

# Evaluation of the Judge Ed Emmett Mental Health Diversion Center

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# Executive Summary

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This study examined the use of a Jail Deflection Program in Harris County, Texas. The deflection program was developed in partnership with law enforcement, the district attorney, and the Judge Ed Emmet Mental Health Center. The program provides alternative interventions to jail for people who have persistent mental health issues that engaged in a lower-level misdemeanor. The program was initiated in September 2018 and has served over 4,000 people since that time.

The study examined several important outcomes among first year and second year jail diversion participants, including future jail incarceration, psychiatric hospitalizations, use of psychiatric emergency services and outpatient services. We found evidence that people who participate in the Harris Center Jail Diversion Program are less likely to have future jail bookings and are more likely to access outpatient services after participating in the program. First year participants experienced an average reduction of 2.52 jail bookings per month after participating in the program. Second year participants had an average reduction of 2.14 jail bookings per month following their program participation. The size of the reduction in jail bookings were largest among Black participants, male participants, and homeless participants. Participants experienced significant increases in usage of outpatient services following their participation in the program. However, their use of outpatient services declined over time, underscoring the importance of mobilizing additional resources and services that help keep program participants connected to services over time.

Harris Center Participants experienced upticks in psychiatric hospitalizations and usage of psychiatric emergency services in the short-term period following their program participation. However, we found significant declines in the number of psychiatric-related events over time during the post-intervention periods. First year participants experienced an average reduction of .67 psychiatric hospitalizations per month after participating in the program, and second year participants had an average reduction of .84 psychiatric hospitalizations per month after participating in the program. The reductions in psychiatric hospitalizations were largest among people who were homeless. First year participants had an average reduction of 1.47 psychiatric emergency incidents per month. Second year participants had an average reduction of 1.91 psychiatric emergency incidents per month after participating in the program. The reductions were largest among people who were homeless at the time when they participated in the program.

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# Introduction

Jails in the United States admit more than 10 million people every year. Compared with the general population, jail inmates are more likely to suffer from serious mental illness and substance use problems (Torrey et al. 2014). Moreover, jails tend to lack the necessary resources for treating substance use problems and mental illness (May et al 2014). Yet, even in communities with psychiatric facilities, jails often serve as a primary provider for mental health services.

Policymakers and practitioners have become increasingly interested in the use of alternatives to jail incarceration. One promising approach is the use of programs that “deflect” individuals away from jail incarceration into alternative institutions that provide mental health/substance use treatment and services. The deflection process results in law enforcement/district attorney’s office deciding not to charge a person and instead transport them to an alternative program than jail. In many jurisdictions, law enforcement is limited to low level offenses and often specific for people with mental health issues or people with substance use issues. Diversion and deflection programs are becoming more available across the country as researchers continue to find that jails have significant collateral consequences for people with behavioral and mental health issues. In Harris County, the Ed Emmett MH Diversion Center provides Harris County residents with an important option for law enforcement officers.

## The Judge Ed Emmett Mental Health Diversion Center

The Judge Ed Emmett Mental Health Diversion Center is a deflection program operated by The Harris Center for Mental Health and IDD. The program opened in September 2018 to reduce the number of people charged with misdemeanor offenses who have a serious mental health diagnosis from being booked into jail. In partnership with the District Attorney's office and local law enforcement agencies, the program offers peer support, triage and assessment services, psychiatric and medical evaluations, mental health stabilization plans, psychosocial programming, rehabilitative services, respite beds, and discharge planning to people referred to the program. While individuals are not mandated to stay in the program, Diversion Center staff work to keep the people engaged in the residential services for as long as needed to get them stabilized and connected to aftercare services. As people transition from the program, they are linked to community services through The Harris Center or other services to ensure successful transitions.

## Purpose of this Study

Over the past five years, Harris County has been developing a deflection/diversion center for individuals with mental health issues who have also been arrested by law enforcement for a minor misdemeanor. In collaboration with stakeholders from the Harris Center, Justice System Partners (JSP) conducted an evaluation of first-year program participants at the Harris Center in 2020. The evaluation found that that first year Harris Center participants had fewer jail bookings in the 12 months following their initial enrollment in the program.

The current evaluation builds on the findings of the initial study conducted by JSP in 2020. In the current evaluation, we assess jail and health outcomes for participants that participated in The Harris Center Diversion Program. We took the initial cohort from year 1 and followed them for an additional year to determine if the benefits from participating in the study are maintained in the second year. The sample includes people who participated in jail diversion during the first year of the program (September 1<sup>st</sup>, 2018 – May 31<sup>st</sup>, 2019). We also drew a second sample of people from the second year and examined outcomes for them for one year post-program. The second sample were people who participated in jail diversion during the second year of the program (June 1<sup>st</sup>, 2019 – April 30<sup>th</sup>, 202).

The current evaluation has three primary goals. First, we assess whether Diversion Center participants are more or less likely to have new bookings into jail for felonies and misdemeanors following their initial enrollment in the program with 1 and 2 year follow-

ups. In contrast to the initial evaluation conducted by JSP, which assessed jail bookings 12 months after participants initial program enrollment, this study estimates whether first year program participants experience new jail bookings for up to two years following their initial program enrollment. Moreover, this study also examines subsequent jail bookings among second year program participants who were not available in the initial study. Second, this study builds on the prior evaluation by examining whether Harris Center participants have increased access to outpatient services that play an important role in stabilizing individuals with severe mental illness. Third, this study examines psychiatric hospitalizations and usage of psychiatric emergency services among both cohorts of the Diversion Center. The research questions for the study are outlined below.

- 1) Do Diversion Center participants less likely to have future jail bookings after their initial enrollment?
- 2) Do Diversion Center participants have fewer psychiatric hospitalizations and lower usage of psychiatric emergency services after their initial enrollment?
- 3) Do Diversion center participants have increased engagement in mental health outpatient services after their initial enrollment?

## Data and Methods

The Harris Center provided JSP with the entire population of individuals served in the Harris Center Program between September 1<sup>st</sup>, 2018, and April 30<sup>th</sup>, 2020. The data also included participants race, ethnicity, sex assigned at birth, and date of birth. For individuals who had multiple participation records during this time window, we selected their initial participation record and considered subsequent stays as returns to program. In total we had 1,636 unique participants during this time frame. The Harris Center also provided JSP with Diversion Center participants' jail booking histories, usage of psychiatric emergency services and outpatient services, as well as histories of psychiatric hospitalizations.

We constructed two unique treatment groups. The first treatment group consists of first year Harris Center participants, ranging between September 1<sup>st</sup>, 2018, and May 31<sup>st</sup>, 2019. The second treatment group consist of second year Harris Center participants, which ranged between June 1<sup>st</sup>, 2019, and April 30<sup>th</sup>, 2020. There were 863 unique people among the first-year participants, and 773 unique people among the second-year participants. First year participants accounted for 52.7 percent of the sample, and second year participants accounted for 47.3 percent of the sample.



## Outcomes

For the purposes of this study, we calculated outcomes across two separate windows for the two separate cohorts. Among the first cohort, all outcomes are examined over a four-year window (2 years pre-intervention, 2 years post-intervention). For the second cohort, we examined all outcomes over a two-year window (1 year pre-intervention, 1 year post-intervention).

*Recidivism.* Recidivism is measured as the total number of new jail bookings for misdemeanors or felonies within 12 months and 24 months following the initial program enrollment. A 24-month window is used for the first cohort, and a 12 month window is used for the second year participants.

*Public Psychiatric Hospitalizations.* Public psychiatric hospitalizations come from the Harris County Psychiatric Center (HCPC), the largest provider of inpatient psychiatric care in Houston. The HCPC data indicate whether program participants have any psychiatric hospitalizations and the date when the hospitalization occurred. A 24-month window is used for the first cohort, and a 12 month window is used for the second cohort.

*Psychiatric Emergency Services.* Psychiatric emergency services data were also used from the Neuro-Psychiatric Center (NPC). The psychiatric emergency services consist of psychiatric evaluations and treatment services for individuals in psychiatric crisis. The unit is staffed by psychiatrists, psychiatric nurses, clinical social workers, licensed professional counselors and psychiatric specialists. Depending on the evaluation, patients may be referred to outpatient services, admitted to the NPC for observation or transferred

to an inpatient facility/alternative program. In constructing the psychiatric emergency services outcome, a 24-month window is used for the first cohort, and a 12 month window is used for the second cohort.

*Outpatient Services.* Outpatient services include a range of services accessed by participants at outpatient facilities. These include crisis follow-ups, psychotherapy, medication management, intake assessments, crisis interventions, supported housing, and routine case management. For constructing the outpatient services outcome, a 24-month window is used for the first cohort, and a 12 month window is used for the second cohort.

## Analytic Approach

To examine our research questions, we used an interrupted time series (ITS) analysis. ITS is a quasi-experimental method that allows researchers to track pre and post outcomes for a single group or multiple groups over time. More specifically, ITS allows researchers to estimate the impact of interventions by measuring multiple events at equally spaced time points before and after an intervention. ITS estimates whether the underlying pattern in the data is different during the post-intervention period relative to the pre-intervention period. ITS is particularly appropriate in situations when researchers are interested in estimating the impact of large-scale interventions. To perform an ITS analysis, we aggregate the data to the year-month level and estimate pre/post differences in the aggregated outcomes for each treatment group.

First, we examine descriptive differences in the pre/post intervention periods for both treatment groups. This provides context for the outcomes variables and indicates the extent to which the outcomes change in their levels both before and after the intervention. In the second part of the analyses, we implement the use of ITS, which estimates the extent to which the outcomes change at the month-year level after the interventions. We use two separate treatment groups: first cohort of Diversion Center participants (treatment group 1), and the second cohort of Diversion Center participants (treatment group 2). Therefore, in the analyses, we estimate all results separately for each treatment group relative to their specific intervention date (treatment group 1 = September 1<sup>st</sup>, 2018 – May 31<sup>st</sup>, 2019; treatment group 2 = June 1<sup>st</sup>, 2019 – April 30<sup>th</sup>, 2020).

## Findings

Table 1 below shows demographic characteristics for both treatment groups used in the study. In both treatment groups, the average age during participation at the Harris Center is approximately 40 years old. Most people in both treatment groups are Black and male. In the first cohort, 60 percent were homeless at the start of the program. Among the second cohort, 74 percent were homeless during their program participation.

**Table 1.** Demographic Characteristics by Treatment Group

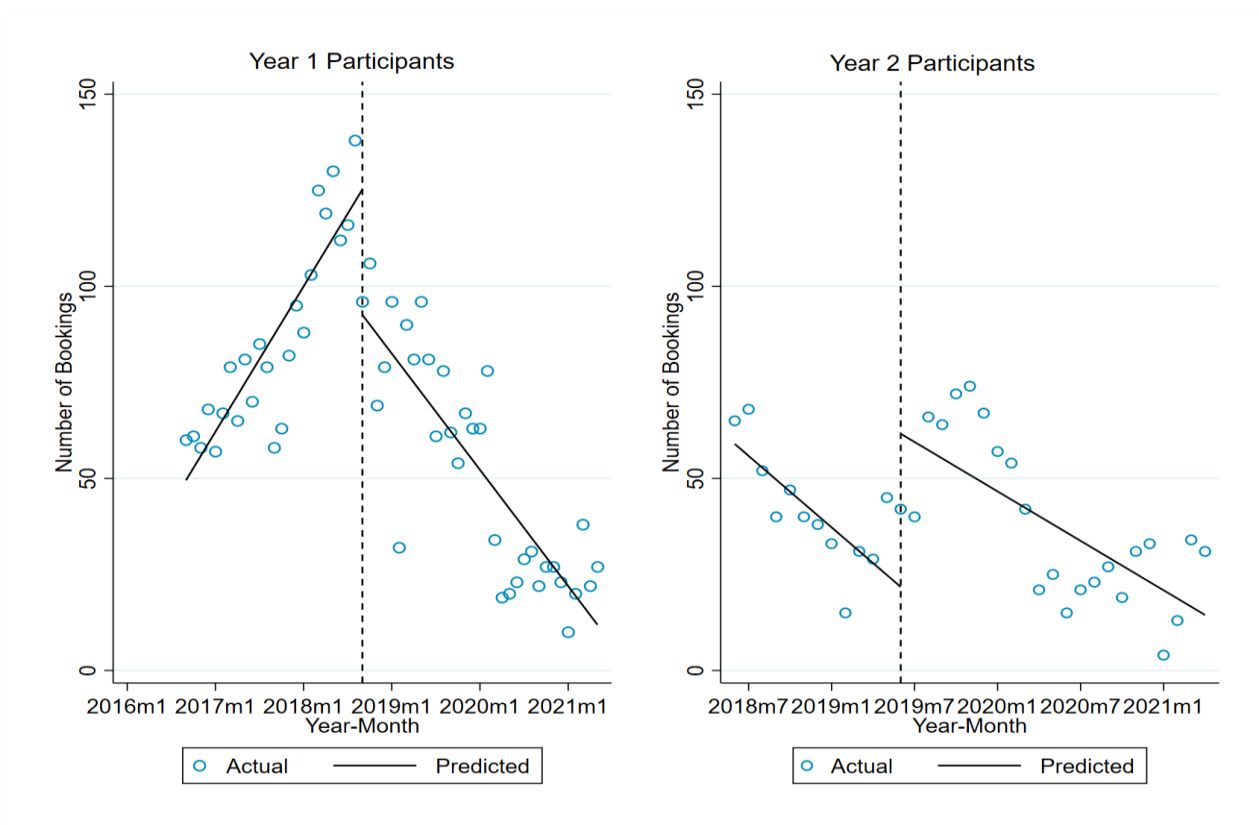
	Treatment Group 1	Treatment Group 2
Age at Program Participation	39.4	40.9
<b>Biological Sex</b>		
Male	77.5%	75.5%
Female	22.5%	24.5%
<b>Race and Ethnicity</b>		
Non-Hispanic Black	58.0%	56.0%
Non-Hispanic White	13.0%	26.0%
Hispanic	23.0%	13.0%
Unknown	6%	6%
Homeless	60%	74%
Observations	863	773

### *Pre/Post Differences in Study Outcomes*

We begin by describing pre and post differences in the outcomes for year 1 and year 2 participants. As a reminder, all outcomes among the first cohort were based on 24-month pre/post windows. For the second year cohort, all outcomes were based on 12-month pre/post windows.

We first describe differences in pre/post jail bookings for each group. Figure 1 below shows pre/post differences in jail bookings for both groups. Beginning with the first cohort, we find a statistically significant reduction in new jail bookings following their initial enrollment in the program. The data show that first cohort had an average of 85.8 prior bookings in the pre-intervention period and an average of 52.2 bookings during the post-intervention period, a 39 percent decrease. This decline was also statistically significant ( $t = 4.5$ ,  $p < .001$ ). For the second cohort, we found a decline in the number of jail bookings in the post intervention period relative to the pre intervention period. Among this group, there was an average of 41.9 bookings during the pre-intervention period and an average of 38.0 new jail bookings during the post-intervention period. However, this difference was not statistically significant ( $t = -.58$ ,  $p > .05$ ).

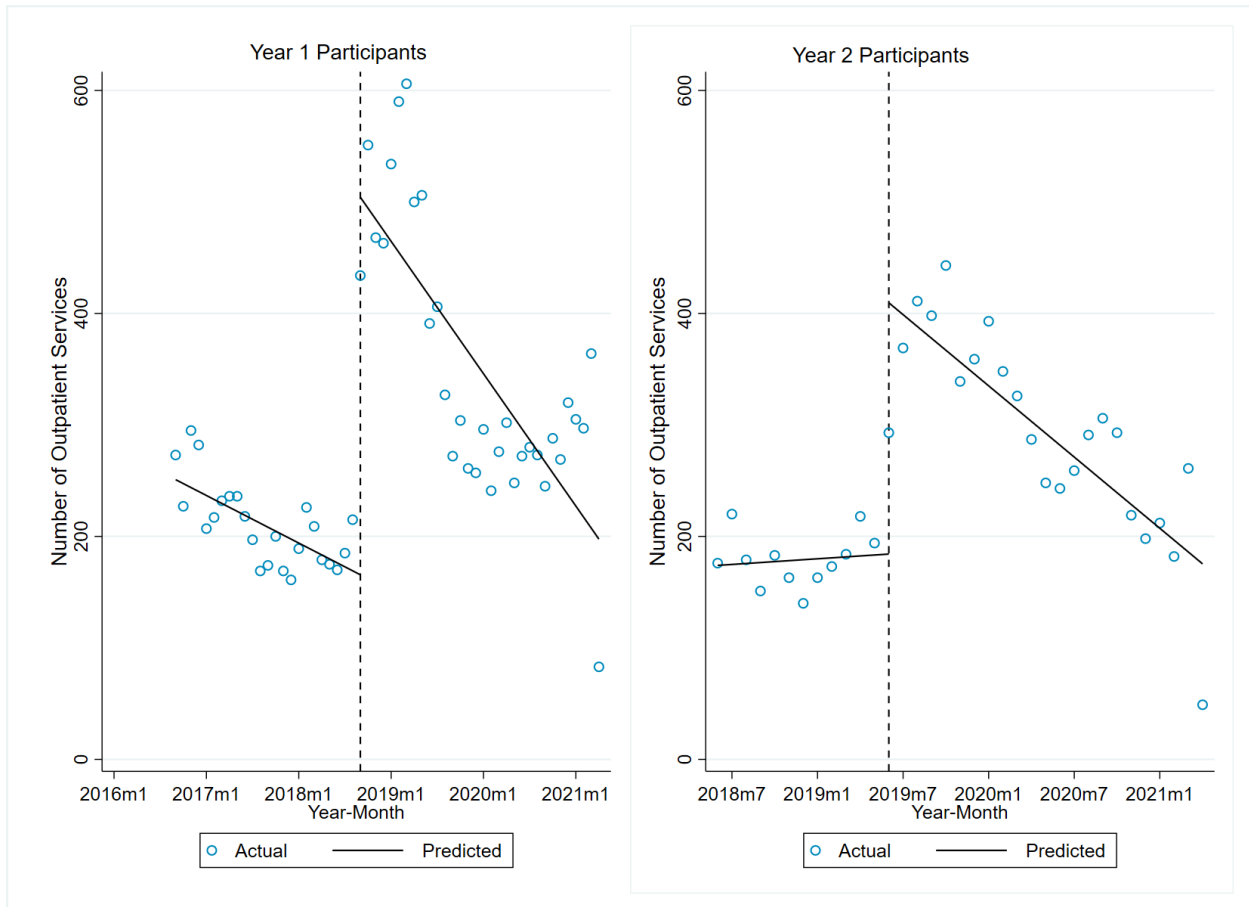
**Figure 1.** Pre/Post Jail Booking among Year 1 and Year 2 Harris Center Participants



We now describe differences in outpatient services for each group. Figure 2 below shows pre/post differences in usage of outpatient services for both groups. For the first cohort, we find a statistically significant increase in the number of outpatient services accessed during the pre/post intervention periods. The data shows that first year participants access an average of 210.0 outpatient services during the pre-intervention period compared with an average of 350.9 outpatient services during the post-intervention period, a 67 percent increase. This difference was statistically significant ( $t = -5.5, p < .001$ ). For the second cohort, we also see a significant increase in the number of outpatient service being accessed in the post-intervention period compared with the pre-intervention period. Second cohort participants accessed an average of 178.7 outpatient

services during the pre-intervention period compared with 292.5 outpatient services during the post-intervention period, a 64 percent increase. This difference was statistically significant ( $t = -5.3, p < .001$ ).

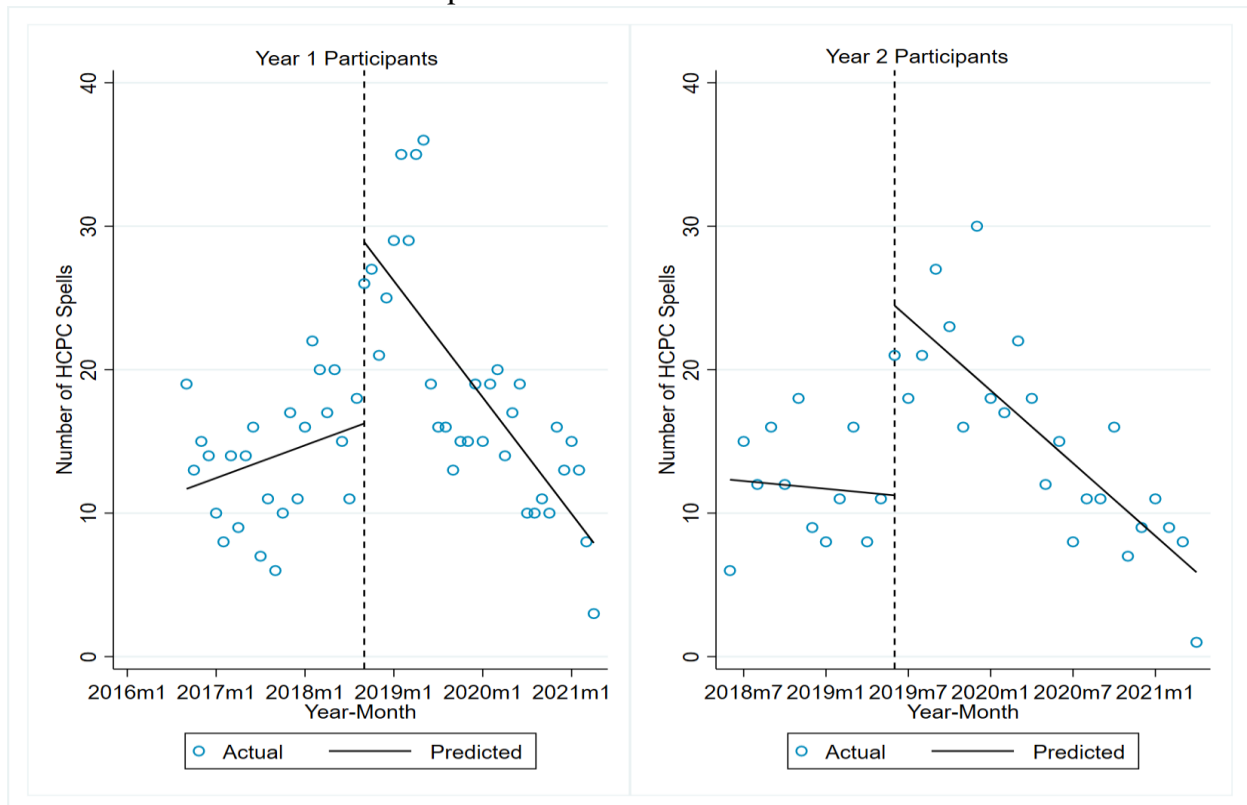
**Figure 2.** Pre/Post Outpatient Spells among Year 1 and Year 2 Harris Center Participants



We now describe differences in psychiatric hospitalizations for both groups. Figure 3 below shows pre/post differences in psychiatric hospitalizations among both groups. Beginning with first year participants, we see a slight increase in the average number of psychiatric hospitalizations in the post-intervention period compared to the pre-intervention period. First cohort had an average of 13.9 psychiatric hospitalizations during

the pre-intervention period compared with an average of 18.4 psychiatric hospitalizations during the post-intervention period, a 32 percent increase. This difference was statistically significant ( $t = -4.38, p < .001$ ). For the second cohort, we also see an increase in the number of psychiatric hospitalizations in the post-intervention period relative to the pre-intervention period. The second cohorts have an average of 11.8 psychiatric hospitalizations during the pre-intervention period compared with 15.2 psychiatric hospitalizations in the post-intervention period, a 28 percent increase. This increase was not statistically significant ( $t = -1.5, p > .05$ ).

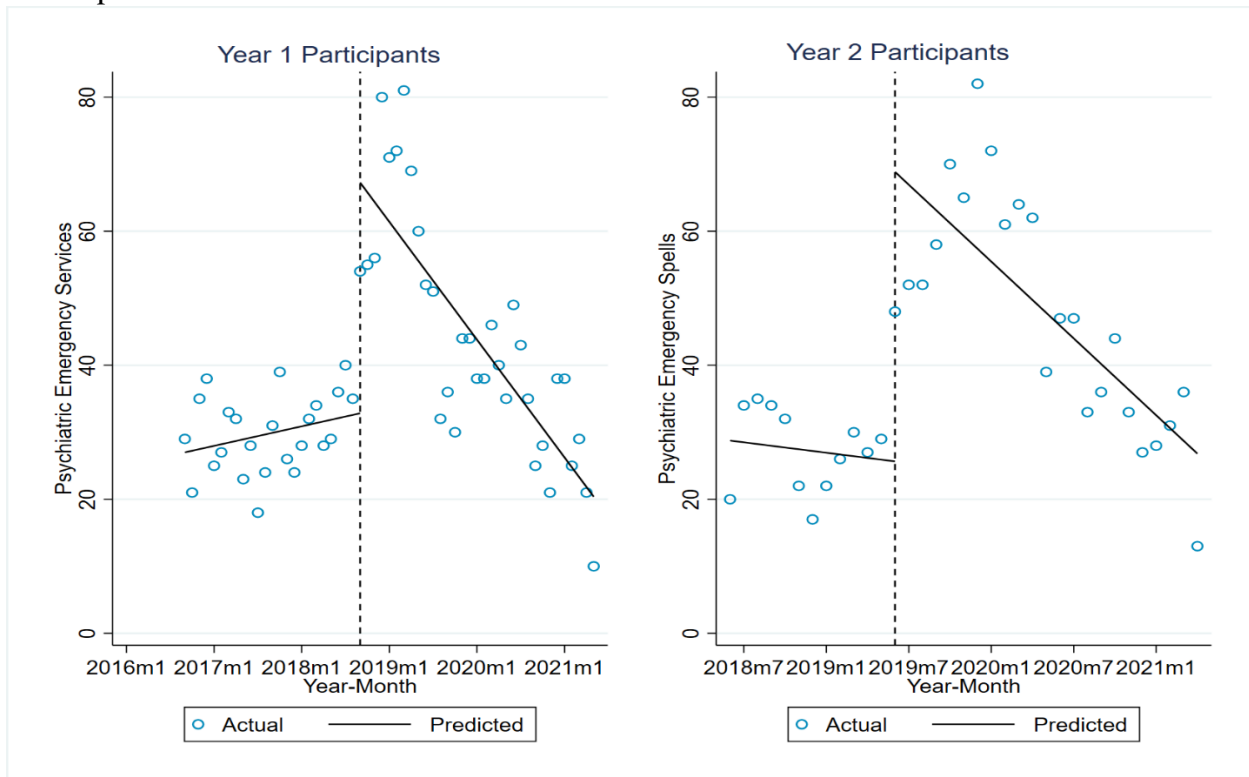
**Figure 3.** Pre/Post Public and State Psychiatric Hospitalizations Services among Year 1 and Year 2 Harris Center Participants





We now describe pre/post differences in usage of psychiatric emergency services. Figure 4 below shows pre/post differences in usage of psychiatric emergency services for both groups. The data show that the first cohort had an average of 29.8 incidents of psychiatric emergency services compared with 43.8 during the post intervention period, a 47 percent increase. This increase was also statistically significant ( $t = -3.8, p < .01$ ). For second cohort, there was an average of 27.3 incidents of psychiatric emergency services during the pre-intervention period compared with 47.8 incidents in the post intervention period, a 75 percent increase. This increase was also statistically significant ( $t = -3.9, p < .01$ ).

**Figure 4.** Pre/Post Psychiatric Emergency Services among Year 1 and Year 2 Harris Center Participants



*Single Group ITS Results*

We now describe results from ITS analyses for each of the study outcomes. Table 2 below shows coefficients from ITS analyses for jail bookings for both treatment groups. The coefficients indicate the extent to which the outcome increases or decreases by per month after the intervention date. Among the first cohort, the results show an average reduction of 2.52 jail bookings per month following the intervention date. The coefficient is larger for men, indicating that the intervention is particularly impactful for male participants. Coefficients are also larger for Black participants and homeless participants. For Black participants, jail bookings were reduced by an average of 1.64 bookings per month, and by 1.94 jail bookings per month among homeless participants.

The results also showed significant reductions in jail bookings for the second cohort during the post-intervention period. Second year cohort experienced an average reduction of 2.14 jail bookings per month following the intervention date. The size of the reduction was larger for Black participants (-1.55), male participants (-1.95), and participants who were homeless (-1.84). These reductions were all statistically significant.

**Table 2.** Single Group Interrupted Time Series Results for Jail Bookings among both Treatment Groups by Race, Gender, and Homelessness Status

	All People	Black People	White People	Hispanic People	Women	Men	Homeless People
1st Year Participants	-2.52*** (.27)	-1.64*** (.21)	-.76*** (.08)	-.29*** (.04)	-.37*** (.06)	-2.14*** (.24)	-1.94*** (.22)
2nd Year Participants	-2.14*** (.61)	-1.55** (.39)	0.46* (.18)	-.20 (.12)	-.19 (.11)	-1.95** (.53)	-1.84** (.60)

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 3 below shows results from ITS analyses for the outpatient outcomes among both treatment groups. These results showed significant increases in the number of outpatient services accessed following the intervention dates for both treatment groups. However, while the number of outpatient services increased after the intervention, usage of outpatient services declines over time (as indicated by the coefficients below). Among the first cohort, the number of outpatient services declined by an average of 9.89 per month following the intervention. The results also showed that this decline was largest among males (-7.04) and people who were homeless (-8.21). The results also showed that the second cohort experienced declines in usage of outpatient services over time following the intervention. Second year participants experienced an average decline of 10.65 outpatient services per month following the intervention. Participants who were homeless (-9.28), male participants (-8.88) and Black participants (-7.43) had larger declines in outpatient services following the intervention.

**Table 3.** Single Group Interrupted Time Series Results for Outpatient Services among both Treatment Groups by Race, Gender, and Homeless Status

	All People	Black People	White People	Hispanic People	Women	Men	Homeless People
1st Year Participants	-9.89*** (1.85)	-5.78*** (1.28)	-4.20*** (.64)	-1.59*** (.38)	-2.85*** (.52)	-7.04*** (1.50)	-8.21*** (1.90)
2nd Year Participants	-10.65*** (2.14)	-7.43*** (1.45)	-3.26*** (.74)	-1.63*** (.31)	-1.76*** (.78)	-8.88*** (1.47)	-9.28*** (2.05)

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4 below shows results from ITS analyses for public psychiatric hospitalizations among both treatment groups. While the descriptive results above show that psychiatric hospitalizations increase for both treatment groups initially after the intervention dates, these results showed significant declines over time in psychiatric hospitalizations for both groups. For the first cohort, the results showed an average decline of .67 psychiatric hospitalizations per month following the intervention date. For the second cohort, psychiatric hospitalizations declined by an average of -.84 hospitalizations per month following the intervention. In both treatment groups, declines in psychiatric hospitalizations were largest among participants who were homeless. For first year participants who were also homeless, there was an average decline of -.54 psychiatric hospitalizations per month. For the second cohort who were homeless, there was an average decline of -.78 psychiatric hospitalization per month.

**Table 4.** Single Group Interrupted Time Series Results for State Hospitalizations among both Treatment Groups by Race, Gender and Homeless Status

	All People	Black People	White People	Hispanic People	Women	Men	Homeless People
1st Year Participants	-0.67*** (.12)	-0.36*** (.09)	-0.28*** (.05)	-0.11** (.03)	-0.26*** (.04)	-0.42*** (.09)	-0.54*** (.10)
2nd Year Participants	-0.84*** (.13)	-0.54*** (.09)	-0.25* (.09)	-0.10* (.04)	-0.23*** (.05)	-0.61*** (.10)	-0.78*** (.11)

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5 below shows results from ITS analyses for psychiatric emergency services among both treatment groups. Overall, these results show declines in usage of psychiatric emergency services over time following the intervention dates for both treatment groups. For the first cohort, the results showed an average decline of -1.47 psychiatric emergency service incidents per month following the intervention. The results showed that declines were largest among participants who were homeless, experiencing an average decline of -1.24 psychiatric emergency service incidents per month following the intervention. Among the second year cohort, there was an average decline of -1.91 psychiatric emergency service incidents per month following the intervention. The results also showed that declines were largest among Black participants (-1.50), male participants (-1.43), and participants who were homeless (-1.69).



**Table 5.** Single Group Interrupted Time Series Results for Psychiatric Emergency Services among both Treatment Groups by Race, Gender and Homeless Status

	All People	Black People	White People	Hispanic People	Women	Men	Homeless People
1st Year Participants	-1.47*** (.24)	-.80*** (.15)	-.66*** (.13)	-.19* (.06)	-.48*** (.06)	-.98*** (.20)	-1.24*** (.23)
2nd Year Participants	-1.91*** (.48)	-1.50*** (.36)	-.26 (.15)	-.12 (.08)	-.48* (.12)	-1.43* (.39)	-1.69* (.48)

## Discussion

This evaluation examined criminal justice involvement, health, and psychiatric outcomes among two cohorts that participated in the Harris Center Diversion Program. To study changes in these outcomes, we used a quasi-experimental technique (interrupted time series analysis) to examine pre/post differences in the outcomes for both treatment groups. This allows us to examine the impact the program has over time and not just compare the outcomes in the aggregate. This technique was helpful in that it clearly demonstrates as people participate in the program, over time their jail bookings and use of emergency psychiatric services reduces. The study finds that both treatment groups experience significant reductions in jail bookings after their initial enrollment in the program. The first cohort experience an average reduction of 2.52 jail bookings per month following the intervention, and second year cohort experienced an average reduction of 2.14 jail bookings per month after the intervention. These results suggest that participating in the Harris Center Diversion Program is associated with significant reductions in future jail bookings for both groups.

The results also showed that Diversion Center participants experienced upticks in psychiatric hospitalizations and psychiatric emergency services incidents immediately following the intervention. However, both groups experienced significant declines in psychiatric hospitalizations and incidents involving psychiatric emergency service usage following the intervention. One explanation for this finding is that individuals who participate in the Harris Center Diversion program, who would otherwise be incarcerated

in jail, are receiving the necessary services in a psychiatric emergency and hospital setting to stabilize them and then return to the program. This is not uncommon across deflection programs as participants have become increasingly connected to resources and services that are clinically appropriate. Over time, however, we see significant declines in psychiatric related events for both treatment groups, suggesting that once stabilized the people in the program are able to maintain in the community without as many jail stays, psychiatric emergency and hospitalizations. The benefits of reducing psychiatric events among program participants do not occur immediately but are achieved over time.

Finally, we found significant short-term increases in the usage of outpatient services among both groups. This suggests that Harris Center participants are significantly more likely to access outpatient services after they participate in the program. Not surprising, we found evidence suggesting that over time, these increases declined for both groups. In other words, participants in both groups accessed outpatient services at significantly higher rates closer to their intake in the program, however, their usage of outpatient services was reduced over time. Given we found no increase in jail bookings, psychiatric emergency or hospitalizations, this reduction in outpatient services appears to be in line with participants becoming stable and no longer needing intensive services.

There were several limitations in the current evaluation. First, we were unable to create a comparison group that was similarly situated as the people in the program. Those individuals who were initially matched had significantly fewer pre-intake jail bookings.

While single group ITS analyses are a rigorous way to assess the impact of an intervention, the use of comparison groups would significantly strengthen the validity of the findings. We will continue to work with the Harris Center staff to identify and develop an appropriate comparison group and conduct further analyses as those data become available.

## References

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