled with a low misdemeanor charge. However the Bronx, the majority of individuals (33.5%) were ATI-Enrolled with a low misdemeanor charge.

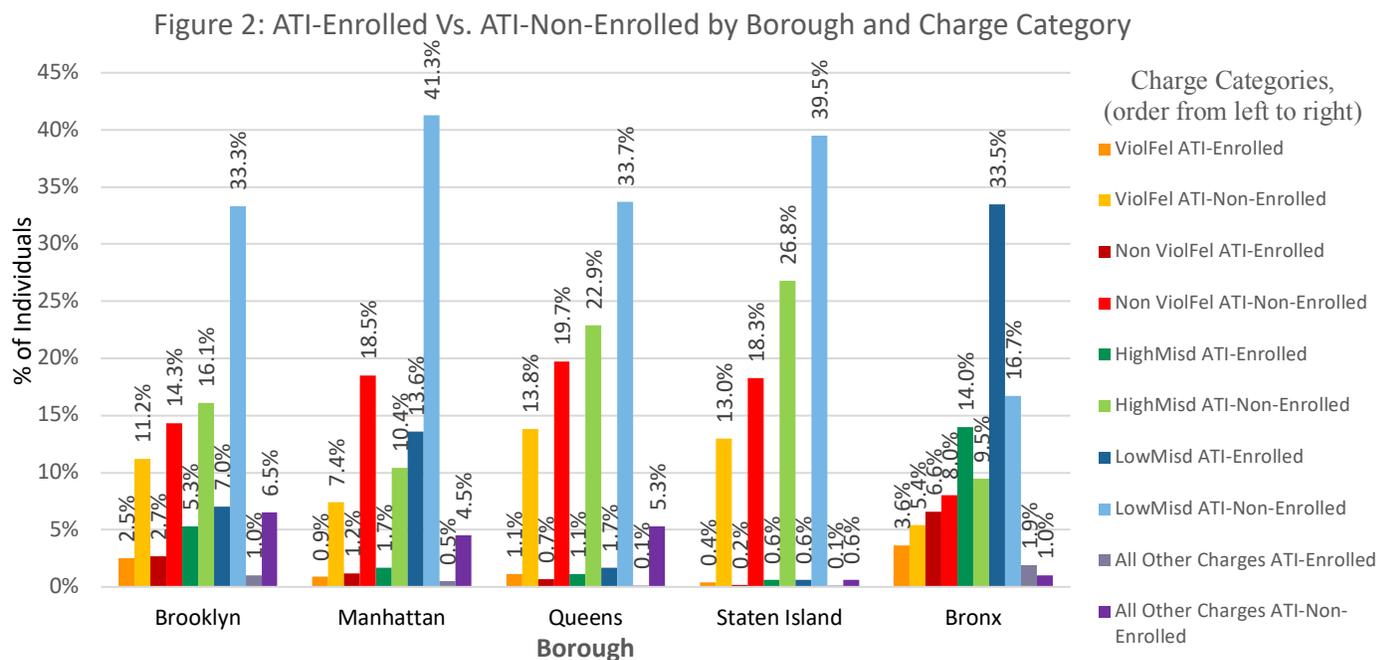


Table 3: Number and percentage of ATI-Enrolled and ATI-Non-Enrolled by borough and charge category in 2016

Charge Group Categories	All		Brooklyn		Manhattan		Queens		Staten Island		Bronx	
	N	%	N	%	N	%	N	%	N	%	N	%
ViolFel ATI-Enrolled	697	2.1%	200	2.5%	99	0.90%	49	1.1%	5	0.4%	344	3.6%
NonViolFel ATI-Enrolled	1,002	3.0%	214	2.7%	128	1.20%	29	0.7%	2	0.2%	629	6.6%
HighMisd ATI-Enrolled	2,002	5.9%	422	5.3%	181	1.70%	46	1.1%	7	0.6%	1,346	14.0%
LowMisd ATI-Enrolled	5,326	15.7%	559	7.0%	1,471	13.6%	75	1.7%	7	0.6%	3,214	33.5%
All other charges ATI-Enrolled	315	0.9%	81	1.0%	49	0.5%	5	0.1%	1	0.1%	179	1.9%
ViolFel ATI-Non-Enrolled	2,965	8.7%	893	11.2%	796	7.4%	598	13.8%	162	13.0%	516	5.4%
NonViolFel ATI-Non-Enrolled	4,986	14.7%	1,137	14.3%	2,004	18.5%	849	19.7%	228	18.3%	768	8.0%
HighMisd ATI-Non-Enrolled	4,640	13.7%	1,282	16.1%	1,128	10.4%	987	22.9%	333	26.8%	910	9.5%
LowMisd ATI-Non-Enrolled	10,666	31.4%	2,655	33.3%	4,467	41.3%	1,454	33.7%	491	39.5%	1,599	16.7%
All Other Charges ATI-Non-Enrolled	1,333	3.9%	519	6.5%	484	4.5%	227	5.3%	7	0.6%	96	1.0%
<b>Total</b>	<b>33,932</b>		<b>7,962</b>		<b>10,807</b>		<b>4,319</b>		<b>1,243</b>		<b>9,601</b>	

Figure 3 provides the programming needs of ATI individuals by borough. The distribution of programming needs across boroughs are relatively consistent. Manhattan and Brooklyn have higher prevalence of decision making needs, whereas the Bronx has a higher percentage of individuals with a self-management need.

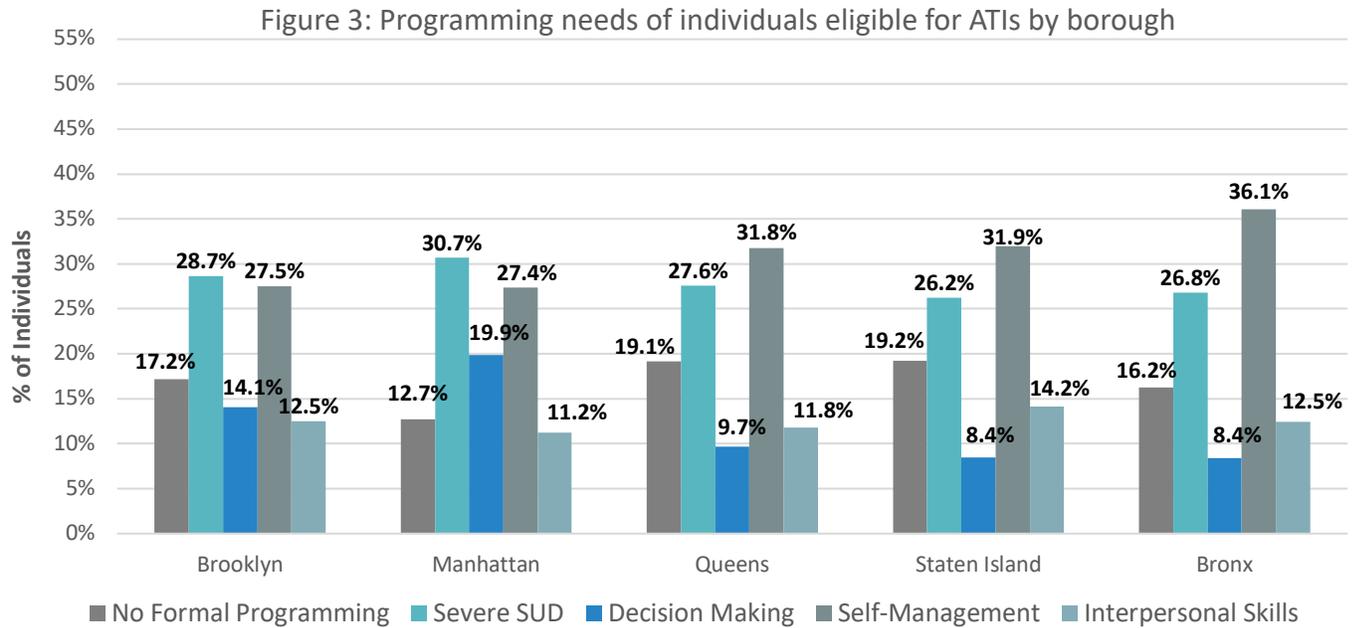
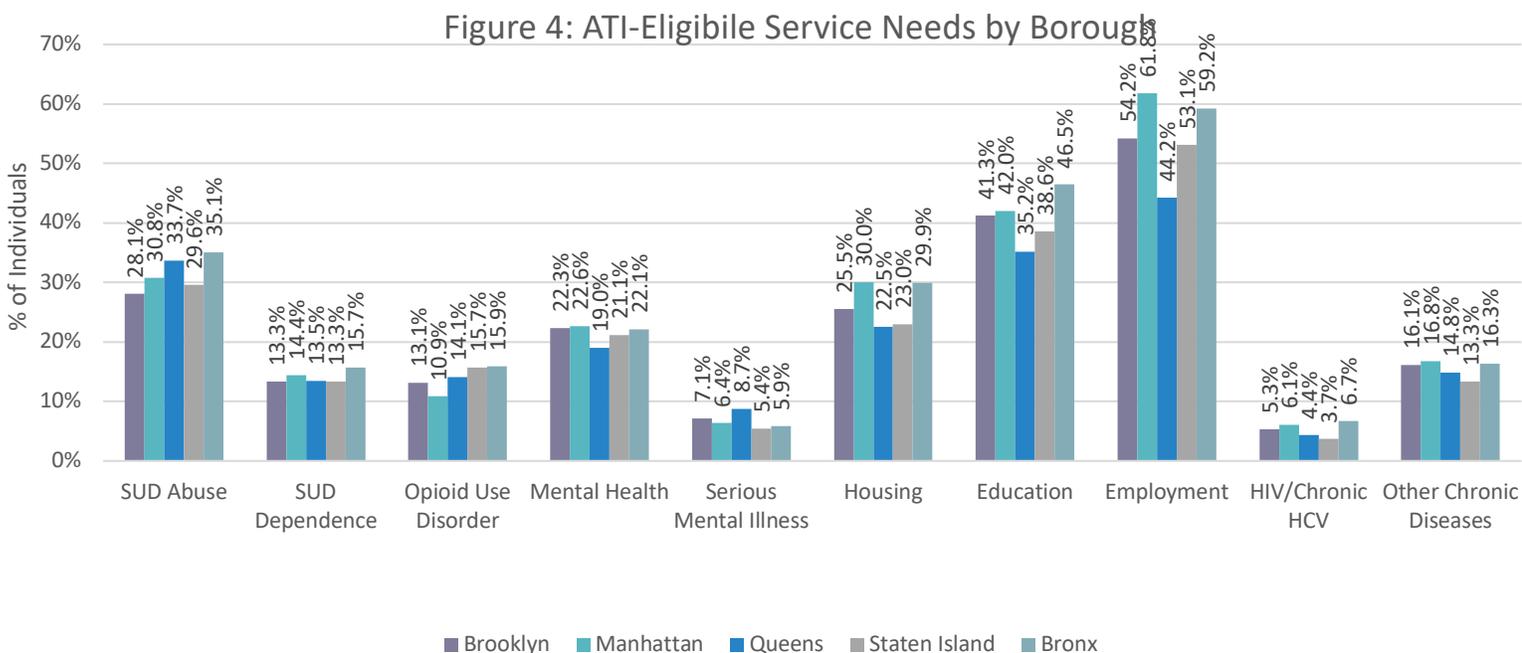


Figure 4 shows the service needs of ATI-Eligible individuals across the five boroughs (these needs are not mutually exclusive and therefore do not add to 100%). In general, the level of prevalence needs are consistent across the boroughs. Manhattan had a higher percentage of individuals with criminal thinking needs, whereas Queens had a lower percentage of individuals with a need for employment services.



## **Appendix F: Information Collected in the RNR Program Tool for Adults**

- **Program Enrollment and Population**
  - Total number of clients served in last 12 months
  - Total number of criminal justice system clients served in last 12 months
  - Of those currently enrolled, age (16-27; 28-35; 36-42; 43+), race, and gender breakdown
- **Program Performance Metrics**
  - Percentage successfully completed in last year (overall and criminal justice population)
  - Percentage of how clients end program participation (e.g., successfully, dismissed, removal from program)
  - Of those who successfully completed, age (16-27; 28-35; 36-42; 43+), race, and gender breakdown
  - Percentage of program sessions completed by successful and unsuccessful clients
- **Program Staff**
  - Percentage of staff turnover in the past year
  - Percentage of employees in the organization who are contractors
  - Credentials of administrators and staff (e.g., advanced degrees, certification to teach a specific curriculum, relevant experience, correctional staff without certification)
  - Staff training and special qualifications (e.g., mental health qualifications)
- **Program Population and Eligibility**
  - Target population
  - Exclusionary criteria
  - Methods/ instruments used for screening clients for eligibility and matching clients to services, once enrolled
  - Criminal justice risk level for eligibility of the target population
- **Program Target**
  - Target behavior (e.g., substance use, cognitive restructuring, life skills)
  - Primary approach to target behavior (e.g., intensive outpatient, classes, case management)
  - Additional elements (e.g., family reunification, mentoring, housing, trauma-informed)
  - Flow and stages of programming and case/treatment planning (if applicable)
  - Curriculums used in the program
  - Referral practices to other programs
- **Program Controls, Sanctions, and Incentives**
  - Type of rewards/ positive reinforcement and sanctions/ negative reinforcement used, if applicable, and how they are administered
  - Frequency of drug testing in the program (if applicable)
  - Other types of structure/ controls
- **Program Dosage**
  - Total hours clients expected to complete in the program
  - Frequency of the programming (e.g., daily, weekly, monthly)
  - Hours per week participants are involved in the program
  - Length of the program, excluding aftercare length (in weeks)
  - Phases of programming
  - Components and length of aftercare
- **Program Implementation**
  - Requirements to complete program
  - Communication and information sharing practices with other agencies
  - Prior evaluation of the program (e.g., external, internal, performance measures, client satisfaction scales)
  - Program use of an operations manual or standard operating procedures (e.g., elements of manual used)
  - Coaching practices with program staff (e.g., external coaching, peer/staff coaching)
  - Quality assurance measures (e.g., external audits, videotaping sessions, staff review problem

## Appendix H: ATI-Eligible Programming and Service Needs by Prior History, Service Needs by Charge Category

The majority of the ATI-Eligible population (47%) have prior felony and misdemeanor convictions. 26% have no prior convictions, while 20% have a prior misdemeanor charge. Only 6% of the population has a prior felony only. Figure 5 provides the programming needs within each prior conviction charge group (each prior history group adds up to 100%). In general, the programming needs were consistent among each prior history group. However, individuals with a prior misdemeanor only and a prior felony and misdemeanor had higher decision-making needs. Figure 6 provides the breakdown of service needs within each prior history group. Overall, the level of needs is consistent for each charge history, however generally individuals with a prior misdemeanor only and individuals with a prior felony and misdemeanor typically had higher levels of need. For example, these groups' level of serious mental illness needs is 26% and 17% respectively, compared to their no prior and prior felony only counterparts, in which serious mental illness is only present in 11% and 7% of the population, respectively.

Figure 5: ATI-Eligible Programming Needs by Prior History

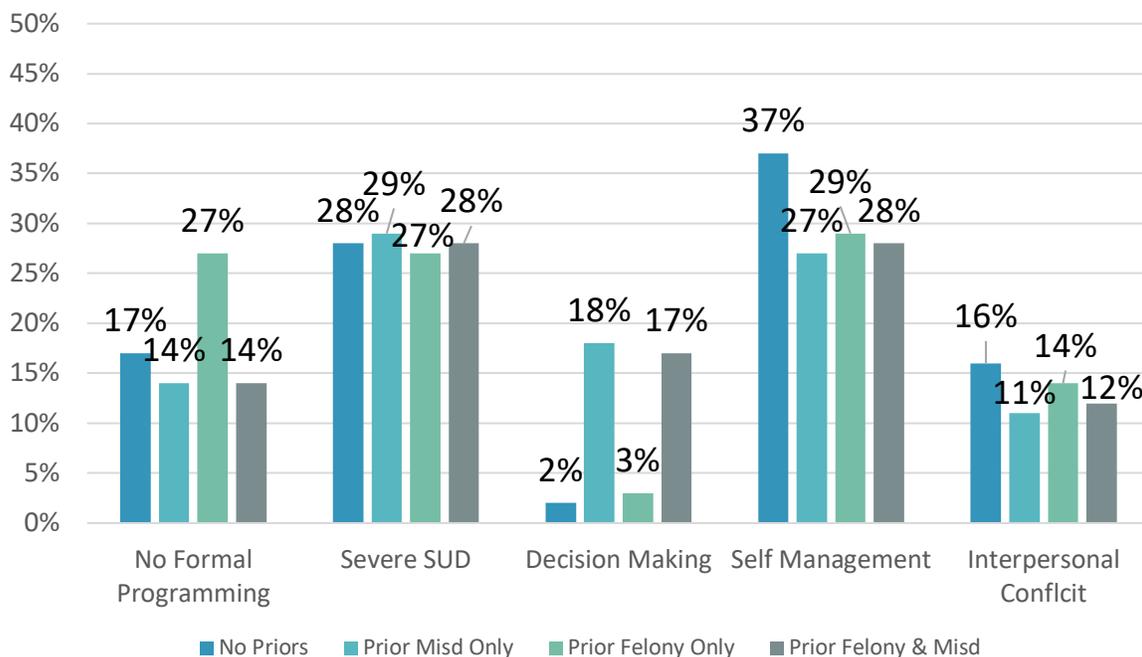
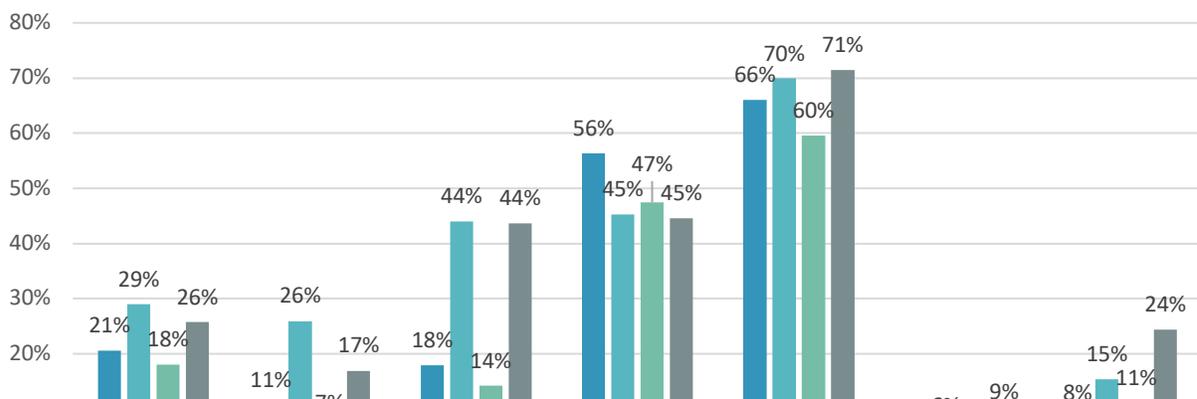


Figure 6: ATI-Eligible Service Needs by Prior History



Figures 7 and 8 provide the service needs by charge category for ATI-Enrolled and ATI-Non-Enrolled individuals. Service needs are generally consistent among charge categories and ATI-Enrolled and Non-Enrolled individuals.

Figure 7: ATI-Enrolled Service Needs by Charge Category

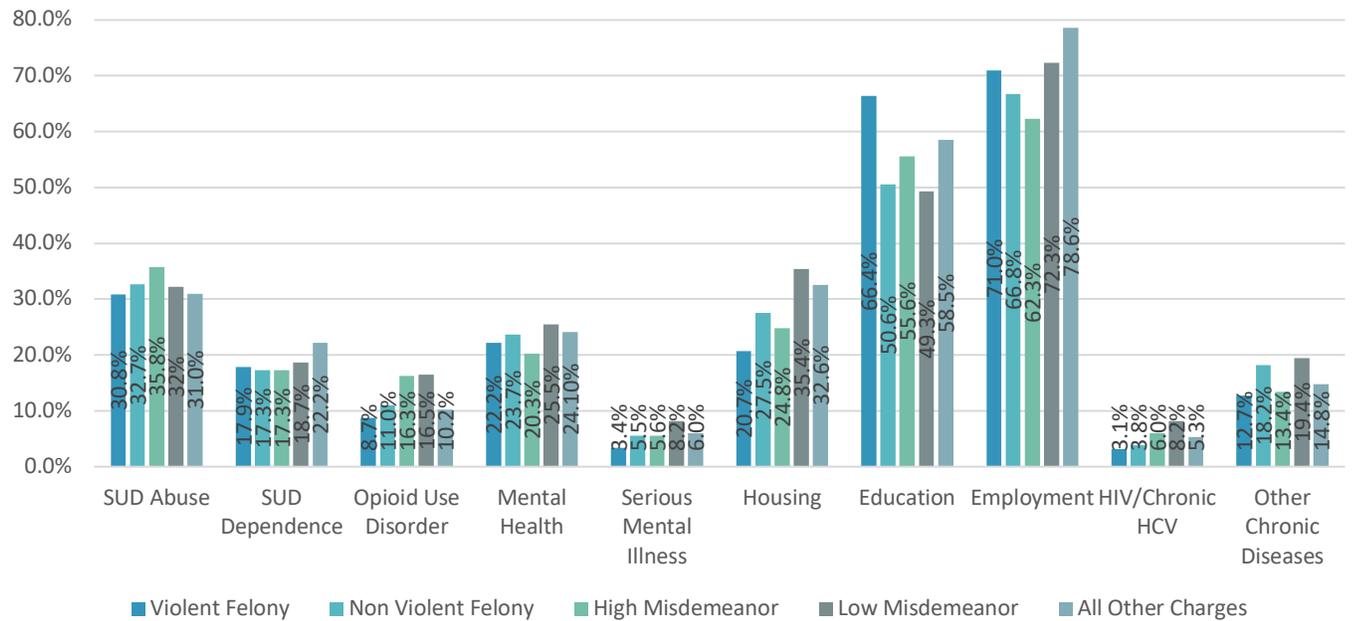
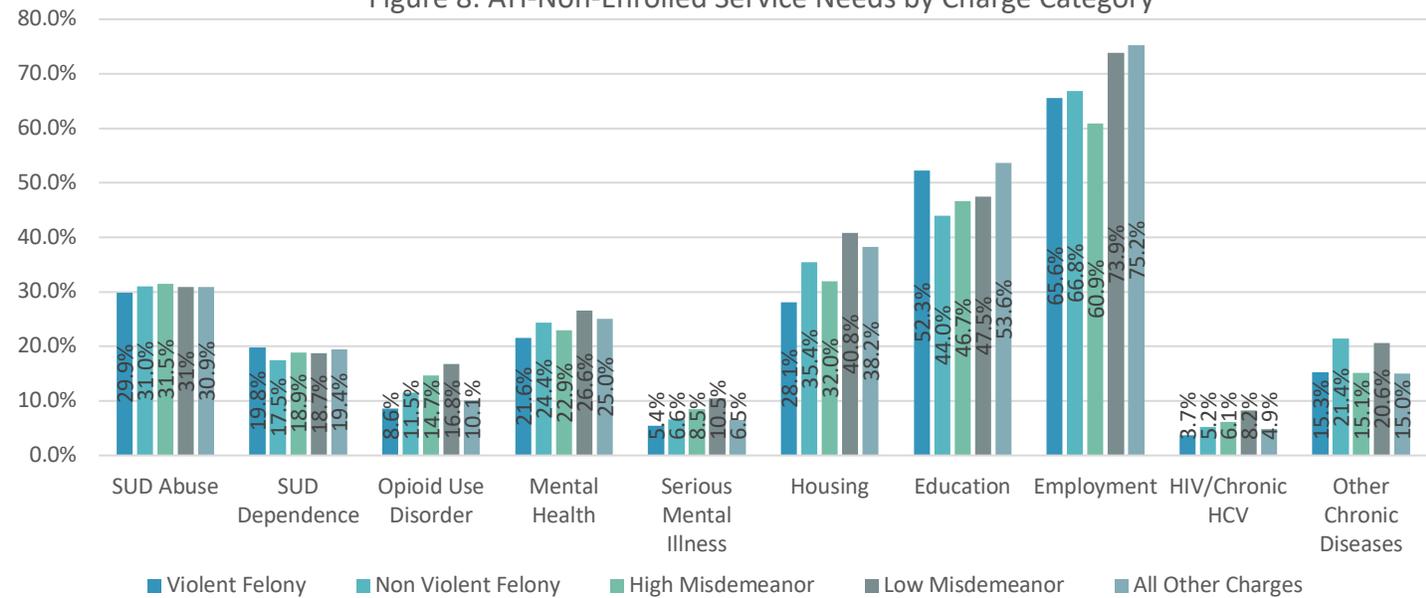


Figure 8: ATI-Non-Enrolled Service Needs by Charge Category



## **Appendix I: MOCJ Contract Coding Sheet**

Is contract with an organization, partnership, or individual?

- Organization
- Partnership
- Individual

How does the program describe its mission?

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Is program considered an Alternative to Incarceration (ATI) program?

- Yes
- No

Are participants court-mandated to attend the program?

- Yes, all
- Yes, some
- No

What is the program's setting?

- Jail
- Juvenile Detention Facility
- Prison
- Residential
- Community-based
- Other (Specify: \_\_\_\_\_)

What category(ies) of services are provided? Check all that apply.

- Anger management
- Basic Needs (food, clothing)
- Case management or reentry case management
- Cognitive restructuring/Criminal thinking
- Co-occurring mental health and substance use disorders
- Domestic violence
- Driving under the influence/Driving while intoxicated (DUI/DWI)
- Educational/Vocational
- Employment
- Financial
- Fines
- General recreation activities (e.g., gardening, yoga)
- Housing
- Life skills (general)
- Marriage/family issues
- Mental health
- Obtaining vital documents

- Parenting classes/skills
- Referrals
- Sex offending
- Self-improvement and management
- Services (e.g., legal, medical, emergency)
- Social and interpersonal skills
- Substance use disorders
- Other (please specify): \_\_\_\_\_

Is program expected to make referrals for additional services or programming?

- Yes
- No
- Varies by client

If yes, what types of services and programming?

- Anger management
- Basic Needs (food, clothing)
- Case management or reentry case management
- Cognitive restructuring/Criminal thinking
- Co-occurring mental health and substance use disorders
- Domestic violence
- Driving under the influence/Driving while intoxicated (DUI/DWI)
- Educational/Vocational
- Employment
- Financial
- Fines
- General recreation activities (e.g., gardening, yoga)
- Housing
- Life skills (general)
- Marriage/family issues
- Mental health
- Parenting classes/skills
- Referrals
- Sex offending
- Self-improvement and management
- Services (e.g., legal, medical, emergency)
- Social and interpersonal skills
- Substance use disorders
- Not specified in contract
- Other (Specify: \_\_\_\_\_)

What is the term (length) of the contract (number of months)? \_\_\_\_\_

How many people is the program contracted to serve?

Screening? \_\_\_\_\_

Intake? \_\_\_\_\_

Developing service plan? \_\_\_\_\_

Making referrals? \_\_\_\_\_  
Program completion? \_\_\_\_\_

What is the total cost for the contract? \_\_\_\_\_

What is the breakdown of the total cost?

\_\_\_\_\_ Personnel  
\_\_\_\_\_ Rent  
\_\_\_\_\_ Supplies  
\_\_\_\_\_ Other  
\_\_\_\_\_ Indirect

At what time points or milestones is funding disbursed?

\_\_\_% Insert time period or milestone  
\_\_\_% Insert time period or milestone  
\_\_\_% Insert time period or milestone  
\_\_\_% Insert time period or milestone

What is the average cost per participant? \_\_\_\_\_

Does the contract specify requirements for staff training and/or experience?

- Yes
- No

If yes, what are the requirements?

- Bachelor's degree
- Certified Addiction Counselor (CAC)
- Certification (other than CAC) (Specify: \_\_\_\_\_)
- Master's degree or higher
- Medical training/degree (nurse, NO, PA, MD)
- Relevant experience
- Other (Specify: \_\_\_\_\_)

Does contract place limits on staff salaries?

- Yes
- No

If yes, what is the salary cap? \_\_\_\_\_

Are fidelity measures in place?

- Yes
- No

If yes, what are those measures?

- Case review as needed
- Client satisfaction surveys
- External evaluation

- External quality assurance audits (e.g., JACHO, ACRA)
- Internal quality assurance team/supervisor
- Peer review sessions
- Review tapes (video or audio) of sessions
- Supervisor review of staff through in-person observations
- Other (please specify): \_\_\_\_\_

How are these measures reported?

- Annual report
- Case conferencing
- Monthly report
- Quarterly report
- Verbal contact
- Not reported
- Other (Specify: \_\_\_\_\_)

How frequently are these measures reported?

- Weekly
- Bi-weekly
- Monthly
- Annually
- Other (Specify: \_\_\_\_\_)

Are performance metrics (e.g., successful completion, recidivism, life outcomes) in place?

- Yes
- No

If yes, what are those metrics?

- Attendance at sessions
- Drug testing
- Engagement in employment or education
- Increased autonomy or life skills
- Rearrest
- Reconviction
- Re-incarceration
- Other (Specify: \_\_\_\_\_)

How are these metrics reported?

- Annual report
- Case conferencing
- Monthly report
- Verbal contact
- Not reported
- Other (Specify: \_\_\_\_\_)

How frequently are these metrics reported?

- Weekly

- Bi-weekly
- Monthly
- Annually
- Other (Specify: \_\_\_\_\_)

What is the impact of the performance metrics (e.g., impact on funding or referrals)?

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What dosage (number of hours) of programming is the program contracted to provide to a given client? \_\_\_\_\_ hours

Does the program target juveniles, adults, or both?

- Adults
- Juveniles
- Young people (age 16-21/24)
- Any age group

How does the program describe its target population? (e.g., individuals with mental health issues, individuals with substance use disorder?)

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Are there exclusion criteria for participation?

If yes, what are the criteria?

- Age (Specify: \_\_\_\_\_)
- Gender (Specify: \_\_\_\_\_)
- Offense type (Specify: \_\_\_\_\_)
- Risk level (Specify: \_\_\_\_\_)
- Special characteristics, e.g. SMI (Specify: \_\_\_\_\_)
- Other (Specify: \_\_\_\_\_)

Does the contract stipulate assessments for use for screening?

- Yes
- No

If yes, what are the instruments?

- Risk-need assessment (Specify: \_\_\_\_\_)
- Target-specific assessment (Specify: \_\_\_\_\_)
- Other (Specify: \_\_\_\_\_)

Are these instruments appropriate for the program type?

- Yes
- No

Does the contract stipulate assessments for use for intake/placement?

- Yes
- No

If yes, what are the instruments?

- Risk-need assessment (Specify: \_\_\_\_\_)
- Target-specific assessment (Specify: \_\_\_\_\_)

Are these instruments appropriate for the program type?

- Yes
- No

Is programming provided in group, individual settings, or both?

- Group
- Individual
- Both

If group or both, what is the expected number of participants per group? \_\_\_\_\_

How frequently do participants attend the program?

\_\_\_\_\_ times per

- Week
- Month

What is the length (number of minutes) of program sessions? \_\_\_\_\_ minutes

What curriculum or curricula does the program use?

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Are the curricula appropriate for the target behavior?

- Yes
- No

Does the contract require training in or use of trauma-informed practices?

- Yes
- No

If yes, how?

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Does the contract require procedures to link individuals to housing supports?

- Yes

- No

If yes, how?

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Does the contract specify the need for some staff to be multi-lingual?

- Yes
- No

If yes, which languages are spoken? Check all that apply.

- Arabic
- Cantonese
- French
- Korean
- Mandarin
- Spanish
- Tagalog
- Other (Specify \_\_\_\_\_)

Does the program provide transportation assistance?

- Yes
- No

Does the program provide childcare assistance?

- Yes
- No

Number of locations:

In which boroughs does the program provide services?

- Brooklyn
- Manhattan
- Queens
- Staten Island
- The Bronx

What privacy measures are in place?

- Consent forms
- HIPAA
- Other (Specify: \_\_\_\_\_)

What client-level information is shared between treatment agency and MOCJ?

- Attendance
- Client progress/performance
- Drug testing data

- Only aggregate data are shared
- No information sharing
- Other (Specify: \_\_\_\_\_)

How is information shared between treatment agency and MOCJ?

- Client self-reports
- Direct access to records through shared/common data systems
- MOCJ provides records to program
- Program provides records
- Other (Specify: \_\_\_\_\_)

Are there amendments to the contract?

- Yes
- No

If yes, what do the amendments stipulate?

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## **Appendix J: Propensity Score Balancing Analysis Methods**

Logistic regression models were developed for each strata of the design to predict ATI group membership (to model the odds of ATI group membership over NonATI group membership):

$$\log \frac{ATI}{NonATI} = \beta_0 + x_1\beta_1 + \dots + x_k\beta_k$$

The estimated models were then used to predict the probability of ATI group membership ( $p$ ) for each client. These predicted probabilities are the propensity scores.

There are several ways that propensity scores can be used to balance samples and conduct analysis.

1. Propensity score weighting. Under the weighting approach, the propensity scores are used to construct weights for the sample so that all of the data can be used, only it is re-weighted to balance the attributes included in the logistic regression above. The weights are termed inverse probability of treatment weights and are constructed by taking the inverse of the probability of being in the current treatment group (ATI or NonATI). Because  $p$  is an estimate of the probability of ATI,  $1 - p$  is an estimate of the probability of NonATI. Therefore, by taking the inverse of these weights, and applying them to the correct group, we can estimate the unbiased difference between the ATI and NonATI group recidivism rates. There are two estimators that can be computed and analyzed for this purpose:
  - a. Average Treated Effect (ATE): This is a measure of the effect of ATI on the average client in the population (average across ATI and NonATI populations). The weights are computed as  $w = \frac{ATI}{p} + \frac{NonATI}{1-p}$ . In other words, if the record is for an ATI client, then the weight is proportional to the inverse of the probability of being in the ATI group. If the record is for a NonATI client, then the weight is proportional to the inverse of the probability of being in the NonATI group. These weights applied to the data will yield the effect of ATI on the average eligible client.
  - b. Average Treatment Effect on the Treated (ATT): While the ATE estimates the effect of the program on the average eligible client this may not be the policy question of interest. It may be more policy relevant to ask what would have been the recidivism outcome of the average ATI client had they not received treatment. Here the ATI group sample is not re-weighted, only the NonATI sample (to make it resemble the ATI sample). The weights for the ATT estimator are computed as  $w = ATI + p * \frac{NonATI}{1-p}$ . Hence the ATT estimator re-weights the NonATI sample to make it resemble to ATI sample but does not re-weight the ATI sample.
2. Propensity score matching: Under the matching approach, rather than weight the sample in different ways to estimate the ATE or ATT estimators, the propensity scores are used to find one or more nearest neighbors for each client (from the other group). The outcomes from the “matched” neighbors are then compared to estimate the effects of the program.
  - a. ATE: Similar to the re-weighting method, the matched ATE estimator is computed by first creating a matched outcome for all the clients in the ATI and the NonATI groups. However, they are only matched to clients in the other group. All ATI clients are matched to their nearest neighbor among the NonATI data and all NonATI clients are matched to their nearest neighbor from the ATI group. Once matched the outcomes for the matched clients are directly computed and averaged across the full sample. This yields the ATE estimator.

- b. ATT: Here, since we are interested in estimating the impacts of ATI on only ATI clients, we match the ATI sample to its nearest neighbor from the NonATI sample and compare the outcomes of this matched sample. This yields the ATT estimator.

Table 4: Propensity score weighting and matching estimators (ATE and ATT) for 1-year recidivism rates, by charge group strata.

	Re-arrest		Readmission to DOC	
	Any	Viol	CS	CS+DE
<b>Weighted ATE Estimates</b>				
ViolFel	<b>26.8%</b>	<b>3.5%</b>	<b>14.2%</b>	<b>21.6%</b>
NonViolFel	<b>12.9%</b>	<b>1.8%</b>	<b>-2.6%</b>	<b>4.2%</b>
HighMisd	<b>4.1%</b>	0.6%	<b>-3.2%</b>	<b>-4.5%</b>
LowMisd	<b>2.1%</b>	<b>-0.9%</b>	<b>-6.1%</b>	<b>-4.2%</b>
All other charges	<b>8.1%</b>	0.1%	<b>-2.7%</b>	0.5%
<b>Matched ATE Estimates</b>				
ViolFel	<b>19.8%</b>	<b>4.9%</b>	<b>5.5%</b>	<b>14.0%</b>
NonViolFel	<b>11.3%</b>	<b>1.9%</b>	<b>-2.9%</b>	2.5%
HighMisd	<b>2.6%</b>	1.2%	<b>-6.8%</b>	<b>-8.1%</b>
LowMisd	<b>1.6%</b>	<b>-0.9%</b>	<b>-6.9%</b>	<b>-4.8%</b>
All other charges	<b>7.4%</b>	0.9%	<b>-4.1%</b>	-1.2%
<b>Weighted ATT Estimates</b>				
ViolFel	<b>20.9%</b>	<b>8.0%</b>	0.8%	<b>11.3%</b>
NonViolFel	<b>13.1%</b>	<b>3.2%</b>	<b>-4.6%</b>	0.1%
HighMisd	<b>-2.1%</b>	0.9%	<b>-9.5%</b>	<b>-14.5%</b>
LowMisd	-0.3%	<b>-0.8%</b>	<b>-9.9%</b>	<b>-9.6%</b>
All other charges	<b>5.3%</b>	<b>0.3%</b>	<b>-6.0%</b>	<b>-5.4%</b>
<b>Matched ATT Estimates</b>				
ViolFel	<b>15.4%</b>	<b>7.6%</b>	1.4%	<b>12.0%</b>
NonViolFel	<b>13.1%</b>	<b>2.1%</b>	<b>-3.3%</b>	0.4%
HighMisd	-0.8%	<b>2.2%</b>	<b>-8.9%</b>	<b>-12.8%</b>
LowMisd	0.4%	-0.5%	<b>-10.0%</b>	<b>-9.4%</b>
All other charges	<b>4.4%</b>	0.4%	<b>-6.9%</b>	<b>-5.0%</b>

ATE – Average Treated Effect; ATT – Average Treatment Effect on the Treated  
 CS– City Sentenced; CS+DE–City Sentenced or Detained.

Table 5: Propensity score weighting and matching estimators (ATE and ATT) for 2-year recidivism rates, by charge group strata.

	Re-arrest		Readmission to DOC	
	Any	Viol	CS	CS+DE
<b>Weighted ATE Estimates</b>				
ViolFel	<b>23.2%</b>	<b>5.8%</b>	<b>10.7%</b>	<b>20.1%</b>
NonViolFel	<b>7.9%</b>	<b>2.1%</b>	<b>-5.9%</b>	<b>-0.2%</b>
HighMisd	1.3%	-0.1%	<b>-8.1%</b>	<b>-6.4%</b>
LowMisd	<b>-1.7%</b>	<b>-2.6%</b>	<b>-11.3%</b>	<b>-7.8%</b>
All other charges	<b>4.0%</b>	<b>-3.1%</b>	<b>-7.9%</b>	<b>-2.6%</b>
<b>Matched ATE Estimates</b>				
ViolFel	<b>21.8%</b>	<b>7.6%</b>	<b>6.1%</b>	<b>15.8%</b>
NonViolFel	<b>5.9%</b>	1.7%	<b>-6.5%</b>	-1.9%
HighMisd	0.8%	1.5%	<b>-10.6%</b>	<b>-8.9%</b>
LowMisd	<b>-1.8%</b>	<b>-2.7%</b>	<b>-12.1%</b>	<b>-8.3%</b>
All other charges	<b>4.8%</b>	-3.3%	<b>-6.3%</b>	-1.6%
<b>Weighted ATT Estimates</b>				
ViolFel	<b>24.6%</b>	<b>11.8%</b>	1.9%	<b>14.5%</b>
NonViolFel	<b>9.0%</b>	<b>3.0%</b>	<b>-7.6%</b>	<b>-2.9%</b>
HighMisd	<b>-4.8%</b>	-0.2%	<b>-14.6%</b>	<b>-17.4%</b>
LowMisd	<b>-4.5%</b>	<b>-3.1%</b>	<b>-15.9%</b>	<b>-13.7%</b>
All other charges	1.3%	<b>-2.7%</b>	<b>-9.9%</b>	<b>-8.1%</b>
<b>Matched ATT Estimates</b>				
ViolFel	<b>21.9%</b>	<b>10.7%</b>	4.1%	<b>13.9%</b>
NonViolFel	<b>5.4%</b>	2.1%	<b>-7.8%</b>	<b>-5.5%</b>
HighMisd	-3.0%	0.9%	<b>-13.5%</b>	<b>-15.3%</b>
LowMisd	<b>-3.7%</b>	<b>-3.0%</b>	<b>-14.7%</b>	<b>-12.0%</b>
All other charges	1.7%	-1.2%	<b>-7.8%</b>	<b>-5.9%</b>

ATE – Average Treated Effect; ATT – Average Treatment Effect on the Treated  
 CS– City Sentenced; CS+DE–City Sentenced or Detained.

## Appendix K: Group Match Recidivism Comparisons

In order to account for higher than average recidivism rates within the programming groups, ACE! examined correct/incorrect group recommendation/placement of individuals. Recidivism rates may be driven by individuals who were not recommended to receive a type of programming. The following analysis provides an example of how appropriate placement of individuals in programs can affect recidivism, and the potential gains correct placement may have, and/or the negative effects of incorrect placement. The following definitions are used to define the various match outcomes within each programming group:

**Recommended and received:** Individuals were recommended X group and received X group

**Received and not recommended:** Individuals received X group, but were recommended for a different group

**Recommended and not received:** Individuals were recommended X group but received a different group instead

**Not received and not recommended:** Individuals were not recommended nor did they receive X group

Tables 6 and 7 shows the sample size for each match group. The *recommended and received* and *received and not recommended* groups make up the total N for each year. The *recommended and not received* group represents the programming that the *received and not recommended* group should have received. Recidivism measures for 1-year and 2-year follow-up periods included: re-arrest for any crime, re-arrest for a violent crime, re-admission to DOC as city sentenced, and re-admission to DOC as city sentenced or detained. Tables 8 and 9 provides the overall recidivism outcomes for each match group without controlling for attributes. Note: groups with a sample size  $n < 10$  were removed from the analysis and are not included in the total N.

**Table 6:** Match categories' sample sizes for 1-year follow-up period (N=27,988)

	No Formal Programming	A-Severe Substance Use Disorder	B-Decision Making	C-Self-Management	D-Interpersonal Skills
<b>Recommended</b>	<b>N=4,253</b>	<b>N=7,619</b>	<b>N=2,413</b>	<b>N=9,816</b>	<b>N=3,887</b>
Received	0 (0%)	122 (2%)	0 (0%)	9,503 (97%)	0 (0%)
Not Received	4,253 (100%)	7,497 (98%)	2,413 (100%)	313 (3%)	3,887 (100%)
<b>Received</b>	<b>N=115</b>	<b>N=418</b>	<b>N=328</b>	<b>N=27,127</b>	—
Recommended	0 (0%)	122 (29%)	0 (0%)	9,503 (35%)	—
Not Recommended	115 (100%)	296 (71%)	328 (100%)	17,624 (65%)	—

**Table 7:** Match categories' sample sizes for 2-year follow-up period. (N=18,121)

	No Formal Programming	A-Severe Substance Use Disorder	B-Decision Making	C-Self-Management	D-Interpersonal Skills
<b>Recommended</b>	<b>N=2,733</b>	<b>N=5,000</b>	<b>N=1,559</b>	<b>N=6,244</b>	<b>N=2,581</b>
Received	0 (0%)	80 (2%)	0 (0%)	6,072 (97%)	0 (0%)
Not Received	2,733 (100%)	4,920 (98%)	1,559 (100%)	172 (3%)	2,581 (100%)
<b>Received</b>	<b>N=70</b>	<b>N=281</b>	<b>N=162</b>	<b>N=17,608</b>	—
Recommended	0 (0%)	80 (28%)	0 (0%)	6,072 (34%)	—
Not Recommended	70 (100%)	201 (72%)	162 (100%)	11,536 (66%)	—

**Table 8:** 1-year follow-up outcomes for each programming groups' match/non-match possibilities without controlling for group differences (N=27,988)

	Re-arrest for any charge	Re-arrest for violent charge	Re-admission to DOC as city sentenced	Re-admission to DOC as city sentenced or detained
<b>No Formal Programming</b>				
Recommended and received	—	—	—	—
Received and not recommended (N=115)	72%	30%	9%	53%
Recommended and not received (N=4,253)	45%	7%	13%	29%
<b>Group A-Severe Substance Use Disorder</b>				
Recommended and received (N=122)	39%	7%	16%	43%
Received and not recommended (N=296)	31%	7%	16%	32%
Recommended and not received (N=7,497)	68%	14%	24%	48%
<b>Group B-Decision Making</b>				
Recommended and received	—	—	—	—
Received and not recommended (N=328)	63%	22%	11%	50%
Recommended and not received (N=2,413)	91%	13%	57%	84%
<b>Group C-Self-Management</b>				
Recommended and received (N=9,503)	51%	9%	12%	30%
Received and not recommended (N=17,624)	63%	11%	24%	45%
Recommended and not received (N=313)	45%	17%	10%	39%
<b>Group D-Interpersonal Skills</b>				
Recommended and received	—	—	—	—
Received and not recommended	—	—	—	—
Recommended and not received	54%	11%	13%	34%

(N=3,887)				
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**Table 9:** 2-year follow-up outcomes for each programming groups' match/non-match possibilities without controlling for group differences (N=18,121)

	Re-arrest for any charge	Re-arrest for violent charge	Re-admission to DOC as city sentenced	Re-admission to DOC as city sentenced or detained
<b>No Formal Programming</b>				
Recommended and received	—	—	—	—
Received and not recommended (N=70)	81%	49%	16%	66%
Recommended and not received (N=2,733)	57%	12%	18%	38%
<b>Group A-Severe Substance Use Disorder</b>				
Recommended and received (N=80)	60%	14%	28%	55%
Received and not recommended (N=201)	50%	9%	25%	47%
Recommended and not received (N=4,920)	76%	21%	32%	58%
<b>Group B-Decision Making</b>				
Recommended and received	—	—	—	—
Received and not recommended (N=162)	68%	31%	23%	57%
Recommended and not received (N=1,559)	96%	21%	67%	91%
<b>Group C-Self-Management</b>				
Recommended and received (N=6,072)	63%	14%	18%	40%
Received and not recommended (N=11,536)	72%	18%	31%	54%
Recommended and not received (N=172)	60%	24%	20%	55%
<b>Group D-Interpersonal Skills</b>				
Recommended and received	—	—	—	—
Received and not recommended	—	—	—	—

Recommended and not received (N=2,581)	65%	16%	19%	43%
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Bonferroni post-hoc tests were conducted to identify the significant differences between groups. Multivariate models were conducted to control for an additional set of attributes that might confound with the effects of matching. These multivariate models allow us to produce the same pairwise comparisons while also controlling for a set of relevant attributes. In all of the multivariate models, we have controlled for demographics (age and gender), risk level (CJA’s FTA risk score), charge groups (violent felony, non-violent felony, high misdemeanor, low misdemeanor, and other), as well as important ATI information. ATI variables include the length of stay in the ATI program (exit date minus entry date) and type of exit from the ATI program (successful or not successful). Hence, for the multivariate analysis, all pairwise recidivism rate comparisons reflect estimated contrasts *net* of the effects of all controlling factors. Table 10 shows the summary of the attributes used to control in the multivariate analysis. Tables 11 and 12 shows the univariate and multivariate recidivism contrasts for one- and two-year follow-up periods.

Table 10: Summary of Controlling Attributes

	1 Year Follow-up Sample								2 Year Follow-up Sample							
	Any Rearrest w/in 1 yr		Vio Rearrest w/in 1 yr		CS Readmission w/in 1 yr		CS/DE Readmission w/in 1 yr		Any Rearrest w/in 2 yr		Vio Rearrest w/in 2 yr		CS Readmission w/in 2 yr		CS/DE Readmission w/in 2 yr	
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Female (%)	22.60%	11.43%	16.92%	9.08%	18.24%	7.22%	20.58%	9.38%	24.93%	12.24%	17.61%	8.87%	19.10%	8.06%	22.33%	9.92%
Age (Years)	31.57	32.29	32.65	26.47	30.64	37.52	30.32	34.47	32.36	32.50	33.51	27.14	31.14	36.11	31.00	33.94
Pointscore (-12,+12)	0.92	-2.48	-1.10	-0.77	-0.15	-4.82	0.62	-3.57	0.98	-2.47	-1.46	-1.12	-0.34	-4.34	0.54	-3.37
Successful ATI Exit (%)	78.70%	51.31%	64.03%	51.62%	71.08%	28.37%	79.11%	38.29%	80.40%	51.40%	62.23%	51.02%	72.10%	27.89%	82.39%	38.04%
ATI Length of Stay (days)	123.2	113.9	117.6	119.2	129.1	71.9	134.3	93.4	120.6	124.7	122.7	127.2	136.0	88.8	140.2	106.5
ATI Group ViolFel (%)	8.23%	5.58%	6.32%	9.78%	7.39%	3.79%	7.49%	5.49%	6.71%	5.29%	5.11%	8.87%	6.33%	4.08%	6.23%	5.23%
ATI Group NonViolFel (%)	11.65%	7.96%	9.56%	8.94%	10.31%	6.12%	10.44%	8.09%	11.16%	7.91%	9.04%	8.33%	9.66%	6.87%	9.92%	7.91%
ATI Group HighMisd (%)	22.51%	14.18%	17.36%	20.02%	19.71%	9.17%	21.35%	12.14%	20.80%	13.17%	15.07%	17.87%	17.86%	9.08%	19.36%	11.64%
ATI Group LowMisd (%)	54.53%	67.21%	62.65%	55.99%	58.56%	75.77%	56.98%	69.31%	58.30%	68.16%	66.22%	59.48%	61.93%	73.92%	60.64%	69.64%
ATI Group Other (%)	3.08%	5.06%	4.12%	5.27%	4.02%	5.16%	3.75%	4.97%	3.03%	5.47%	4.56%	5.45%	4.23%	6.06%	3.84%	5.59%

The following list provides the significant differences between groups, see tables 8 and 9 below for the complete details. **Note:** Difference of means could not be done for Group D because there were no ATI Programs that were classified to address Social and Interpersonal Skills, and as such there were no actual intakes into Group D. Difference of means could not be done for Group B recommended and received because the sample size was < 10. No formal programming is not discussed below because it is not expected to have recidivism reduction effects.

**Group A-Severe Substance Use Disorder:** Statistically significant differences exist between groups for

A re-arrest for any charge within one year

- *Not recommended and not received* had higher recidivism compared to *recommended and received* (0.196, p<0.001) and *received and not recommended* (0.227, p<0.001); but lower recidivism compared to *recommended and not received* (-0.067, P<0.001)
- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.263, p<0.001)
- *Received and not recommended* had higher recidivism compared to *recommended and not received* (0.294, p<0.001)

A re-arrest for any charge within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.049,  $p < 0.001$ ), but higher recidivism compared to *received and not recommended* (0.149  $p < 0.001$ )
- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.154,  $p < 0.01$ )
- *Recommended and not received* had higher recidivism compared to *received and not recommended* (0.198,  $p < 0.001$ )

A re-arrest for a violent charge within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.029,  $p < 0.001$ )
- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.081,  $p < 0.01$ )

A re-arrest for a violent charge within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.042,  $p < 0.001$ )
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.104,  $p < 0.001$ )

A re-admission to DOC as City Sentenced within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.043,  $p < 0.001$ )

A re-admission to DOC as City Sentenced within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.050,  $p < 0.001$ )

A re-admission to DOC as city sentenced or detained within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.068,  $p < 0.001$ )
- *Received and not recommended* had higher recidivism compared to *recommended and not received* (0.087,  $p < 0.01$ )

A re-admission to DOC as city sentenced or detained within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.069,  $p < 0.001$ )

**Group B-Decision-Making:** Statistically significant differences exist between groups for

A re-arrest for any charge within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.203  $P < 0.001$ ) and *received and not recommended* (-0.110,  $P < 0.001$ )
- *Received and not recommended* had higher recidivism compared to *recommended and not received* (0.093,  $p < 0.01$ )

A re-arrest for any charge within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.151,  $p < 0.001$ )
- *Received and not recommended* had higher recidivism compared to *recommended and not received* (0.116,  $p < 0.01$ )

A re-arrest for a violent charge within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.018,  $p < 0.05$ ) and *received and not recommended* (-0.045,  $P < 0.05$ )

A re-arrest for a violent charge within two years

- *Not recommended and not received* had but lower recidivism compared to *recommended and not received* (-0.040,  $P < 0.001$ )

A re-admission to DOC as City Sentenced within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.258,  $p < 0.001$ )
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.231,  $p < 0.001$ )

A re-admission to DOC as City Sentenced within two years

- *Not recommended and not received* had but lower recidivism compared to *recommended and not received* (-0.257,  $P < 0.001$ )
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.185,  $p < 0.001$ )

A re-admission to DOC as city sentenced or detained within one year

- *Not recommended and not received* had lower recidivism compared to *recommended and not received* (-0.259,  $p < 0.001$ ) and higher recidivism compared to *received and not recommended* (-0.186,  $p < 0.001$ ),
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.073,  $p < 0.01$ )

A re-admission to DOC as city sentenced or detained within two years

- *Not recommended and not received* had lower recidivism compared to *recommended and received* (-0.215,  $p < 0.001$ ) and *recommended and not received* (-0.148,  $p < 0.001$ )

**Group C-Self-Improvement and Management:** Statistically significant differences exist between groups for

A re-arrest for any charge within one year

- *Received and not recommended* had lower recidivism compared to *Recommended and received* (-0.062,  $p < 0.001$ ) and *recommended and not received* (-0.095,  $p < 0.01$ )

A re-arrest for any charge within two years

- *Not recommended and not received* had lower recidivism compared to *received and not recommended* (-0.060,  $p < 0.05$ )
- *Recommended and received* had lower recidivism compared to *received and not recommended* (-0.037,  $p < 0.001$ )

A re-arrest for a violent charge within one year

- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.054,  $p < 0.01$ ) and *received and not recommended* (-0.018,  $p < 0.001$ )

A re-arrest for a violent charge within two years

- *Received and not recommended* had lower recidivism compared to *recommended and received* (-0.028,  $p < 0.001$ )

A re-admission to DOC as City Sentenced within one year

- *Not recommended and not received* had higher recidivism compared to *recommended and received* (0.069,  $p < 0.001$ )
- *Recommended and received* had lower recidivism compared to *received and not recommended* (-0.069,  $p < 0.001$ )
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.052,  $p < 0.05$ )

A re-admission to DOC as City Sentenced within two years

- *Not recommended and not received* had higher recidivism compared to *recommended and received* (0.079,  $p < 0.01$ )
- *Recommended and received* had lower recidivism compared to *received and not recommended* (-0.068,  $p < 0.001$ )

A re-admission to DOC as city sentenced or detained within one year

- *Not recommended and not received* had higher recidivism compared to *recommended and received* (0.174,  $p < 0.001$ )
- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.124,  $p < 0.001$ ) and *received and not recommended* (-0.083,  $p < 0.001$ )

A re-admission to DOC as city sentenced or detained within two years

- *Not recommended and not received* had higher recidivism compared to *recommended and received* (0.119,  $p < 0.001$ )
- *Recommended and received* had lower recidivism compared to *recommended and not received* (-0.166,  $p < 0.001$ ) and *received and not recommended* (-0.071,  $p < 0.001$ )
- *Received and not recommended* had lower recidivism compared to *recommended and not received* (-0.096,  $p < 0.01$ )

**Table 11: Univariate and multivariate recidivism contrasts for 1-year follow-up period**

	Re-arrest for Any Charge within 1 Year						Re-arrest for a Violent Charge within 1 Year						Re-admission to DOC as CS within 1 Year						Re-admission to DOC as CS + DE within 1 Year					
	Univariate			Multivariate			Univariate			Multivariate			Univariate			Multivariate			Univariate			Multivariate		
	Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError	
<b>No Formal Programming</b>																								
Recommended and not received vs Not received and not recommended	0.156	0.008	***	0.100	0.008	***	0.044	0.005	***	0.028	0.005	***	0.084	0.007	***	0.055	0.006	***	0.135	0.008	***	0.081	0.007	***
Received and not recommended vs Not received and not recommended	-0.115	0.046	*	-0.183	0.043	***	-0.191	0.029	***	-0.135	0.029	***	0.122	0.037	**	0.017	0.034		-0.109	0.046		-0.207	0.040	***
Received and not recommended vs Recommended and not received	-0.270	0.046	***	-0.283	0.044	***	-0.235	0.029	***	-0.164	0.029	***	0.038	0.037		-0.037	0.034		-0.243	0.046	***	-0.289	0.041	***
<b>Severe Substance Use Disorder</b>																								
Recommended and received vs Not received and not recommended	0.170	0.044	***	0.196	0.043	***	0.030	0.028		0.052	0.029		0.023	0.036		-0.014	0.034		-0.054	0.044		-0.052	0.040	
Recommended and not received vs Not received and not recommended	-0.120	0.007	***	-0.067	0.006	***	-0.044	0.004	***	-0.029	0.004	***	-0.065	0.005	***	-0.043	0.005	***	-0.113	0.007	***	-0.068	0.006	***
Received and not recommended vs Not received and not recommended	0.248	0.029	***	0.227	0.029	***	0.021	0.018		0.016	0.019		0.020	0.023		-0.017	0.023		0.054	0.029		0.018	0.027	
Recommended and not received vs Recommended and received	-0.290	0.045	***	-0.263	0.043	***	-0.074	0.028	*	-0.081	0.029	**	-0.088	0.036	*	-0.028	0.034		-0.059	0.045		-0.016	0.040	
Received and not recommended vs Recommended and received	0.078	0.053		0.031	0.051		-0.009	0.033		-0.036	0.034		-0.003	0.043		-0.003	0.040		0.109	0.052		0.071	0.048	
Received and not recommended vs Recommended and not received	0.368	0.029	***	0.294	0.029	***	0.065	0.018	**	0.046	0.020		0.085	0.023	**	0.025	0.023		0.167	0.029	***	0.087	0.027	**
<b>Decision Making</b>																								
Recommended and not received vs Not received and not recommended	-0.359	0.010	***	-0.203	0.010	***	-0.022	0.007	**	-0.018	0.007	*	-0.412	0.008	***	-0.258	0.008	***	-0.479	0.010	***	-0.259	0.009	***
Received and not recommended vs Not received and not recommended	-0.073	0.027	**	-0.110	0.026	***	-0.116	0.017	***	-0.045	0.017	*	0.051	0.021	*	-0.026	0.020		-0.138	0.026	***	-0.186	0.024	***
Received and not recommended vs Recommended and not received	0.286	0.028	***	0.093	0.028	**	-0.094	0.018	***	-0.028	0.019		0.464	0.022	***	0.231	0.021	***	0.341	0.028	***	0.073	0.026	**
<b>Self-Improvement and Management</b>																								
Recommended and received vs Not received and not recommended	0.015	0.021		0.021	0.021		0.070	0.013	***	0.031	0.014		0.025	0.017		0.069	0.016	***	0.154	0.021	***	0.174	0.019	***
Recommended and not received vs Not received and not recommended	0.075	0.035		0.055	0.034		-0.010	0.022		-0.022	0.022		0.053	0.028		0.053	0.026		0.071	0.034		0.050	0.031	
Received and not recommended vs Not received and not recommended	-0.101	0.021	***	-0.040	0.021		0.045	0.013	**	0.013	0.014		-0.090	0.017	***	0.000	0.016		0.005	0.021		0.091	0.019	***
Recommended and not received vs Recommended and received	0.061	0.028		0.034	0.028		-0.080	0.018	***	-0.054	0.019	**	0.028	0.023		-0.016	0.022		-0.083	0.028	**	-0.124	0.026	***
Received and not recommended vs Recommended and received	-0.116	0.006	***	-0.062	0.006	***	-0.024	0.004	***	-0.018	0.004	***	-0.114	0.005	***	-0.069	0.005	***	-0.150	0.006	***	-0.083	0.005	***
Received and not recommended vs Recommended and not received	-0.177	0.028	***	-0.095	0.028	**	0.056	0.018	**	0.036	0.019		-0.142	0.022	***	-0.052	0.022	*	-0.067	0.028	*	0.041	0.026	
<b>Interpersonal Conflict</b>																								
Recommended and not received vs Not received and not recommended	0.047	0.009	***	0.008	0.008		-0.007	0.005		-0.006	0.005		0.073	0.007	***	0.039	0.006	***	0.076	0.008	***	0.027	0.007	***

**Note:** Areas highlighted in blue represent a change in either significance or direction from the univariate model to the multivariate model.

Multivariate controls for differences among the groups based on demographics (age and gender), risk level (CJA’s FTA risk score), charge groups (violent felony, non-violent felony, high misdemeanor, low misdemeanor, and other), ATI variables include the length of stay in the ATI program (exit date minus entry date) and type of exit from the ATI program (successful or not successful).

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 12:** Univariate and multivariate recidivism contrasts for 2-year follow-up period

	Re-arrest for Any Charge within 2 Years						Re-arrest for a Violent Charge within 2 Years						Re-admission to DOC as CS within 2 Years						Re-admission to DOC as CS + DE within 2 Years					
	Univariate			Multivariate			Univariate			Multivariate			Univariate			Multivariate			Univariate			Multivariate		
	Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError		Contrast	StdError	
<b>No Formal Programming</b>																								
Recommended and not received vs Not received and not recommended	0.142	0.010	***	0.092	0.009	***	0.056	0.008	***	0.034	0.008	***	0.096	0.009	***	0.058	0.008	***	0.140	0.010	***	0.081	0.009	***
Received and not recommended vs Not received and not recommended	-0.103	0.055		-0.134	0.052	*	-0.314	0.044	***	-0.210	0.044	***	0.123	0.053		0.056	0.048		-0.140	0.060		-0.189	0.052	**
Received and not recommended vs Recommended and not received	-0.245	0.056	***	-0.226	0.053	***	-0.369	0.045	***	-0.244	0.045	***	0.027	0.053		-0.002	0.048		-0.280	0.060	***	-0.270	0.053	***
<b>Severe Substance Use Disorder</b>																								
Recommended and received vs Not received and not recommended	0.065	0.052		0.105	0.050		0.011	0.041		0.036	0.042		-0.032	0.049		-0.029	0.045		-0.087	0.056		-0.040	0.050	
Recommended and not received vs Not received and not recommended	-0.100	0.008	***	-0.049	0.007	***	-0.063	0.006	***	-0.042	0.006	***	-0.081	0.007	***	-0.050	0.007	***	-0.121	0.008	***	-0.069	0.007	***
Received and not recommended vs Not received and not recommended	0.163	0.033	***	0.149	0.033	***	0.054	0.026		0.062	0.028		-0.011	0.031		-0.034	0.030		-0.010	0.035		-0.032	0.033	
Recommended and not received vs Recommended and received	-0.165	0.052	**	-0.154	0.050	**	-0.074	0.042		-0.078	0.042		-0.049	0.050		-0.021	0.046		-0.034	0.056		-0.030	0.050	
Received and not recommended vs Recommended and received	0.098	0.061		0.044	0.059		0.043	0.049		0.026	0.050		0.021	0.058		-0.005	0.054		0.077	0.066		0.007	0.058	
Received and not recommended vs Recommended and not received	0.262	0.033	***	0.198	0.033	***	0.117	0.027	***	0.104	0.028	***	0.070	0.032		0.016	0.030		0.111	0.036	**	0.037	0.033	
<b>Decision Making</b>																								
Recommended and not received vs Not received and not recommended	-0.296	0.012	***	-0.151	0.012	***	-0.047	0.010	***	-0.040	0.010	***	-0.445	0.011	***	-0.257	0.011	***	-0.454	0.013	***	-0.215	0.012	***
Received and not recommended vs Not received and not recommended	-0.015	0.036		-0.035	0.035		-0.149	0.029	***	-0.053	0.029		-0.008	0.033		-0.072	0.031		-0.118	0.038	**	-0.148	0.034	***
Received and not recommended vs Recommended and not received	0.282	0.038	***	0.116	0.036	**	-0.102	0.031	**	-0.014	0.031		0.437	0.035	***	0.185	0.033	***	0.336	0.040	***	0.066	0.036	
<b>Self-Improvement and Management</b>																								
Recommended and received vs Not received and not recommended	-0.002	0.026		-0.023	0.025		0.080	0.021	***	0.028	0.021		0.070	0.024	**	0.079	0.023	**	0.140	0.028	***	0.119	0.025	***
Recommended and not received vs Not received and not recommended	0.035	0.043		-0.004	0.041		-0.025	0.034		-0.033	0.035		0.050	0.041		0.034	0.038		-0.005	0.046		-0.048	0.041	
Received and not recommended vs Not received and not recommended	-0.091	0.025	**	-0.060	0.025	*	0.044	0.020		0.000	0.021		-0.055	0.024		0.011	0.023		-0.003	0.027		0.048	0.025	
Recommended and not received vs Recommended and received	0.037	0.035		0.020	0.035		-0.105	0.028	***	-0.062	0.029		-0.021	0.033		-0.046	0.032		-0.145	0.038	***	-0.166	0.035	***
Received and not recommended vs Recommended and received	-0.089	0.007	***	-0.037	0.007	***	-0.037	0.006	***	-0.028	0.006	***	-0.125	0.007	***	-0.068	0.006	***	-0.144	0.008	***	-0.071	0.007	***
Received and not recommended vs Recommended and not received	-0.126	0.035	**	-0.057	0.035		0.069	0.028	*	0.034	0.029		-0.104	0.033	**	-0.022	0.032		0.001	0.038		0.096	0.034	**
<b>Interpersonal Conflict</b>																								
Recommended and not received vs Not received and not recommended	0.043	0.010	***	0.006	0.009		0.008	0.008		0.008	0.008		0.090	0.009	***	0.048	0.008	***	0.083	0.011	***	0.028	0.009	**

**Note:** Areas highlighted in blue represent a change in either significance or direction from the univariate model to the multivariate model.

Multivariate controls for differences among the groups based on demographics (age and gender), risk level (CJA’s FTA risk score), charge groups (violent felony, non-violent felony, high misdemeanor, low misdemeanor, and other), ATI variables include the length of stay in the ATI program (exit date minus entry date) and type of exit from the ATI program (successful or not successful).

\*p<.05, \*\*p<.01, \*\*\*p<.001

## **Appendix L: Practice Guidelines**

The Center for Advancing Correctional Excellence (ACE!) developed a series of Practice Guidelines for responding to particular needs identified through this study. The guidelines are intended to act as primers on the importance of each topic and how to address the issues through best practices, and to provide additional resources on each topic. These practice guidelines focus on strength-based approaches to promoting desistance and on using developmentally appropriate treatment strategies that promote individuals' healthy physical, emotional, and behavioral development.

### **These Practice Guidelines cover the following topics:**

- Motivation and Treatment Readiness Techniques
- Promoting Healthy Living
- Healthy Relationships
- Using Incentives to Engage People and Sustain Behavior Change
- Medication Management
- Assertive Case Management

## **PRACTICE GUIDELINE: Motivation and Treatment Readiness Techniques**

An important part of the treatment engagement process is identifying and addressing individuals' ambivalence to change. Many people are not prepared to make substantial life changes when they are recommended to participate in a treatment program or services. It is, therefore, incumbent upon treatment providers to appropriately craft motivation to build individuals' self-confidence in the possibility and potential benefits of change. Individuals' ambivalence to change can manifest itself in many different ways including (1) not understanding why they engage in certain behaviors; (2) uncertainty that their life will be better if they change; and (3) uncertainty that they can do anything differently. This ambivalence often underlies individuals' hesitance to engage in treatment or to make changes. Service providers should work collaboratively with individuals to help them understand how to address and move past these roadblocks. For example, service providers can use reframing techniques to guide individuals to reframe their thoughts, behaviors, and emotions to help them start believing in the possibility of change. For individuals who are mandated to relatively short diversion programs and have more extensive needs than can be addressed during the program mandate, motivation and treatment readiness is particularly important to build the intrinsic motivation to continue in programming past the mandated period of time.



Diversion programs, such as Alternatives to Incarceration (ATI), should use a clinical orientation in their motivation and treatment readiness approach, which should focus on individuals' willingness, readiness, and interest in engaging in services. Programs should create a structured approach to address ambivalence so that individuals understand issues that contribute to their involvement in the criminal justice system and factors that make it difficult for them to change their behavior. The goal during the short ATI program mandate is to help individuals see the value in continuing to engage in services after the mandated program has been completed.

Motivation is a dynamic process that can be developed by extrinsic factors (e.g. work, family, friends, significant others) and/or intrinsic factors (e.g. one's own drive, will, personal preferences). Treatment providers should identify how both factors can be best used to facilitate individuals' behavior change process, since moving through the stages of change varies by individual. Typically, many providers focus on extrinsic factors as an initial "push" to help individuals begin moving from pre-contemplation to contemplation in the stages of change (described below). This is because providers can help individuals recognize that the people they care about (e.g. family, peers, children, employers) also care about them and want them to make positive change. Intrinsic factors are useful when moving from contemplation to action because moving through these stages requires an internal commitment to self-improvement. Employing motivational and treatment readiness techniques can be especially useful when engaging individuals who may not be initially motivated to change their behavior, which may include individuals mandated to services by the court.

## Stages of Change:

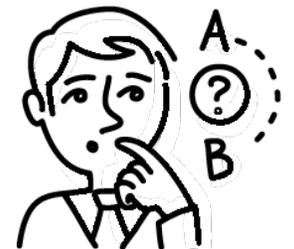
Evidence shows that motivational strategies, including motivational interviewing and other strong engagement practices, help individuals who otherwise would not have likely engaged in behavior change to be more inclined to participate in treatment and make progress toward their goals (e.g. Miller & Rollnick, 2002). Research identifies [five principle stages of change](#). Progression through the stages is not always linear, so it is important that treatment providers continuously pay attention to where an individual is on the continuum (DiClemente & Velasquez, 2002).



- **Pre-contemplation:** Individuals are not aware, concerned, or considering changing their behavior. Essentially, they do not understand the issues that affect criminal behavior.
- **Contemplation:** Individuals begin to recognize problematic behaviors and consider making changes in the foreseeable future (i.e. within the next 6 months). At this point, individuals do not know how to change their behavior and/or do not understand the benefit of changing their behavior.
- **Preparation:** Individuals believe that behavior change is necessary and begin making small steps to prepare for the action phase. Individuals are trying to understand how to get started.
- **Action:** Individuals provide signals to indicate they are ready to change their behavior. The readiness to act phase provides a small window of opportunity to engage individuals in services because individuals may retreat to a prior stage to avoid dealing with a problem as they become aware of it. Clinicians and treatment providers should recognize cues and “change talk” and initiate the action process. When individuals are in the action stage, they often struggle with appropriate actions to make and sustain change. The action stage is a long period of time that requires individuals learn new skills and develop new habits and routines.
- **Maintenance:** Individuals have developed skills to sustain their new healthy, positive behaviors. However, they still need continuous support to sustain change, maintain progress, and prepare to address potential relapses.

**Approaches to Effective Motivational Interventions:** Motivational techniques are used to assist clients as they move through the change process (CSAT, 1999).

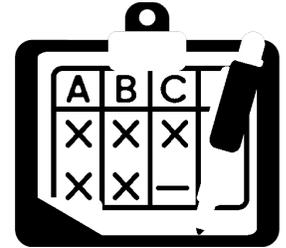
- Motivational Interviewing: a counseling style used as a way to interact with ambivalent and/or resistant clients. The goal is to be directive while eliciting self-motivational “change talk.” Click [here](#) for resources and information on Motivational Interviewing.
- The FRAMES approach: a motivational interviewing guide towards change which stands for Feedback, Responsibility, Advice, Menu Options, Empathy, and Self- Efficacy. For resources and information on FRAMES:
  - o <https://www.ncbi.nlm.nih.gov/books/NBK64963/>
  - o <http://tiny.cc/fcmc3y>
- OARS (Open Questions, Affirmation, Reflective Listening, and Summary Reflections) is a skills-based and client-centered approach that utilizes verbal and non-verbal responses and behaviors. These are good ways to work with individuals on how to open up for change.
- Decisional balance exercises: used by clinicians or treatment staff to assist clients in weighing the pros and cons of a behavior. For resources and information on decisional balance exercises:
  - o <http://www.midss.org/content/decisional-balance-scale-exercise>
  - o <http://www.ncbi.nlm.nih.gov/books/NBK64958/#A61942>
  - o <http://www.ncbi.nlm.nih.gov/books/NBK64976/table/A62221/?report=objectonly>
- Developing discrepancy: clinicians help individuals recognize gaps between future goals and current behavior. For resources and information on developing discrepancy: <http://www.therapistaid.com/therapy-worksheet/building-discrepancy>



- Flexible pacing: clinicians must assess individuals' past experiences with treatment, current treatment readiness, and progress toward goals in order to appropriately tailor different treatment responses to the individual. Use past successful experiences with treatment to guide individual through the change process. For resources and information on flexible pacing: <https://www.ncbi.nlm.nih.gov/books/NBK64963/>
- Personal contact with clients, such as phone calls and emails, as well as home visits, can be effective encouragement for individuals to continue in treatment or return to treatment.

### **Motivation and Treatment Readiness Assessments and Scales:**

There are a variety of assessment instruments and tools that can be used to evaluate clients' motivation, which can produce findings that may be included in the treatment process. The way the clinician or treatment provider discusses the results can also enhance motivation. Therefore, it is necessary to establish rapport with clients before conducting assessments. The treatment provider should make sure that assessment findings are individualized, and use them to engage clients in discussion. In addition to using assessments, treatment providers should listen for "change talk" and pay attention to shifts in clients' attitudes toward treatment.



- TCU Treatment Motivation Scales  
<https://ibr.tcu.edu/forms/treatment-motivation-scales/>
- SAMHSA/CSAT  
<https://www.ncbi.nlm.nih.gov/books/NBK64976/#A62297>
  - o Readiness to Change Questionnaire
  - o Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)
  - o What I Want from Treatment
- University of Rhode Island Change Assessment (URICA)  
<https://www.guilford.com/add/miller11/urica.pdf?t>

### **Brief Motivation/Treatment Readiness Interventions**

- TCU Getting Motivated to Change  
<https://ibr.tcu.edu/manuals/description-getting-motivated-to-change/>
- TCU Treatment Readiness and Induction Program (TRIP)  
<https://ibr.tcu.edu/manuals/treatment-readiness-and-induction-program-trip/>
- Your Own Reintegration System (YOURS) in which change is driven through developing supports.  
[www.yours.gmuace.org/tools](http://www.yours.gmuace.org/tools)

### **Structuring the Assessment and Feedback Session:**

- Express appreciation to clients for providing information.
- Ask clients if they have any questions or comments about the assessment.
- Encourage clients to ask questions throughout the feedback of the results.
- Provide clients with background about the assessment, how it is standardized, how widely used it is (provide written copy).
- Present all information to clients in written form and accompany with verbal explanation.
- Use motivational style when presenting information.
- At the end of the feedback session, summarize the results and the overall risks or problems that were discovered. Ask for the client's reactions and any self-motivational feelings that the feedback prompted.

Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be more frequent, include more frequent workgroups or role playing sessions, and sessions should be repeated.

**Additional Resources:**

- DiClemente, C. C., & Velasquez, M. M. (2002). Motivational interviewing and the stages of change. *Motivational interviewing: Preparing people for change*, 2, 201-216.
- Center for Substance Abuse Treatment. Enhancing Motivation for Change in Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1999. (Treatment Improvement Protocol (TIP) Series, No. 35.) Available from: <https://www.ncbi.nlm.nih.gov/books/NBK64967/>
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2nd ed.). New York, NY, US: Guilford Press.

## PRACTICE GUIDELINE: Promoting Healthy Living



Strategies for helping clients succeed while in treatment should take into consideration the whole person, not just clients' convictions or criminogenic needs. Healthy living encompasses a broad range of daily functioning, habits and activities including engaging in healthy and productive activities, maintaining positive relationships, taking medication, and exercising. Many individuals would benefit from help and encouragement in this area from treatment providers, criminal justice actors, and non-profit organizations that work in the criminal justice system.

### **Why Promote Healthy Living:**

- Most providers, whether employed by the courts or treatment/service agencies, tend to focus on long-term goals that may be hard to achieve. Helping the individual focus on shorter-term healthy living behaviors will allow them to have “wins” along the way.
- Compared to the general population, individuals with criminal justice involvement have high rates of both physical and behavioral health problems, many of which require medication management, regular physician visits, and practicing healthy living habits. Left untreated or under-treated, these health concerns can be very disruptive to a person’s daily functioning (Gideon, 2013).
- Many individuals who are criminal justice-involved or engaged in treatment have limited access to nutritious foods, and many have limited knowledge of how to cook or have trouble finding the time to cook among work, treatment, and other obligations (Heller, 2016). Healthy eating habits are also important, since food insecurity can hinder positive decision-making (Frech, 2013).
- Individuals in the criminal justice system and individuals with substance use disorders are frequently homeless or unstably housed, including stays at homeless shelters or moving frequently from various friends’ and relatives’ homes. The conditions of homelessness can lead to poor health, and many health issues may also lead some individuals to become homeless. Common health concerns related to homelessness include mental health problems, substance abuse, bronchitis and pneumonia, problems caused by being outdoors, and wound and skin infections (National Library of Medicine, 2018).
- Housing instability has a negative collateral impact on sleep habits, which in turn impact many aspects of life, including energy level, productivity, safety, and appetite (Cordeiro, 2014), as well as decisions that are made about daily activities.
- Social connectedness matters—having people to rely on for emotional support can be an important stabilizing factor in individuals’ lives (Warland et al., 2013).

- Finding new hobbies and ways to spend leisure time is important to making healthy choices. For example, exercising, can be a fun way for individuals to connect with new people and to develop healthier habits.
- An estimated 70-80% of criminal justice-involved individuals smoke cigarettes, which is associated with numerous, long-term health conditions (Cropsey et al., 2015).

### **Assessment:**

Many biopsychosocial assessments that treatment providers use include measures of healthy living. In addition, agencies can use standardized instruments like the Short Form-12 (SF-12) and the Patient Health Questionnaire (PHQ-9) to assess for overall health.

### **How to Help Promote Healthy Living:**

- Healthy living starts with individuals' housing situation. Service providers (including non-profit agencies) should check in frequently with their clients about where they are living, who they are living with, and how they feel about their living situation. Is it stable? Are they getting along with the other people in the home? Do they feel safe?
- Individuals may need help accessing physical healthcare. This may include obtaining identification, enrolling in health insurance, finding healthcare providers and following up with medications, appointments, and recommendations.
- Individuals may need assistance managing their medications, symptoms, and appointments. Some helpful tools may include calendars, phone alarms, and daily pill boxes.
- Social media is no substitute for real social interaction and communicating with friends and family one-on-one.
- Healthy living practices can be fun. Many people use fitness trackers or smart phones that track physical activity. Individuals can set their own goals and even compete with friends.
- Individuals have the option of using SNAP benefits at many farmers' markets to acquire fresh produce.
- Service providers can help individuals understand how their eating patterns can impact both their bodies and their emotions, and demonstrate the numerous benefits to improving eating habits. Learning how to cook can be an activity that increases bonds with family or friends.
- Discussions on healthy eating may also address limiting consumption of sugary drinks and alcohol.
- There are numerous medications, apps, and strategies to help individuals quit smoking. Service providers may make individuals aware of the different options that are available and encourage them to try new ones when the first attempt does not work where appropriate.
- The first step to developing healthy sleep habits is understanding what they are and what can negatively affect them. Individuals should understand the positive impacts of keeping a consistent schedule, avoiding electronics and alcohol that can negatively affect sleep habits, and having a bedtime routine.
- Promoting healthy living allows individuals to learn to regulate their own behaviors and make decisions to improve their awareness of how lifestyle factors (e.g. food, sleep, safety, loneliness, support systems, etc.) affect their well-being (Frech, 2013).



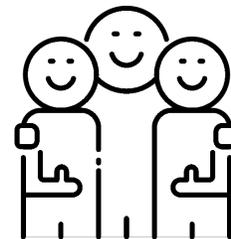
Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be offered more frequent, include more frequently in terms workgroups or role-playing sessions, and sessions should be repeated.

### **Sources and Additional Resources:**

- Cordeiro, Brittany (2014). 8 Healthy Sleep Habits. Accessed from: <https://www.mdanderson.org/publications/focused-on-health/april-2014/healthy-sleep-habits.html>
- Cropsey KL, Clark CB, Zhang X, Hendricks PS, Jardin BF, Lahti AC. (2015). Race and medication adherence moderate cessation outcomes in criminal justice smokers. *American Journal of Preventive Medicine* 49(3):335-44.
- Frech A. (2013). Pathways to adulthood and changes in health-promoting behaviors. *Advances in life course research*, 19, 40-9.
- Gideon, L. (2013). Bridging the gap between health and justice. *Health & Justice*, 1, 4. <http://doi.org/10.1186/2194-7899-1-4>.
- Heller, J. (2016). A Framework Connecting Criminal Justice and Public Health. Accessed from: <https://humanimpact.org/a-framework-connecting-criminal-justice-and-public-health/>
- Liu Y, Wheaton AG, Chapman DP, Cunningham TJ, Lu H, Croft JB. Prevalence of healthy sleep duration among adults – United States, 2014. *MMWR Morbidity and Mortality Weekly Report*. 2016;65(6):137–141.
- National Library of Medicine, Homeless Health Concerns (see <http://www.nlm.nih.gov/medlineplus/homelesshealthconcerns.html>)
- SAMHSA Tip 55: Behavioral Health Services for People Who Are Homeless (see <http://store.samhsa.gov/product/TIP-55-Behavioral-Health-Services-for-People-Who-Are-Homeless/SMA13-4734>)
- Warland, C, Jones, J., Phlipp, J., Schnur, C., & Young, M. (2013). Healthy relationships, employment, and reentry (Policy Brief). Washington, DC: National Resource Center for Healthy Marriage and Families.
- Online versions of assessment tools are available at [https://www.phqscreeners.com/sites/g/files/g10049256/f/201412/PHQ-9\\_English.pdf](https://www.phqscreeners.com/sites/g/files/g10049256/f/201412/PHQ-9_English.pdf) and <https://www.hss.edu/physician-files/huang/SF12-RCH.pdf>

## **PRACTICE GUIDELINE: Healthy Relationships**

Strategies for helping clients stabilize in the community and reduce the likelihood of future criminal justice involvement must take into consideration the whole person, not just clients' convictions or criminogenic needs. Working with individuals to develop and maintain positive relationships with family and friends can help create a network that supports individuals as they make progress on their goals.



### **Why Address Healthy Relationships:**

- The majority of individuals who have been involved in the criminal justice system have friends and/or family who have also been involved in the criminal justice system (Esiri, 2016).
- Incarceration has a negative impact on both the individual and their family. It can strain family relationships and create barriers in healthy parent-child relationships (Wildeman & Western, 2010).
- Individuals re-entering the community from incarceration cite family support as the most important factor in helping them build stability and avoid repeat involvement in the criminal justice system (LaVigne, Shollenberger, & Debus, 2009).
- Having healthy relationships often positively impact employment, substance use, earnings, and recidivism (Warland et al., 2013).
- Family involvement in re-entry programming is associated with lower rates of substance use and recidivism, and fewer mental, physical, and emotional problems (Warland et al., 2013).
- Individuals who have close friends or family who actively use drugs are also more likely to use drugs frequently following release from incarceration (LaVigne, Shollenberger, & Debus, 2009).
- Building and maintaining healthy relationships may look different for men and women as well as for younger and older people. For example, women are more likely to be the custodial parent if they have children, and marriage tends to be less of a stabilizing influence on younger people than it is on older people (Laub, Nagin, & Sampson, 1998).
- Individuals are often focused on “tangible” actions to demarcate progress, such as completing substance use disorder treatment or finding a job, so they may not immediately see the positive impact that healthy relationships can have.

### **Assessment:**

Many risk-need assessment instruments include one or more subscales that measure the degree to which an individual has friends or family who have active criminal justice involvement and/or have substance use disorder problems. Some instruments also assess the impact that these friends and family may have on the individual and the decisions that they make. Besides risk-need assessment instruments, there are instruments that specifically assess the influence of maintaining relationships with friends who abuse substances, such as the Global Appraisal of Individual Needs (GAIN), Orientation for Social Support, and the Texas Christian University Social Functioning assessment.

### **Curriculum to Address Healthy Relationships:**

While there are a number of curricula that address healthy relationships for youth, there are few available for adults. SAMHSA developed Relationships Matter!, a webinar series for practitioners who work with women experiencing mental health and substance use issues, which explores the role of relationships. Topics include: Being Real: The Power of Authentic Therapeutic Relationships in Women’s Services; #RelationshipGoals:

Significant Others in Women’s Recovery; Finding Her Tribe: Women’s Relationships with Peers and Community; Motherhood: What It Means for Women’s Recovery; Complex Connections: Intimate Partner Violence (IPV) and Women’s Substance Use and Recovery. These materials and webinars can be found at <https://www.samhsa.gov/women-children-families/trainings/relationships-matter>.

**Tips for Helping People Build and Maintain Healthy Relationships:**

- Many individuals could increase their exposure to models of healthy relationships; mentors, especially those with lived experience, can help provide those models.
- Addressing healthy relationships involves developing skills around effective communication, anger management, self-esteem, and conflict resolution (Ooms et al., 2006).
- Working with individuals on healthy relationships may involve working with their families and significant others as well.
- Interventions that help people build healthy relationships should not be limited to only those with young children.
- Building healthy relationships does not need to be a standalone project; it can be integrated into other types of programming including substance use treatment and employment services (Warland et al., 2013).
- Developing a positive relationship with an older mentor is often more beneficial than a romantic relationship (Laub, Nagin, & Sampson, 1998).
- Service providers can help individuals develop healthy relationships by acting as a reliable, stabilizing, positive, healthy relationship in the person’s life.
- Service providers should actively listen when individuals discuss their relationships with friends and family members, particularly regarding engaging in substance use or criminal behavior. The goal is to help individuals identify positive healthy behaviors and distinguish which relationships may help them move toward their goals and which may not. Service providers should ask questions both about the friend or family member themselves and about the individual’s relationship with them.
- Service providers should help individuals identify healthy relationships in their lives as positive examples, particularly individuals that are engaged in positive, healthy behaviors.
- Service providers can help individuals identify people who could potentially be negative influences (e.g., those who pressure the individual or encourage them to do things they should not). These conversations can help individuals examine their relationships with these individuals and practice how to make positive decisions.
- Making new friends can be hard. Service providers can identify opportunities for meeting new people, such as adult sports leagues, gyms, volunteering, or getting involved with a religious organization.
- Service providers can help the individual think through low-cost activities they can do to build relationships with peers who are involved in positive, healthy activities, such as hosting a family movie or game night or going to a church potluck.
- Individuals who have close relationships with others who are actively involved in the criminal justice system, including family members, could benefit from developing coping strategies for how to deal with these challenging relationships, or strategies for minimizing contact with those individuals if necessary and/or beneficial.
- Part of healthy, supportive relationships is being aware of and sensitive to the needs of others. Service providers can help individuals develop perspective-taking so they recognize that relationships are “two-way streets” that require consideration of multiple perspectives (Warland, et. al, 2013).



Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be offered more

frequent, include more frequently in terms workgroups or role-playing sessions, and sessions should be repeated.

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## **PRACTICE GUIDELINE: Using Incentives to Engage People and Sustain Behavior Change**

Incentives, both material and social, can be a powerful tool to initiate and sustain behavior change. Incentives are widely used in substance use disorder treatment programs and housing programs. Incentives have gained traction in the criminal justice system, particularly in problem-solving courts, such as drug courts, and in probation settings.

### **Why Use Incentives:**

- Service providers programming largely have been deficit-based, focusing on developing and providing sanctions to discourage non-compliance. Conversely, incentives, which focus on “catching people doing things right” and rewarding them for engaging in positive behaviors, have been found to be more effective in increasing compliance (Friedman et al., 2010).
- People learn how to behave by reacting to the positive and negative consequences of their behavior. Frequently, these are natural consequences, such as feeling hungover after binge drinking, but these reinforcements can come from the outside as well (Taxman et al., 2010).
- Receiving positive consequences from engaging in positive behaviors (e.g., treatment attendance) shifts the focus from failure to success and has the potential to influence improved client morale and self-efficacy (Taxman et al., 2010).
- Contingency Management (CM) is an evidence-based practice where treatment providers attempt to increase positive behavior among individuals with substance use issues through a transparent system of incentives. It involves three basic principles:
  1. Monitor for change in the target behavior
  2. Reinforce the desired behavior whenever it occurs
  3. Withhold positive reinforcements when the desired behavior does not occur (Petry, 2000); the use of sanctions should be minimized and only used for serious criminal behavior.Incentives should drive the responses by justice and treatment actors.
- Incentive systems can include both “social” and “material” rewards. “Social rewards” refers to intangible rewards including verbal or written praise or early completion of supervision. “Material incentives” refers to tangible items such as gift cards or transit passes (Rudes et al., 2011).



### **Tips for Using Incentives:**

- Transparency with incentives is key—service providers should ensure that they make individuals aware of how they can earn rewards (i.e., what behaviors they are rewarding), and the system should treat all individuals equitably (Rudes et al., 2011).
- Incentives should be tied to the desired target behavior and the client’s treatment or case plan. For example, substance use treatment programs should tie incentives to treatment engagement and/or drug tests that show up negative (Petry, 2000).
- Incentives are most useful in the early stages of programming or relationship building, when clients are more likely to engage in unhealthy activities and routines. Using incentives early in programming can help change behavior patterns because it provides individuals with an early taste of success, and providers with the opportunity to engage individuals in the treatment process and build internal motivation (Taxman et al., 2010).



- The incentive system should incorporate both social and material rewards, and should be meaningful to the person (Taxman et al., 2010). For example, if an individual enjoys sports, incentives developed around sporting events or activities may be more meaningful than incentives involving work activities.
- Incentives are most effective when they are delivered immediately (as soon as the supervision officer or treatment provider observes the behavior), consistently, and frequently (Petry, 2000).
- Service providers should not underestimate the power of kind words and verbal or written reinforcement of desired behaviors.
- “Fishbowls” can help to ensure that rewarding individuals remains cost effective. This is a process where individuals who are engaging in the desired behavior are eligible to draw from a fishbowl or hat with the incentive items written on slips of paper. Most of the items will have minimal monetary value (Petry & Bohn, 2003).

Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be more frequent, include more frequent workgroups or role playing sessions, and sessions should be repeated.

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## PRACTICE GUIDELINE: Medication Management

Many individuals may present with a variety of both physical and behavioral health issues, some of which may require management of medications. Medication management can be challenging—working with multiple treatment providers, managing insurance and copays, ensuring compatibility with other medications, regularly visiting the pharmacy to obtain medications, and remembering when to take them. This practice guideline will focus primarily on medication that addresses behavioral health issues, including medication-assisted treatment (MAT) for individuals with opioid or alcohol use disorder. Medication non-adherence among individuals with MAT and/or mental illnesses has been associated with poorer treatment outcomes.

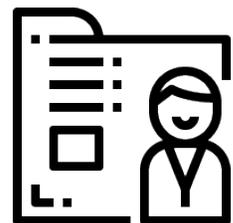
### Talking to Clients about Medication Management:

- When working with clients who have multiple, complex needs, it is helpful to get a full inventory of all health issues. Many providers use bio-psychosocial instruments and measures of daily living that collect some of this information.
- Service providers may want to talk to the client about diagnoses; symptoms and severity; illness history (age of onset, hospitalizations); past and current medications, how effective the client perceives their current treatment to be; medication adherence; frequency of physician contact; current side effects; client preference and goals; and contact information for providers (SAMHSA, 2011).
- Medical information should not be collected only once at intake—it is important to continually check in with clients regarding medications, access to medications, medication adherence, and side effects they are experiencing.
- Treatment providers will want to have a release of information (ROI) that allows clients' past and current treatment providers to share information. If the client does not wish to sign such a release, providers may want to request that clients compile a list of the medications they are taking, dosage, and frequency.
- For clients who are using multiple medications, providers should discuss what time of day they take each medication. For emergency medications, such as Narcan, Epi-pens or asthma inhalers, providers will want to ensure clients know and remember to carry these medications at all times.
- Many medications (including over-the-counter) can have moderate to serious side effects when used in combination with alcohol or illicit drugs, and clients should be aware of these risks. See <https://pubs.niaaa.nih.gov/publications/Medicine/medicine.htm>.
- Service providers use reminders to take their medications, such as using pill boxes, writing a schedule, setting alarms and putting signs around the home.
- Service providers can use different strategies to ensure that clients are taking their medications including pill counts, observing clients taking medications, reviewing medication schedules, and/or drug testing to monitor levels of medications in the body.



### Medication Assisted Treatment for Individuals with Opioid or Alcohol Use Disorder:

- Severe substance use disorder is often characterized by withdrawal symptoms (e.g. anxiety, agitation, insomnia, nausea, vomiting, etc.) when drug/alcohol use has ceased or been significantly reduced after heavy or long-term use. Detoxification, or detox, is often the first step of treatment. Detox from opioids often involves controlled and medically supervised withdrawal from the substance.
- Prescription drug abuse occurs when medications are abused or taken for reasons or ways that are not intended by a doctor, or taken by someone other than the person for whom the drug was prescribed. Prescription opioid pain medications may have



similar effects to heroin. OxyContin and Vicodin are currently among the most commonly abused drugs in the United States, and some research suggests that prescription drug abuse may be a gateway to heroin use, especially given the relatively low street price of heroin compared to prescription pain medications. Opioid prescription drugs include:

- Fentanyl (Duragesic®)
  - Hydrocodone (Vicodin®)
  - Oxycodone (OxyContin®)
  - Oxymorphone (Opana®)
  - Propoxyphene (Darvon®)
  - Hydromorphone (Dilaudid®)
  - Meperidine (Demerol®)
  - Diphenoxylate (Lomotil®)
- Pharmacological treatment often increases retention in treatment programs and decreases opioid use, infectious disease, and involvement in the criminal justice system.
  - Medication and behavioral therapy should be combined and used as part of a therapeutic process that encompasses detoxification (if needed), followed by treatment and relapse prevention.
  - Many interventions for opioid use disorder include pharmacological approaches coupled with behavioral therapy (see below for information on Naltrexone, Buprenorphine, and Methadone).
  - While treatment for alcohol use disorder has traditionally focused on behavioral therapies and support groups, there is growing use of medications coupled with therapy.
  - Disulfiam (Antabuse®) impacts the way the body breaks down alcohol, often causing the user to get sick with nausea and/or flu-like symptoms if they use alcohol.
  - Naltrexone (also used for opioid use disorder) can decrease individuals' craving for alcohol and change the way their bodies experience alcohol.
  - Acamprosate (Campral®) can reduce some of the brain's hyperexcitability associated with alcohol withdrawal (NIDA, 2017).

Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be more frequent, include more frequent workgroups or role-playing sessions, and sessions should be repeated. Regarding medication management for this population, there is a need to ensure that clients take their medication and understand the importance of the medication.

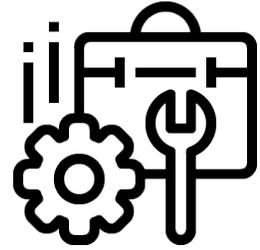
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## PRACTICE GUIDELINE: Assertive Case Management

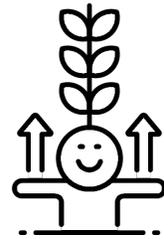
Assertive Case Management, sometimes referred to as Assertive Community Treatment (ACT), is a comprehensive approach to developing community capacity and services for individuals with severe mental health disorders who are most at-risk for psychiatric crisis and hospitalization and involvement in the criminal justice system. (Bond & Drake, 2015; Phillips et al., 2001). Assertive Case Management is used for both adults and adolescents. These clients present with many mental health needs and require a collaborative approach to stabilize them in the community and improve their quality of life. Most clients who are appropriate for assertive case management frequently receive hospital inpatient treatment services; however, from a holistic rehabilitative perspective, this kind of treatment does not address daily crises individuals may face while living in the community (Wilson, Tien, & Eaves, 1995).



Assertive Case Management is a proactive, assertive, and continuous care approach that promotes client engagement using an interdisciplinary team. The team must be large enough to contain all of the necessary disciplines for service delivery, while remaining small enough for familiarity and accessible communication. Case managers develop treatment goals with the client and the team to create a unified, continuous care approach. Since Assertive Case Management involves a team of several case managers working with each individual, it has been found to reduce burnout among case managers who work with seriously mentally ill clients (Boyer & Bond, 1999).

### Why Use Assertive Case Management

- Case managers help navigate medical, behavioral, and social services and the criminal justice system with clients.
- Families are more satisfied with the care received in assertive case management and feel more included in the process than traditional case management (Phillips et al., 2001).
- Assertive Case Management was found to increase client retention and engagement (Tasmania Dept of Health and Human Services, 2008; Bond & Drake, 2015).
- Assertive Case Management improves quality of life among individuals with a persistent and serious mental health disorder (Phillips, et al., 2001).
- There are many variations of Assertive Case Management programs. Target populations should be clearly defined, such as individuals who are homeless, veterans with severe mental illness, individuals with co-occurring mental health and substance use disorders, etc.
- Assertive Case Management has proven to be cost effective for individuals who have had extensive hospitalization (Wilson, Test, & Eaves, 1995).
  - Assertive case management was found to reduce homelessness, recidivism, and hospital utilization (Bond & Drake, 2015).
  - An evaluation of a Vancouver-based Assertive Case Management system (Wilson, Test, & Eaves, 1995) found that individuals who were in the Assertive Case Management group spent an average of 271 days in the community before being re-arrested, compared to individuals in the comparison group, who spent an average of 120 days in the community before being re-arrested.
- Assertive Case Management has been implemented in 35 states and in Canada, England, Sweden, and Australia.



*Note:* The assertive principle in Assertive Case Management may conflict with other evidence-based practices such as dialectical behavior therapy, which promotes autonomy and responsibility. The assertive

principle is most useful for clients that need more direction, such as individuals with serious mental illness.

### **Assessment**

- Programs should have clearly defined target populations and explicit admission criteria, with measurable and operationally defined criteria to appropriately screen clients.
  - Assertive Case Management should target individuals who are high-need.
- Individuals should be formally assessed to determine their type and level of needs. At a minimum, staff should assess for mental health disorders, future involvement in justice system, and family and social supports. All assessment information should be shared with the multidisciplinary treatment team.
- Additional items to assess include general health, family needs, social skills, daily living activities, safety, vocational and educational needs (Tasmania Dept of Health and Human Services, 2008), and frequency and duration of hospital admissions (Vijverberg et al., 2017).
- Some examples of assessment instruments used by Assertive Case Management teams include the Clinical Global Impression Scale, the Global Appraisal of Individual Needs, the Timeline Follow Back, and DSM interviews (Vijverberg et al., 2017).
- Appropriate standardized assessments should also be used to monitor progress.

### **Principles of Assertive Case Management (Summarized from Phillips et al., 2001)**

#### *Staffing and Capacity*

- An Assertive Case Management or Assertive Community Treatment team consists of about 10 to 12 staff members from the fields of psychiatry, nursing, and social work, as well as professionals with other types of expertise, such as substance use disorder treatment and vocational assistance (Phillips et al., 2001; Bond & Drake, 2015).
  - Caseload size and staffing structure and size may depend on the complexity of clients' needs, local demographics, and the existence of supplementary mental health services (Tasmania Dept of Health and Human Services, 2008).
- Team members are cross-trained in each other's areas of expertise in order to readily assist and consult with each other.
- Teams meet frequently to plan and review service plans (at least four program meetings per week).

#### *Program Components*

- Assertive Case Management has nine core elements: (1) treatment in the field (not in an office setting); (2) small caseloads; (3) working with difficult-to-reach clients; (4) focused on transitions; (5) early interventions; (6) conducting psychiatric assessments in the community; (7) developing family support; (8) reintegration/vocational and educational therapy; and (9) pharmacology (Vijverberg et al., 2017).
- Case managers and clients develop individualized service plans and relapse plans with the multidisciplinary team, family members, and service providers.
  - Should focus on no more than 3 areas of need at one time.
- Assertive Case Management team members pick up individuals and bring them to court to help ensure attendance at all court appearances during the period of legally mandated services.
- Assertive Case Management team will continue working with clients despite disengagement; program engages and retains 95% or more of a caseload over 12 months.
- Assertive Case Management develops community living skills in the client's environment, as opposed to in office settings.
- Assertive Case Management provides individualized substance abuse treatment and is based on dual-disorders treatment principles.

- Once clients are stable and their needs can be met through routine monthly mental health services in the community, a standardized discharge plan should be developed to ease transition to self-management and gradually reduce contact with the Assertive Case Management team.

*Program Dosage*

- Service time should be provided as needed, on average 2+ hours per week per client.
- Frequency of contact should be provided as needed, on average 4+ contacts per week per client.
- Program should work directly with the client's support system, such as family members, employers, etc. at least 4 times a month.
- Program should provide 24-hour coverage given that most clients do not have support services that are stable and available. Flexibility and long-term stability are necessary for Assertive Case Management.

Special consideration for individuals with intellectual disabilities and/or mental illness requires treatment providers to pace programming appropriately for their capacity. Programming should be more frequent, include more frequent workgroups or role playing sessions, and sessions should be repeated.

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