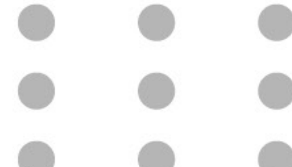

MULTISYSTEMIC THERAPY FOR EMERGING ADULTS (MST-EA)

IMPLEMENTATION IN COOK COUNTY, IL

Jason Brennen
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Submitted to the Office of Juvenile Justice and Delinquency Prevention (OJJDP) on behalf of the Illinois Department of Juvenile Justice (IDJJ)

Final Technical Report
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Disclaimer

This study utilizes data from Youth Outreach Services (YOS), Science to Practice Group (S2P), and the Illinois Department of Juvenile Justice (IDJJ). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of YOS, S2P, or IDJJ.

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INTRODUCTION

This is the final technical report of the Multisystemic Therapy for Emerging Adults (MST-EA) program implementation in Cook County, IL. MST-EA is an intensive therapeutic program for emerging adults with serious behavioral health conditions who are being transitioned back to the community after a stay at an Illinois Department of Juvenile Justice (IDJJ) youth center. The MST-EA program is designed to serve the needs of this target population through a collaboration with IDJJ, the Illinois Department of Human Services (IDHS), as well as the community service provider, Youth Outreach Services (YOS), and the MST-EA technical assistance provider, Science to Practice Group (S2P).

Emerging Adult Population Characteristics

Emerging adults, also known as transition-age youth, are at a critical developmental stage: the transition from being youth dependent upon parents for supervision, guidance, emotional support, and financial dependence to being independent adults who are productive and healthy members of society. This unique stage of development begins as early as 14 years of age and continues to 25 or 26 years of age (Arnett, 2000; Davis & Vander Stoep, 1997). Recent research in neurobiology and developmental psychology suggests that cognitive skills and emotional intelligence continue to develop into a person's mid-20s, and even beyond (Giedd et al., 1999).

Transition age youth are also most at risk for numerous concerns with the potential for lifelong impact. The onset of mental illness primarily occurs during this age period, with three-quarters of all serious mental illnesses (for example, schizophrenia, major depressive disorder, posttraumatic stress disorder) beginning before the age of 25 (De Girolamo et al., 2012; Kessler et al., 2007). Prevalence rates of serious mental illness (excluding substance abuse disorders) are nearly 10% among transition age youth and higher than at any other developmental period (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013).

As a result, mental health needs that emerge during the transition to adulthood can compromise functioning in key domains. Transition age youth with serious mental illness have high documented rates of unemployment (42%), high school dropout (45%), and homelessness (30%) (Davis & Vander Stoep, 1997; Embry et al., 2000; Newman et al., 2009). These youth are also more vulnerable to substance use disorders, being the victims of violence, and emotional and physical trauma than any other age group (Velázquez, 2013; Perker & Chester, 2018).

Transition age youth are overrepresented in the criminal justice system; while individuals under the age of 25 make up 10% of the United States population, in 2012 they comprised 29% of arrests and 21% of admissions into adult prisons across the country (United States Department of Justice, 2013; Carson & Golinelli, 2014). In Illinois, transition age youth comprised 10% of the overall population in 2013, yet they accounted for 34% of total arrests and 28% of individuals sentenced to incarceration in state prisons (Illinois Criminal Justice Information Authority, 2013). The prevalence of homelessness among transition age youth is especially striking, since research also indicates that homelessness impacts the formerly incarcerated population to an even greater degree and increases the likelihood of further criminal justice system involvement (Morton et al., 2017).

Transition age youth are also more likely than other age groups to recidivate when they leave a correctional facility. A national study of 30 states revealed that 76% of those under age 24 and released in 2005 were rearrested within 3–5 years, compared to 70% of those ages 25–29 and 60% of those aged 40 and older (Durose et al., 2014).

Individuals with serious mental illness have greater justice system involvement than those without, both as juveniles and young adults (Vander Stoep et al., 1997; Vander Stoep et al., 2000; Yampolskaya & Chuang, 2012; Davis et al., 2009; Hoeve et al., 2013). Subsequent arrest rates peak at 50% for men and 39% for women among this developmental age group (Davis et al., 2007). Justice system involvement can be a strong predictor of school dropout, unemployment, low earnings, welfare dependence, and substance abuse problems in young adulthood (Sampson & Laub, 1990; Freeman, 1992; Haberman & Quinn, 1986; Kaufman et al., 2000, Grogger, 1995; Moffitt et al., 2001). Thus, reducing recidivism in this high-risk group, during the ages when offending becomes criminal rather than delinquent, might significantly modify adult trajectories of offending and support more positive developmental outcomes (Laub et al., 1998).

Youth Assessment and Screening Instrument data from 2018 documents that IDJJ serves a high-risk population, with over 80% of youth assessed as being high risk to offend. In addition to legal history, a significant number of youth are high risk in the area of community and peers (67% of youth), family (51% of youth), skills such as consequential thinking, problem-solving, and interpersonal skills (50% of youth), alcohol and other drugs (43% of youth), and attitudes (35% of youth). These areas include many dynamic factors that can be influenced with interventions. Moreover, a significant share of IDJJ's youth have mental health diagnoses. Almost 90% of IDJJ youth in custody have mild to significant mental health disorder symptoms and one-third have significant symptoms that interfere with functioning. Approximately half of youth in IDJJ custody are prescribed psychotropic medications.

Multisystemic Therapy for Emerging Adults (MST-EA)

IDJJ sought to improve the outcomes of emerging adults in its care, defined as youth aged 17 to 21, by implementing the intensive, community-based service model MST-EA. The MST-EA model is an adaption of standard Multisystemic Therapy (MST), a manualized, community- and family-based intervention with proven effectiveness for reducing recidivism in delinquent youth ages 12–17 (Wagner et al., 2014; Burns et al., 1999; Farrington & Welsh, 1999; Kazdin & Weisz, 1998; Stanton & Shadish, 1997). MST is included in registries of evidence-based programs, including the Office of Juvenile Justice and Delinquency Prevention (OJJDP) Model Programs Guide (listed at the highest level, "Effective") and Blueprints for Healthy Youth Development (listed at the highest level, "Model Plus"). MST has also been proven effective in multiple randomized controlled studies at reducing reliance on out-of-home placements (by 64%) and reducing arrests and incarceration (by more than 50%).

There are currently no established intervention models with evidence of efficacy to reduce recidivism among high-risk transition age youth. There are evidence-based interventions to reduce offending and re-offending in juveniles in the general population, including MST and Treatment Foster Care Oregon (TFCO, formerly Multidimensional Treatment Foster Care), but these services have not been used or evaluated with individuals older than 17 years of age (Chamberlain et al., 2007; Henggeler et al., 1999).

A recent adaptation of standard MST was developed for emerging adults (MST-EA) who (a) are between the ages of 17 and 26, (b) have a serious behavioral health problem, (c) have a recent arrest or release from incarceration, and (d) are residing in the community. Davis et al. (2015) provide details on the MST-EA model

and present positive findings based on an open pilot trial with 41 participants. The pilot study reported that the number of criminal and juvenile charges of MST-EA participants in the 6 months post intervention was fewer than those in the 6 months prior to the intervention. Furthermore, the percentage of participants working doubled and the percentage of participants living in out-of-home settings was cut by more than half. Further, Sheidow et al. (2016) present clinical outcome data from a sample of 80 transition age youth treated with MST-EA. Discharge summaries from those 80 cases indicated that 82% had no new arrests during treatment and 76% demonstrated success in managing their mental health disorder symptoms. Further, 90% of the transition age youth were living in the community at the time of discharge and 73% were actively enrolled in school or employed (or both). While large randomized controlled trials to determine the efficacy of MST-EA are still pending, these early findings suggest that adapting MST to the needs of transition age youth may provide more effective justice responses.

Guiding Questions

The study, which documents the implementation of MST-EA in Cook County, IL between 2020 and 2022, is guided by three research questions:

METHOD

Program Implementation

Program Model

MST-EA is designed for justice-involved emerging adults with behavioral health problems (namely, serious mental illness and substance use disorders). The transition age youth is the primary focus of treatment. Thus, family or caregiver involvement is not required. However, involving family or other supports is recommended, and efforts are made to identify such supports and include them in treatment. MST-EA is delivered by a team of up to 4 Master's-level therapists and a full-time clinical supervisor. Therapists carry a maximum of 4 cases each. Service duration varies based on client needs, but the average length of MST-EA treatment is 7-8 months. The therapists have frequent, at times daily, interactions with their cases by text, phone, video conference, and in person at home, work, school or other community settings, providing at least 4 hours of clinical contact each week.

MST-EA therapists collaborate with emerging adults to understand the systemic drivers of problem behaviors and develop a sequence of interventions to address behaviors, all while increasing their sense of responsibility during the transition to adulthood. Commonly used MST-EA interventions include cognitive behavioral therapy, motivational interviewing, affective education, and skill building. MST-EA also aims to change how participants function in their natural settings (such as home, school, and community), leveraging the transition age youth's strengths and pulling in positive supports from their "social network." Further, MST-EA uses part-time paraprofessional "coaches" who help teach concrete life skills and engage clients in weekly prosocial activities. The coaches typically have recent life experience transitioning to adulthood, which increases their credibility with the clients and helps promote overall engagement with the MST-EA program.

A detailed quality assurance (QA) system is used to train therapists in MST-EA and ensure their adherence to the model. First, new therapists participate in a 12-day workshop, during which they learn the theoretical foundations of MST-EA and are exposed to both didactic instruction and experiential exercises to develop specific skills. Second, therapists gain experience delivering MST-EA under close supervision. The team supervisor meets weekly with therapists to review cases, help problem-solve barriers to participant engagement, and ensure interventions follow core MST-EA principles. Third, each team is assigned an expert MST-EA consultant who helps facilitate adherence through biannual booster trainings and weekly review of cases. Important components of the QA system also include validated client-report surveys that measure implementation adherence by therapists, fidelity coding of at least one treatment session audiotape for each therapist each month, and fidelity coding of at least one supervision session audiotape each month. Considerable resources are devoted to quality assurance because research has identified a strong association between therapist adherence to MST and positive client outcomes (Henggeler et al., 1997; Henggeler et al., 1999; Schoenwald et al., 2008).

Implementation Context

This study included transition age youth who were 17-21 years old with justice system involvement and behavioral health conditions enrolled in MST-EA between September 2020 and December 2022 in Cook County, IL. Cook is the county seat of Chicago, which represented approximately 28% of the IDJJ Aftercare population in June 2019. In Cook County, over 30% of IDJJ Aftercare youth returned to secure custody in fiscal year 2018, which exceeds the statewide rate of 23% from that same year.

Youth began enrolling in MST-EA in September 2020, in the midst of the COVID-19 pandemic and the introduction of telehealth services as a mode of program delivery. Overall, the implementation was relatively smooth; the program quickly reached full enrollment and had a short waitlist. It is standard for the first year of any program implementation to be a little bumpy as new processes and procedures are put into place. The primary challenge therapists faced in the first months of program implementation was optimally aligning the timing of referrals with screening and program intake. Some of the first participants had to be discharged prematurely because their time on IDJJ Aftercare ran out before their course of MST-EA treatment was completed. The Aftercare period authorizes the funding expenditures for MST-EA. Therefore, treatment must end when Aftercare ends. This issue was resolved within the first program year and referrals were made before youth were released into the community.

The second challenge experienced by the MST-EA program emerged later in the study period. The planned program staffing was 1 MST-EA supervisor and 4 MST-EA therapists for a maximum caseload of 16transition age youth. It takes 6 to 9 months for therapists to be fully trained to implement MST-EA. However, the therapist team experienced 100% turnover within the first year. Having to hire and train new therapists restricted the number of youth that could be served and qualified referrals exceeded program capacity. Despite active and continuous hiring efforts, the program was not able to achieve target staff levels for the duration of the study period. The program had only two therapists and one supervisor for a significant period. Operating with 50% of planned program staff meant that enrollment was below target goals.

During this time, there was a national shortage of behavioral health professionals as well as increasing demand, making recruiting and retaining staff challenging (National Institute for Health Care Management Foundation, 2023). MST-EA programs in other jurisdictions—and mental health services across the country—experienced similar hiring and retention difficulties.

Notable successes of the MST-EA implementation included: consistent leadership from the same MST-EA supervisor throughout the grant period, a strong referral network and partnership between IDJJ Aftercare and the MST-EA program staff that resulted in a steady flow of well-targeted referrals, and a quick return to “services as usual” post-COVID pandemic with only about 10% of MST-EA services provided via telehealth by close of study period, meaning that about 90% of were provided in-person.

Data Sources

This study uses data from four data sources (see Table 1). Program intake and case management records for participating transition age youth are sourced from the service provider, Youth Outreach Services. MST-EA program and discharge records are sourced from the MST-EA technical assistance provider, Science to Practice Group. Virtual engagement survey responses are collected from therapists at the time of program discharge for each emerging adult. Recidivism records are sourced from the Illinois Law Enforcement Agencies Data System (LEADS), provided by the Illinois Department of Juvenile Justice.

Table 1. Data Sources for this Study

Data Type	Data Source
Intake & case management records	Youth Outreach Services
MST-EA program & discharge records	FIDO, Science 2 Practice Group
Virtual engagement survey	Youth Outreach Services therapists at discharge
Recidivism records	LEADS data provided by the Illinois Department of Juvenile Justice

Analysis

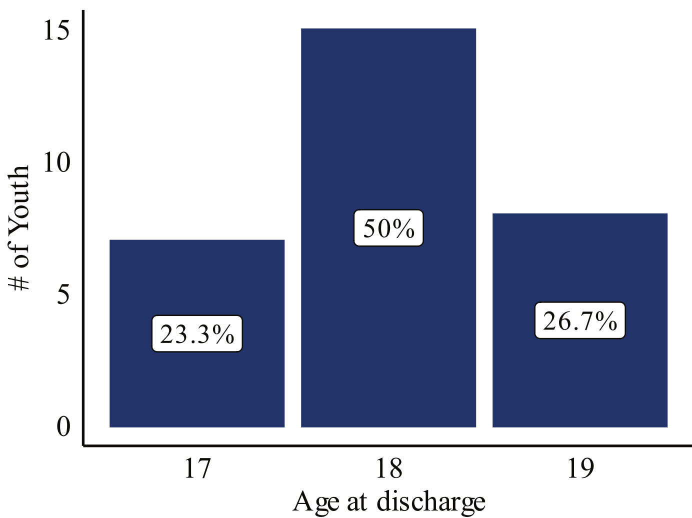
We report descriptive statistics on emerging adult characteristics, program engagement, virtual service provision, MST-EA program outcomes, and recidivism for all emerging adult participants enrolled in MST-EA between September 2020 and December 2022, who discharged by December 2022. Unless otherwise noted, the study sample for all analyses is comprised of 27 transition age youth.

FINDINGS

Participant Characteristics

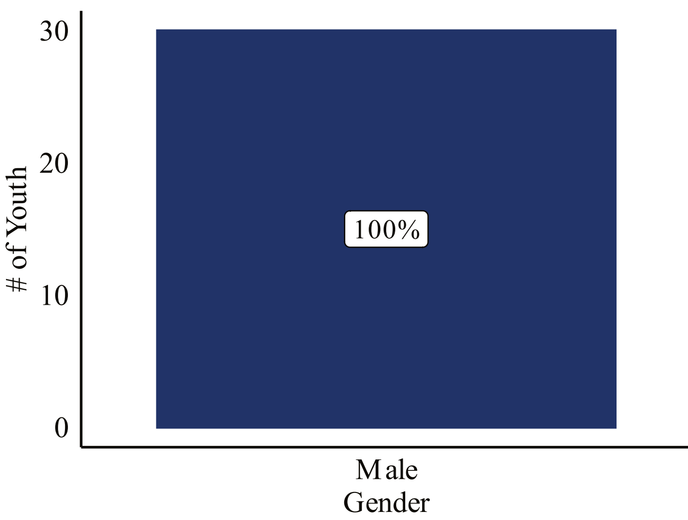
The MST-EA program served young people with qualifying substance use or mental health diagnoses being discharged from an Illinois Department of Juvenile Justice (IDJJ) facility. Program participants' age at discharge ranged from 17 to 19 years old (see Figure 1). The modal participant was 18 years old at the time of program discharge. All transition age youth in the study sample were male (see Figure 2). Several female participants were enrolled in MST-EA near the end of the grant period; however, none of these participants discharged from the program within the study window and are not included in the final report. The majority of participants identify as Black or African American (83%) and a minority of participants identify as Hispanic or Latino (13%; see Figure 3).

Figure 1. Most Youth Were 18 Years Old at Discharge



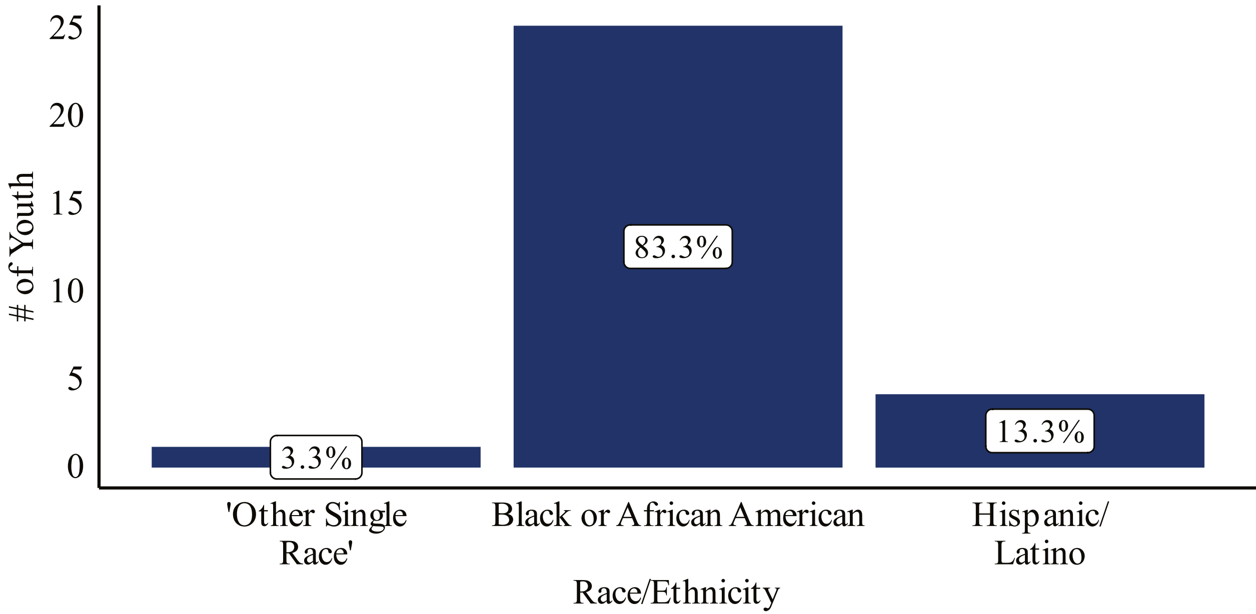
Note: Distribution of participants' ages at discharge in years. Percentage annotations are rounded to nearest tenth.

Figure 2. All Participating Youth Identified as Male



Note: Distribution of participants' genders. Percentage annotations are rounded to nearest tenth. Use of term "Gender" reflects variable label in service provider data.

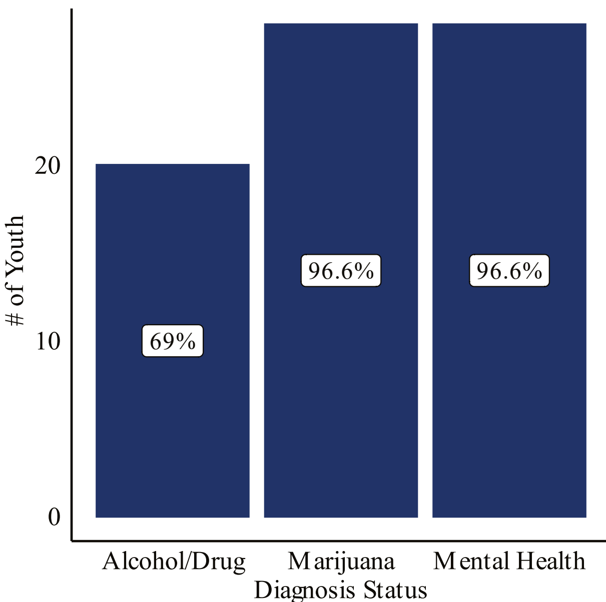
Figure 3. Most Participants Were Black/African American



Note: Distribution of participants' races/ethnicities. Percentage annotations are rounded to nearest tenth. Use of term "Other Single Race" reflects value label in service provider data.

Participants commonly presented with several diagnoses at program intake (see Figure 4). Consistent with program eligibility criteria, all transition age youth presented with substance use or mental health diagnoses, with most participants presenting with both. Almost all participants (~97%) presented with concerns about marijuana use and mental health at intake. Marijuana use encompasses diagnoses of cannabis use disorder (mild, moderate, severe, or unspecified). Mental health diagnoses represent various conditions, including posttraumatic stress disorder, disruptive mood dysregulation disorder, schizophrenia, bipolar disorder, major depressive disorder, generalized anxiety disorder, and conduct disorder. Alcohol or drug concerns (excluding marijuana) were identified in 69% of transition age youth and included substance use disorders for opioids, amphetamines, cocaine, and alcohol.

Figure 4. At Intake, Most Participating Youth Had Marijuana and Mental Health Concerns



Note: Presence of different diagnostic concerns at time of MST-EA program intake. Percentage annotations are rounded to nearest tenth.

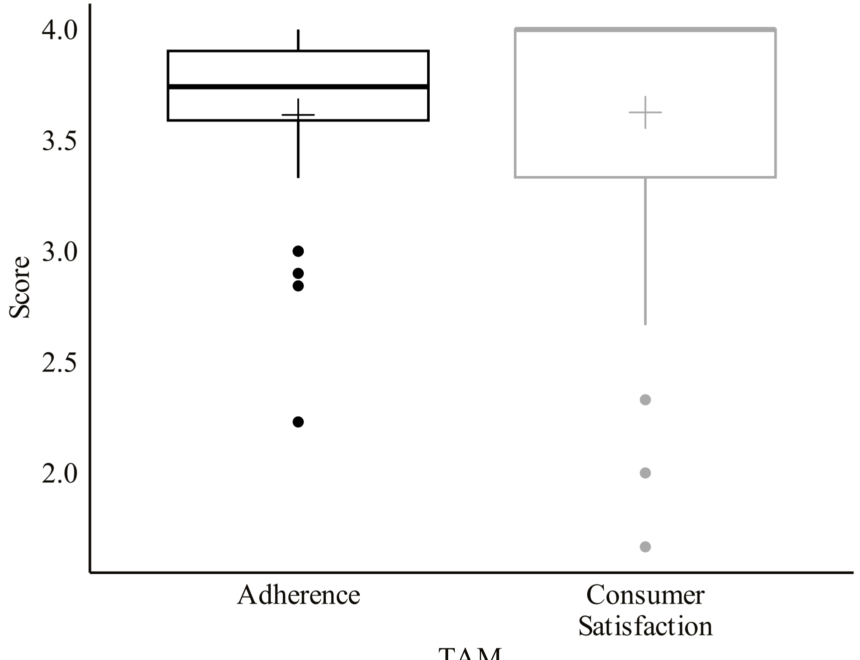
Program Engagement

Program Fidelity

MST-EA program fidelity is measured, in part, by two Therapist Adherence Measure (TAM) scores calculated at the youth level: one captures program adherence and the other captures consumer satisfaction. A sample of the TAM data collection instrument is in the Appendices. TAMs are collected about every 2 weeks over the course of program engagement. The distribution of these scores is depicted in the box-and-whisker plots in Figure 5. The average scores were similar for both TAM instruments, at about 3.6, on a scale of 0 to 4. Median scores are higher for consumer satisfaction TAMs (4.0) than for adherence TAMs (3.7), suggesting high adherence to program model expectations.

The MST-EA model includes intensive initial training for all therapists, periodic booster sessions, and continued technical assistance. This support contributes to the high model adherence observed in this project. The reported TAM scores are consistent with similar MST-EA programs run in other jurisdictions.

Figure 5. Therapist Adherence Measure (TAM) Scores Indicate High Adherence to Program Model Expectations



Note: TAM scores, by instrument. Averages annotated with “plus” signs. Median scores indicated by thick horizontal lines.

Figure 6 depicts the smoothed distribution of the total number of counseling sessions for each discharged transition age youth. The modal participant had around 20 MST-EA counseling sessions; some had well over 75 sessions. The average number of sessions was just over 25, with the median number of sessions at just under 25.

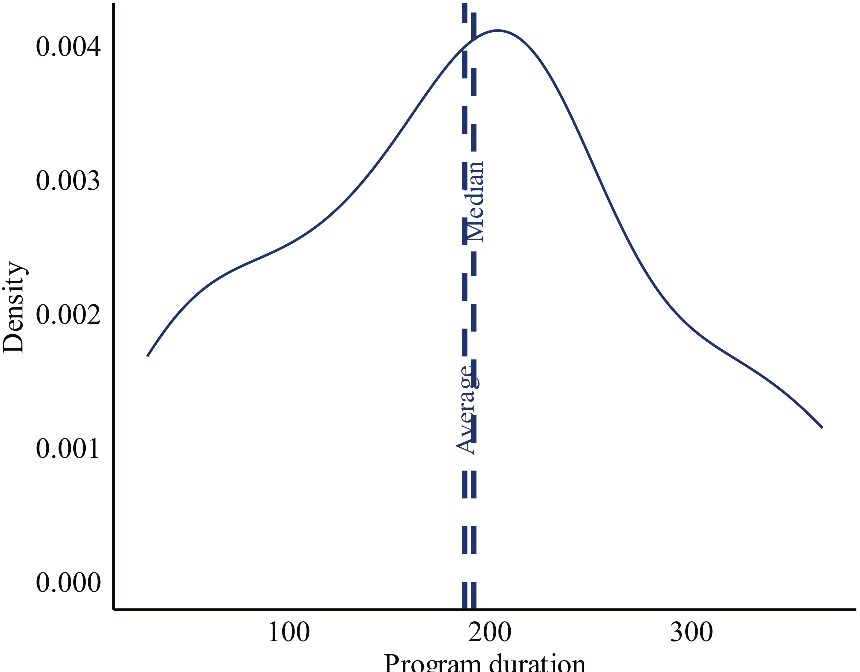
A related measure of program fidelity—program duration—is depicted in Figure 7. Program duration is the number of days between a participant's program intake and discharge dates. The modal, median, and average program duration are all similar—just under 200 days.

Figure 6. On Average, Participating Youth Attended More Than 25 Sessions

0.020
0.015
0.010
0.005
0.000
Density
Median
Average
0
25
50
75
100
Number of sessions per youth

Note: Median and average numbers of sessions attended annotated with vertical lines.

Figure 7. On Average, MST-EA Program Duration Was Just Under 200 Days



Note: Program duration in days for discharged participants. Median and average program length annotated with vertical lines.

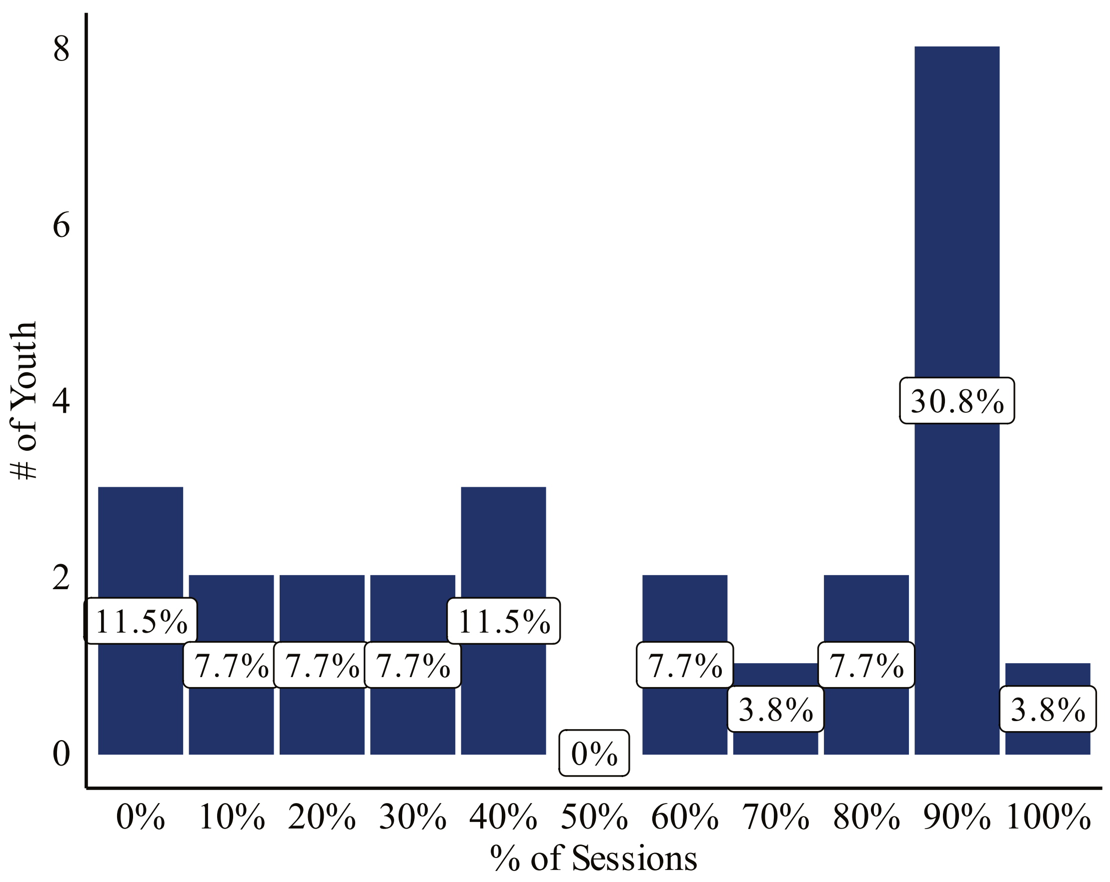
Virtual Service Provision

The MST-EA program launched in September 2020, during the acute phase of the COVID-19 pandemic. MST-EA in Cook County, IL, like therapeutic and service programs around the country, grappled with delivering services in a manner that protected the health of clients and staff within a context of evolving public health information and regulatory guidance. These circumstances lead to MST-EA services, a primarily in-person model, needing to adapt in real time and connect with participants through a combination of virtual service provision (such as telehealth), outdoor meetings, and in-person meetings in typical settings. The balance of online versus in-person services shifted over the study period, with the highest levels of remote engagement in 2020 and 2021.

In order to capture information about the unanticipated implementation of telehealth service, we developed an original survey of program participant engagement, which describes youth's experiences with virtual therapy. The Virtual Engagement Questionnaire was completed electronically by the therapist at discharge and was designed to reflect the duration of program engagement (see Appendices for the Virtual Engagement Questionnaire instrument).

The proportion of MST-EA sessions that were conducted virtually varied (Figure 8). Almost 40% of participants had 90% or more of sessions conducted virtually. For these youth, likely concentrated among those enrolled in MST-EA in 2020 and early 2021, the vast majority of program delivery was done remotely. By contrast, 9% of participating youth experienced fully in-person sessions and another 13% of participants had only 10 to 20% of sessions virtually. The remaining 39% of participants had a more balanced share of in-person and virtual sessions. Between 30 and 80% of their sessions were virtual.

Figure 8. Most MST-EA Sessions Were Conducted Virtually



Note: Therapist report of proportion of sessions that were conducted virtually via phone, video, or other technology. Response based on survey item asking “About how often did sessions occur remotely through phone, virtual, or other technology?" [0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%].

The survey collected therapist perceptions of the disruptiveness of different barriers to virtual program engagement (see Figure 9). Overall, we found that barriers to virtual engagement did not disrupt youth participation in MST-EA sessions. For each barrier, 10 to 15 participants indicated it was “never” an issue. Youth resistance to remote engagement was the most reported barrier, affecting over half of sessions at least some of the time. Other leading barriers included distractions in the environment, difficulty accessing a mobile device, and the lack of a quiet, private space to communicate with the therapist (see Table 2).

In practice, MST-EA therapists took steps to address barriers to youth engagement when they arose. Therapists used multiple strategies to overcome participant resistance to virtual engagement, including breaking up sessions into multiple sessions of shorter duration and allowing participants to turn the camera away if that felt more comfortable. Therapists provided cell phones, tablets, and data minutes to enable virtual engagement when issues with access to technology arose.

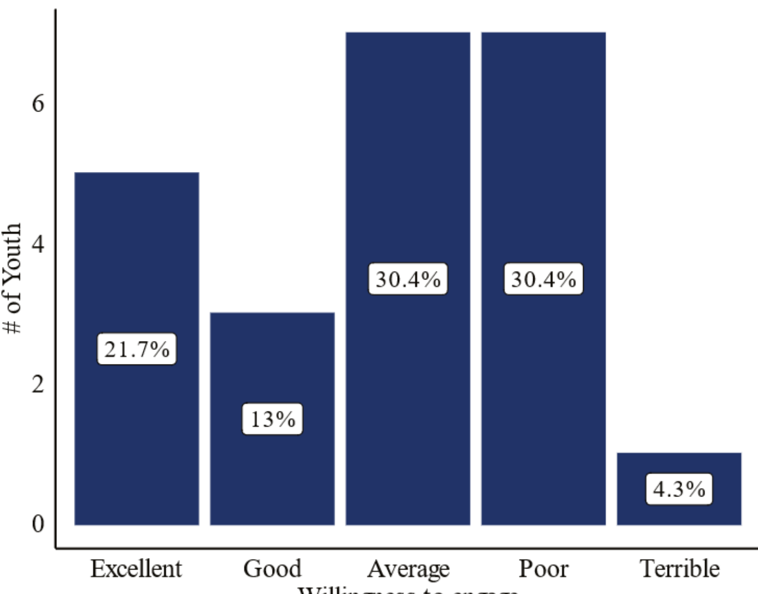
Figure 9. Youth Resistance was the Greatest Barrier to Remote Engagement

	Always/Most of the time	About half the time	Sometimes	Never
Youth resistance to remote engagement	22%	0%	26%	39%
Poor connection quality	0%	13%	9%	70%
Lack of quiet/private space	13%	4%	13%	61%
Distractions in environment	13%	0%	26%	52%
Difficulty accessing WiFi/Cell data	9%	4%	22%	57%
Difficulty accessing a mobile device	4%	4%	17%	65%
Challenges operating devices/software	4%	4%	9%	65%

Note: Therapist reported barriers to engagement virtually via phone, video, or other technology.

Response based on survey item asking “Among phone and virtual sessions only, please indicate about how often the following issues presented barriers to youth or family engagement:” [Always, Most of the time, About half the time, Sometimes, Never]

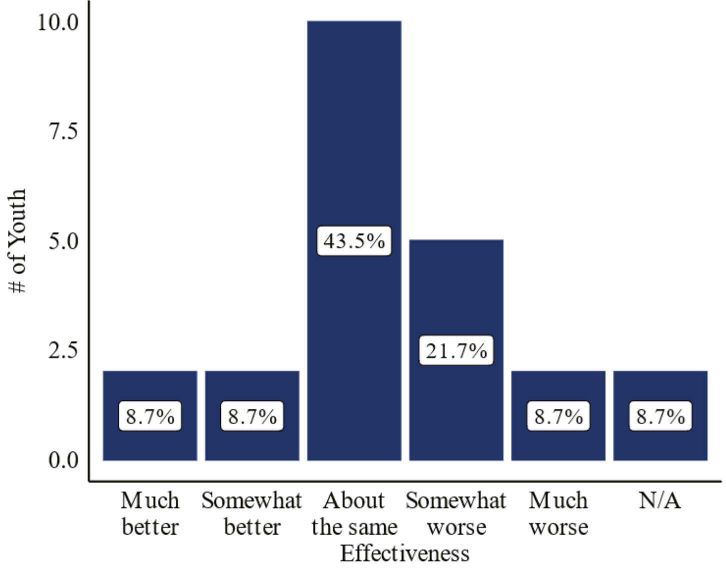
Figure 10. Participants Displayed a Range of Willingness to Engage in Virtual Treatment Sessions



Note: Therapist perception of participants willingness to engage in virtual treatment sessions. Response based on survey item asking "Overall, how would you characterize the youth's willingness to engage in phone or virtual sessions?"

With the unanticipated need to quickly build in virtual and telehealth services, it was important to gain some insight into how this shift influenced participant experiences with MST-EA. According to therapist reports, about two-thirds of participating youth had an excellent/good (34.7%) or average (30.4%) willingness to engage in virtual sessions, with about one-third (34.7%) having poor/terrible virtual engagement (see Figure 10). About 60% of participants perceived virtual sessions to be as effective or more effective than in-person sessions; about 30% perceived virtual sessions as less effective (see Figure 11). Overall, the use of virtual treatment appeared to be a positive treatment experience for the majority of participating youth. Even for those whose experiences with virtual treatment were inferior to in-person treatment, using allowed them to access MST-EA throughout the pandemic, while protecting the physical health of transition age youth and therapists.

Figure 11. Effectiveness of Virtual Treatment Was about the Same or Better Than In-Person Treatment for Most Participants



Note: Therapist perceptions of the effectiveness of virtual treatment (relative to in person) with transition age youth. Response based on survey item asking "In comparison to any face-to-face sessions with this youth, how would you rate the effectiveness of phone or virtual sessions?" "N/A" indicates participants without any in-person sessions to which virtual sessions could be compared.

Program Outcomes

Program Completion and Goal Attainment

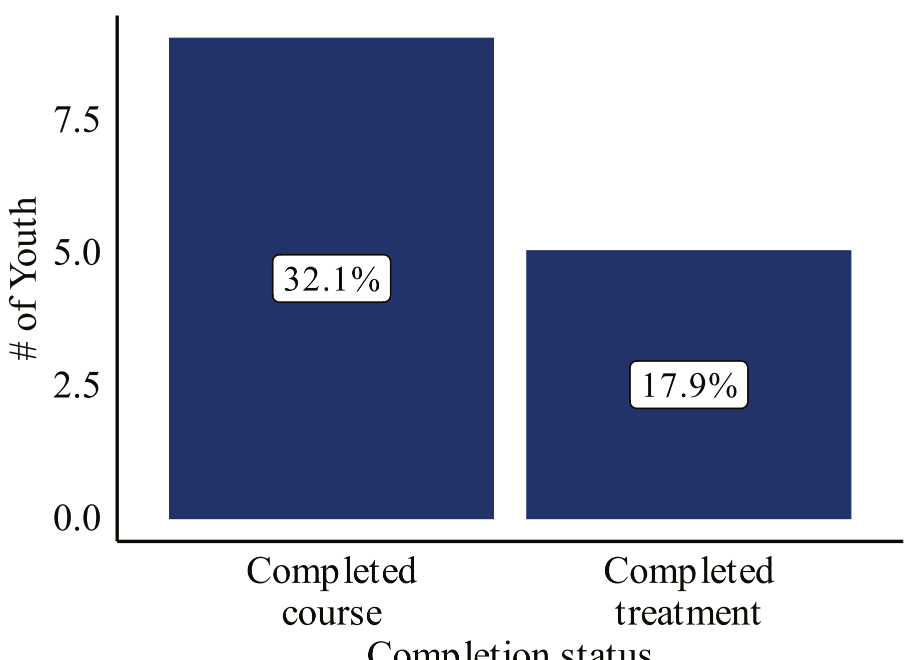
The MST-EA program collects data on a variety of primary and distal program outcomes. Two of these reflect program completion, depicted in Figure 12. “Completed course” is defined as a program duration of at least 4 months and the participating youth and MST-EA therapist reaching a mutual decision to end program engagement. About one-third of participants (32%) completed the MST-EA course. “Completed treatment” includes the definition of completed course and that the majority of treatment plan goals have been met and sustained. About 18% of participants achieved completed treatment status.

There were several circumstances that characterized cases that discharged without course completion. A handful of participating youth were discharged prematurely because their Aftercare period ended before a course of treatment could be completed. The Aftercare period is required to authorize expenditures for the MST-EA program and the period in which the IDJJ maintains authority over the youth. These instances of early discharge due to Aftercare ending were concentrated in the first months of program enrollment, after which the issue was addressed by ensuring MST-EA intake began before or at the point of institutional release, leaving a 6-month period of Aftercare. Further, IDJJ supported legislation which became Illinois Public Act 103-290. Going into effect 7/28/23, the legislation allows payment for services for up to 12 months after a young person discharges from Aftercare, expanding the eligibility timeframe for transition age youth served by MST-EA moving forward.

Several participants were discharged without course completion because they were charged with a new criminal offense and taken into custody. At this point, the MST-EA case is closed. Others were discharged without course completion when they stopped engaging with their MST-EA therapists. In these instances, therapists and their supervisors would make intensive engagement attempts via phone, text, and in-person visits. Cases were closed after 30 days of unsuccessful engagement attempts.

Interpreting the share of treatment completion—the 32% completing a course of at least 4 months—needs to be considered in light of the circumstances of the target population and the intensity of the MST-EA program. The MST-EA target population for the Cook County, IL implementation was comprised of transition age youth aged 17 or older who were released into the community following a period in an institution. All participating youth had a serious mental health condition or substance use disorder; many participants had both challenges. This “deeper end” and high-risk population of young people faces many challenges to successful reintegration into the community. These realities highlight the positive impact of the program gains MST-EA participants did achieve.

Figure 12. Less Than One-Third of MST-EA Youth Completed All Components of the Program

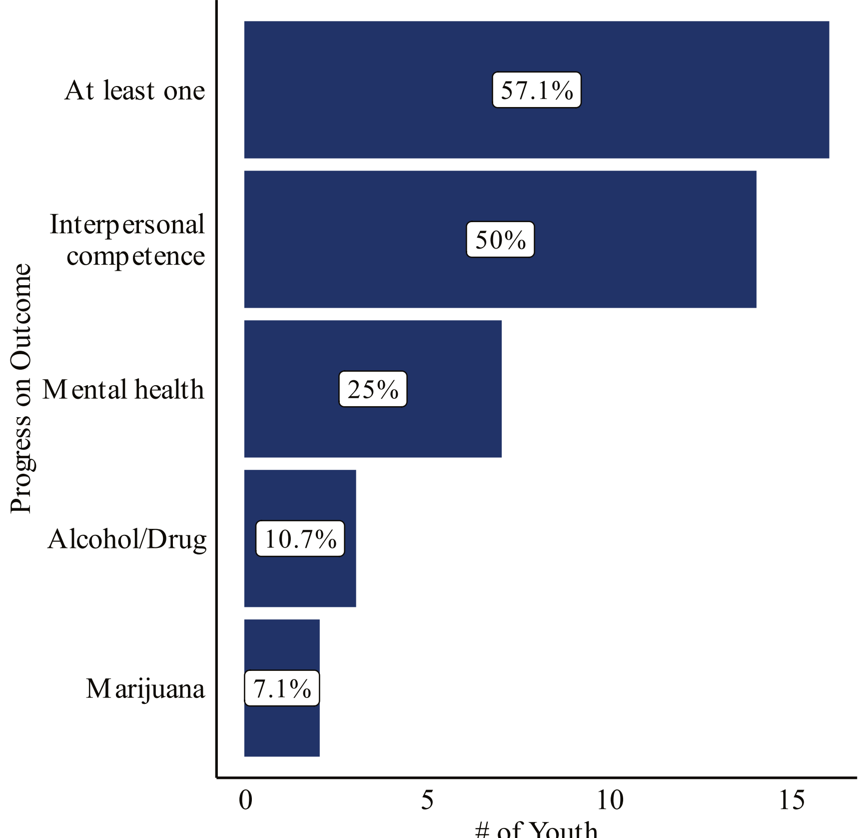


Note: Distinction between course and treatment completion made by MST-EA therapists. Completion outcomes are reported at program discharge.

Many of the participating youth who did not meet course or treatment completion benchmarks still achieved measurable benefits from program engagement, reported in Figure 13. Most participants (57%) attained progress on at least one program outcome. Improved interpersonal competence was the most common achievement, with half of participants making interpersonal competence gains. The second most frequently reported improvement was in mental health, with 25% of participating youth achieving improvements. About 11% of participants made progress addressing alcohol or drug use while 7% of participants made progress addressing marijuana use.

All participating youth(100%) were documented as being housed and a significant majority of participants (approximately 89%) were living in the community at discharge (see Figure 14). None of the youth in the program faced new drug charges, and around 82% had no new legal charges at the time of discharge. About half of participants were reported as attending school or working at the time of program discharge, when their ages ranged from 17 to 19 years old (see Figure 1).

Figure 13. Most Participating Youth Reported Progress on at least One Program Outcome at Discharge



Note. Participant attainment of proximal program outcomes. "At least one" refers to achievement of any of four other program outcomes.

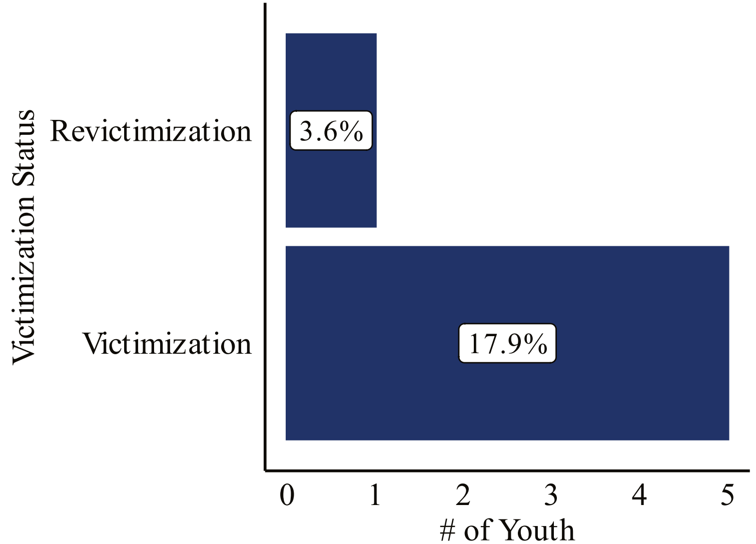
The MST-EA program collected data on victimization incidents that occurred during the period the youth was engaged with MST-EA (see Figure 15). Victimization events were defined as "an incident of physical assault/abuse, sexual assault/abuse, emotional abuse (i.e., bullying), witnessing violence, damage to property, or other related victimizations as measured by reports from justice officials, the Aftercare specialist, caregiver(s), or client self-report" (see Appendices for victimization questions). Instances of victimization may have taken place at any time or location during the period of program engagement and were not restricted to events occurring while the youth was participating in MST-EA program activities. Five participants (18%) reported being victimized during the months in which they were enrolled in the MST-EA program. Only one participant experienced more than one victimization incident.

Figure 14. At Program Discharge, No Participants Were Homeless or Faces New Drug Charges

Outcome
Not homeless
100%
No new legal charges
100%
No new drug charges
100%
Living in community
89.3%
In school/work
50%
0
10
20
# of Youth

Note: Outcomes reported at discharge by MST-EA therapist.

Figure 14. Victimization of Participating Youth during MST-EA Engagement Period



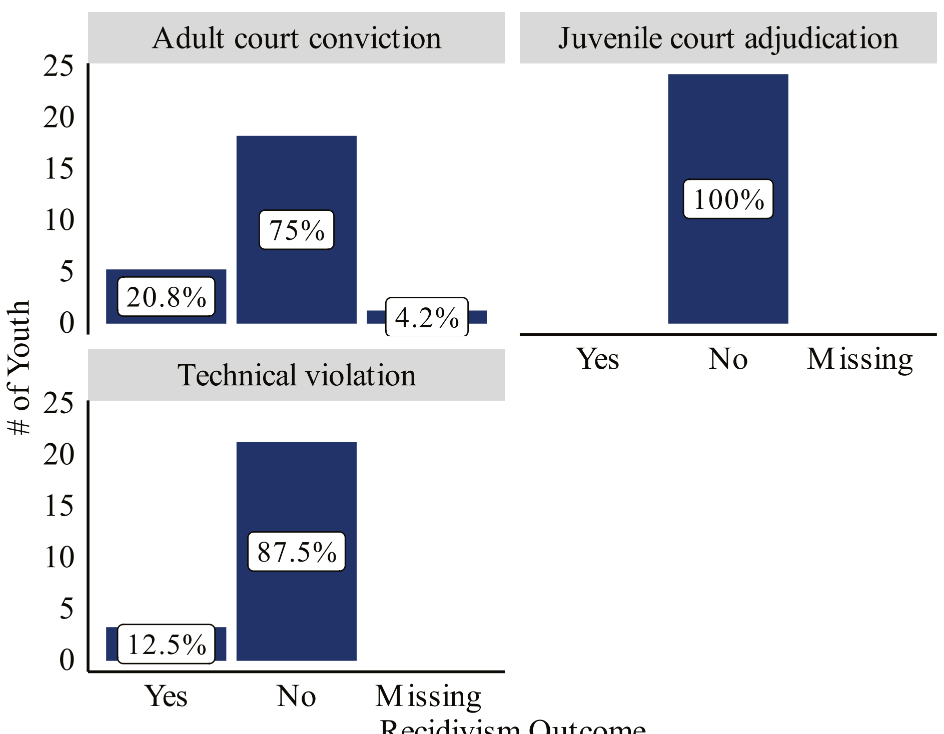
Note: Victimization statuses reported at discharge by MST-EA therapist.

Recidivism Outcomes

This project tracked three recidivism outcomes specified by the federal program sponsor: technical violation, adult court conviction, and juvenile court adjudication. We report recidivism outcomes for transition age youth who had been discharged from the program for more than 6 months at the time when recidivism data were collected.

The three recidivism outcomes are depicted in Figure 16. Most participating youth (nearly 88%) did not receive a technical violation. No participant received a juvenile court adjudication. The period of risk for new juvenile court convictions within the study population is small given that only 23% of participants were under age 18 at program discharge. Participating youth aged 18 or over who were charged with a new offense would be handled in the adult court system. About 21% of MST-EA participants were known to have a new adult court conviction. These recidivism outcomes are similar to outcomes for IDJJ's entire population.

Figure 15. Most Youth Had Not Recidivated 6 Months after Discharge



Note: *n* = 24 Transition age youth represented in the recidivism outcomes. Recidivism reported for the period between MST-EA program intake and six months after program discharge.

DISCUSSION

Figure 17. Overview of MST Implementation Evaluation findings

Outcomes at Discharge
Completion rates: 32% finished MST-EA course, 57% showed progress, with mental health and substance use improvements

Recidivism Outcome
Limited recidivism: 13% technical violations, 21% new adult court convictions, no new juvenile court adjudications

Virtual Service Provision
Introduced due to COVID-19, maintaining program despite youth resistance and device access challenges

Considerations
Older youth with mental health/substance use disorders face reintegration challenges, highlighting program impact

Program Fidelity and Engagement
Strong adherence to MST-EA model, averaging 200 days duration and 25 counseling sessions

Limitations
Lack of comparison group, small sample size, and COVID-19 timeframe affect findings' generalizability

Participant Characteristics
Diverse male youth, primarily Black or African American, with prevalent behavioral health issues

Success and Future Plans
Successful implementation in Cook County, IL, with plans for continued Illinois expansion

This report presents descriptive findings from the implementation of the Multisystemic Therapy for Emerging Adults (MST-EA) program in Cook County, IL. MST-EA is an intensive therapeutic intervention aimed at assisting emerging adults with behavioral health needs who are reintegrating into the community after time in an Illinois Department of Juvenile Justice (IDJJ) youth center. MST-EA adapts an evidence-based model targeted to addressing the challenges faced by IDJJ's youth aged 17 years and older who are not eligible for standard MST (and other youth-focused interventions). MST-EA was offered through a partnership between IDJJ, the Illinois Department of Human Services (IDHS), the community service provider Youth Outreach Services (YOS), and Science to Practice Group, the MST-EA technical assistance provider. The program was funded with support from the OJJDP.

IDJJ serves a high-risk population, with over 80% assessed as being at high risk to offend and 90% exhibiting serious behavioral health symptoms. Transition age youth returning to the community after a detention period face multiple challenges during a critical developmental phase. These challenges have impacts on important life domains including education, employment, and securing stable housing. MST-EA seeks to meet the identified needs of transition age youth and reduce recidivism.

This report documents participant characteristics, program fidelity and engagement, virtual service provision, participant outcomes at program discharge, and recidivism for 27 transition age youth enrolled in MST-EA between September 2020 and December 2022 in Cook County, IL, with MST-EA program records, a virtual engagement survey, and statewide recidivism records.

Participant characteristics. The study included male transition age youth who were predominantly Black or African American (83%) or were a minority Hispanic or Latino (13%). Participants ranged from 17 to 19 years of age. Most participants exhibited multiple behavioral health diagnoses at program entry, including serious mental illness (97%), concerns related to marijuana use (97%), and concerns related to alcohol or other drug use (69%).

Program fidelity and engagement. We found evidence of strong fidelity to the MST-EA model. Program duration, from intake to discharge, averaged just under 200 days. Each participating youth averaged just over 25 counseling sessions, with the modal participant having around 20 sessions. Program duration and number of sessions are consistent with the MST-EA program model. Adherence to the MST-EA model is captured by Therapist Adherence Measure (TAM) scores, with average scores for program adherence and consumer satisfaction at approximately 3.6 on a 0 to 4 scale. The comprehensive support for MST-EA implementation, including initial training, booster sessions, and ongoing technical assistance, likely contributed to the high program fidelity.

Virtual service provision. MST-EA began enrolling participants in September 2020, when in-person meetings were restricted due to the COVID-19 pandemic. This necessitated the unanticipated integration of virtual service provision (that is, telehealth) and outdoor meetings. The Virtual Engagement Questionnaire sought to capture information about transition age youths' experiences with virtual therapy. The balance of online versus in-person services shifted over the study period, with the highest levels of remote engagement in 2020 and 2021. Overall, we found that virtual engagement enabled services to continue and did not unduly disrupt engagement in MST-EA sessions. The most common challenge reported was youth resistance to virtual engagement. Other barriers, affecting a minority of participants, included distractions in the environment, difficulty accessing a mobile device, and the lack of a quiet, private space to communicate with the therapist. Therapists used multiple strategies to overcome these challenges, including conducting shorter sessions, allowing participants to turn the camera away, and providing cell phones, tablets, and data minutes.

Outcomes at discharge. The MST-EA program collects data on a variety of primary and distal program outcomes. About one-third of participants (32%) completed the MST-EA course, defined as a program duration of at least 4 months and the participant and MST-EA therapist reaching a mutual decision to end program engagement. About 18% of participating youth completed treatment, defined as completing the course and the majority of treatment plan goals being met and sustained. Reasons that participants were discharged without course completion included the conclusion of the Aftercare period, being returned to custody for a new criminal charge, and the youth ceasing communication with program staff (cases closed after 30 days of intensive engagement attempts).

Many MST-EA participants (57%) achieved measurable progress on at least one program outcome, including those who did not have a successful discharge. Documented program benefits included improvements in interpersonal competence (50%), mental health (25%), alcohol or other drug use (11%), and marijuana use (7%). All participating youth (100%) were documented as being housed and 89% were living in the community at discharge. About half of participants, ranging in age from 17 to 19 years old, were attending school or working at discharge. No participants faced new drug charges and around 82% had no new legal charges at the time of discharge.

Recidivism outcomes. Recidivism is captured by technical violations, adult court convictions, and juvenile court adjudications that occur during MST-EA enrollment and within 6 months after discharge. Three of 24 participating youth (13%) received a technical violation. No participants received a juvenile court adjudication. The period of risk for new juvenile court convictions is limited given that only 23% of participants were under age 18 at program discharge. Five of 24 MST-EA participants (about 21%) were known to have a new adult court conviction.

Treatment completion and recidivism should be considered within the context of the target population, comprised of youth aged 17 or older who were released into the community from an IDJJ institution. In

addition to juvenile justice involvement, all youth had a serious mental health condition or substance use disorder, with many presenting both. This “deeper end” and high-risk population of young people faces many challenges to successful re-integration into the community. These realities highlight the positive impact of the MST-EA program gains participating transition age youth did achieve.

The presented findings are subject to several limitations. First, this study describes MST-EA program outcomes for participating youth without a comparison group or other causal research design. It is not possible to definitively determine whether or what portion of outcomes can be attributed solely to the MST-EA program. Second, challenges with therapist recruitment and retention meant the program staff did not have capacity to serve the target number of transition age youth. This resulted in a study sample of under 30 participants. Results from small samples can be less precise and less reliable. A final limitation is that this study occurred within a timeframe affected by the COVID-19 pandemic. Due to the major social and economic disruptions to daily life during this period, it is uncertain whether findings can be generalized to future settings.

Despite these limitations, the study demonstrates a successful implementation of MST-EA in Cook County, IL. The program benefitted from strong organizational partnerships, a well-targeted referral pipeline, and high fidelity to the program model. The positive progress achieved by youth who participated in MST-EA shows the promise of this program to support transition age youths as they re-enter the community from the juvenile justice system.

Building on the successful initial implementation of MST-EA in Cook County, the program will continue to serve transition age youth in Illinois. IDJJ plans to continue offering MST-EA within Cook County and is pursuing options to expand programming to additional geographic areas within the state.

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APPENDICES

Therapist Adherence Measure – Emerging Adults

MST-EA Virtual Engagement Questionnaire

MST-EA Victimization Questions

Therapist Adherence Measure - Emerging Adults

Client:	Jack Smoke
Group:	Sample Team-0003-SHEIDO-SMOKE
TAM Due Date:	08-Aug-2017
TAM Happened?	Yes No
Therapist	Ashli Sheidow
Coach	-- Select Coach --

*Below are a series of questions about your experience in therapy over the **PAST TWO WEEKS**.*

Please read each statement and indicate by circling whether this is something that happened: (1) Never, (2) Occasionally, (3) Often, or (4) Always, during your sessions over the past two weeks.

These questions are about your work with your *MST-EA Therapist* and not your Coach (if you have one).

1	The therapist and I agreed on the ***overall*** goals for ***treatment***.	N/A	Never	Occasionally	Often	Always
2	The therapist and I agreed on the goals for ***sessions***.	N/A	Never	Occasionally	Often	Always
3	The therapist used some of my ideas when we decided how to solve my problems.	N/A	Never	Occasionally	Often	Always
4	The therapist helped me set expectations and goals for myself.	N/A	Never	Occasionally	Often	Always

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#	Statement					
5	The therapist made sure I agreed about how to include family, friends, or significant others in my treatment.	N/A	Never	Occasionally	**Often**	Always
6	The therapist talked to me in a way I could understand.	N/A	Never	**Occasionally**	Often	Always
7	I felt like my therapist was honest and straightforward with me.	N/A	Never	**Occasionally**	Often	Always
8	The therapist made sure I knew which problems we were working on.	N/A	Never	**Occasionally**	Often	Always
9	The therapist recommended that I do specific things to solve my problems.	N/A	Never	**Occasionally**	Often	Always
10	The therapist's recommendations helped me work toward my goals almost every day.	N/A	Never	Occasionally	**Often**	Always
11	The therapist asked about how well I followed recommendations from the previous session.	N/A	Never	Occasionally	**Often**	Always
12	The therapist asked about the success (or lack of success) of recommendations from the previous session.	N/A	Never	Occasionally	**Often**	Always
13	We talked about ways to avoid things that might cause me problems.	N/A	Never	**Occasionally**	Often	Always
14	We talked about things that might make it hard for me to change.	N/A	Never	**Occasionally**	Often	Always
15	The therapist checked to see whether tasks and assignments were completed from the last session.	N/A	Never	**Occasionally**	Often	Always

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#	Item					
16	The therapist made recommendations to help me change ways that I interact with people ***in*** my home (the people you currently live with).	N/A	Never	Occasionally	Often	Always
17	The therapist made recommendations to help me change ways that I interact with people ***outside*** my home.	N/A	Never	Occasionally	Often	Always
18	The therapist helped me talk with the people in my life to solve problems.	N/A	Never	Occasionally	Often	Always
19	My therapist tried to understand what is good about the people in my life.	N/A	Never	Occasionally	Often	Always
20	My therapist tried to understand what is good about me.	N/A	Never	Occasionally	Often	Always
21	The therapist helped me believe I can change my behavior if I want to.	N/A	Never	Occasionally	Often	Always
22	The therapist helped me identify my reasons for wanting to change.	N/A	Never	Occasionally	Often	Always
23	The therapist helped me identify my reasons for ***not*** wanting to change.	N/A	Never	Occasionally	Often	Always
24	I felt like my therapist tried to understand how my problems all fit together.	N/A	Never	Occasionally	Often	Always
25	The therapist's recommendations helped me take more responsibility.	N/A	Never	Occasionally	Often	Always
26	The therapist made sure we got a lot done during sessions.	N/A	Never	Occasionally	Often	Always

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#	Item					
27	My therapist and I talked about how I'm feeling (for example, unhappy, irritable, nervous, upset, out of control) or my mental health.	N/A	Never	Occasionally	**Often**	Always
28	My therapist and I talked about how things are going at school or work (or my future plans for school or work).	N/A	Never	Occasionally	**Often**	Always
29	My therapist and I talked about how my relationships with friends, family or significant others were going.	N/A	Never	Occasionally	**Often**	Always
30	My therapist and I talked about my living situation (that is, where I live, how it's going).	N/A	Never	Occasionally	**Often**	Always
31	My therapist and I talked about avoiding getting in trouble with the law.	N/A	Never	Occasionally	**Often**	Always
	IF YOU HAVE NEVER USED ALCOHOL/DRUGS, CHECK THIS BOX & SKIP ITEM #32	☐				
32	My therapist and I talked about reducing or stopping my use of alcohol or drugs, or continuing to stay away from drugs.	N/A	Never	**Occasionally**	Often	Always

Consumer Satisfaction Questionnaire (Therapist)

#	Item					
1	Overall, how satisfied were you with your MST-EA Therapist?	N/A	Not At All	Somewhat	Very Much	**Completely**
2	If you had the same need for help in the future, would you want to return to your MST-EA Therapist?	N/A	Not At All	Somewhat	Very Much	**Completely**
3	If you had a friend with the same need for help, would you recommend your MST-EA Therapist?	N/A	Not At All	Somewhat	**Very Much**	Completely

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These questions are about interactions with your ***MST-EA Coach*** and not your Therapist.

	IF NO COACH IS ASSIGNED, CHECK THIS BOX & SKIP REMAINING ITEMS	☑				
1	I saw the MST-EA Coach twice each week.	N/A	Never	Occasionally	Often	Always
2	My MST-EA Coach teaches me skills that I need.	N/A	Never	Occasionally	Often	Always
3	My MST-EA Coach and I have fun together.	N/A	Never	Occasionally	Often	Always
4	I trust my MST-EA Coach.	N/A	Never	Occasionally	Often	Always
5	My MST-EA Coach knows what my strengths are.	N/A	Never	Occasionally	Often	Always
6	My MST-EA Coach knows what interests me and what I like to do.	N/A	Never	Occasionally	Often	Always
7	I like my MST-EA Coach.	N/A	Never	Occasionally	Often	Always

Consumer Satisfaction Questionnaire (Coach)

1	Overall, how satisfied were you with your MST-EA Coach?	N/A	Not At All	Somewhat	Very Much	Completely
2	If you had the same need for help in the future, would you want to return to your MST-EA Coach?	N/A	Not At All	Somewhat	Very Much	Completely
3	If you had a friend with the same need for help, would you recommend your MST-EA Coach?	N/A	Not At All	Somewhat	Very Much	Completely

Complete

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MST-EA Virtual Engagement Questionnaire

The virtual engagement questionnaire is completed by the therapist at discharge. These questions are intended to illuminate experiences and challenges that were encountered in engaging youth virtually through either phone or video sessions.

Many service providers have adapted approaches to engaging with youth during the COVID-19 pandemic; some of these adaptations depend upon technology for remote communication. We are interested in learning more about the potential barriers to remote engagement that you have experienced while delivering MST-EA to IDJJ youth.

Please complete this form at discharge, considering how you have engaged the youth throughout the program as you answer the questions.

Youth's YIN ID#: ___________

MST-EA Discharge date: ____________

1. Approximately how many total sessions (including in-person, by phone, and virtual (audio/video technology) did you have with this youth? _________

2. About how often did sessions occur remotely through phone, virtual, or other technology?

0% (never), 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100% (always)

3. Among phone and virtual sessions only, please indicate about how often the following issues presented barriers to youth or family engagement:

	Always	Most of the time	About half the time	Sometimes	Never	N/A
Difficulty accessing a mobile or internet enabled **device** like a smartphone, tablet, or computer						
Difficulty **accessing WiFi** or sufficient **cellular data**						
Poor **connection** quality						
Challenges **operating** the device or a virtual audio/video software like FaceTime, Google Duo, etc.						
Lack of a quiet, **private** space						
Distractions in the environment like family or friends						

Youth **resistance** to engaging in remote sessions	
Other (please describe):	

4. In approximately what percent of phone or virtual sessions did you experience one or more of the barriers listed above?

0% (never), 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100% (always)

5. Overall, how would you characterize the youth's willingness to engage in phone or virtual sessions?

Terrible, Poor, Average, Good, Excellent

6. In comparison to any face-to-face sessions that you had with this youth, how would you rate the effectiveness of phone or virtual sessions?

Much better, Somewhat better, About the same, Somewhat worse, Much worse
N/A, no in-person sessions with this youth

MST-EA – Victimization Questions

The victimization questions are completed by the therapist at discharge.

1. During program enrollment (from the date of enrollment through the date of discharge), did the emerging adult (EA) experience an incident of physical assault/abuse, sexual assault/abuse, emotional abuse (i.e., bullying), witnessing violence, damage to property, or other related victimizations as measured by reports from justice officials, the aftercare specialist, caregiver(s), or client self-report?

   Yes - No - N/A

2. During program enrollment (from the date of enrollment through the date of discharge), did the EA experience a subsequent experience related to physical assault/abuse, sexual assault/abuse, emotional abuse (i.e., bullying), witnessing violence, damage to property, or other related victimizations as measured by reports from justice officials, the aftercare specialist, caregiver(s), or client self-report? This re-victimization would be in addition to the event(s) in the previous question.

   Yes - No - N/A