

## Evaluating the Early Public Safety Impact on Davis County Jail Diversion Program

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This study does not speak to statistical significance of any kind, but rather preliminary “evidence” of a treatment effect or lack thereof during a time of much system-wide change as caused by Covid-19.

### Summary

**About the Program:** Introduced in December of 2019, the Davis county jail diversion program aims to provide an alternative to traditional arrest or citation for adults who have engaged in certain lower level drug crimes and misdemeanor offenses. Instead of traditional paths, the program allows for referral to appropriate treatment services with the goal of avoiding the stigmatizing and often costly criminal justice track.

**Research Question:** Critics of jail diversion programs argue that public safety will be compromised as individuals offered treatment in the community now have the opportunity to commit similar and even more severe crimes. As such, we pose the question if there is evidence that the Davis County jail diversion program has had an adverse effect on public safety.

**Definitions:** We define public safety in 3 distinct ways: the volume of total bookings, drug related bookings, and the volume of charges associated with these bookings before and after program roll-out.

**Method:** A simple difference-in-difference approach is utilized to account for general time trends to estimate a treatment effect for those that could refer to the program (the treatment group) to those where referral opportunities were yet made available (the control group).

**Conclusion:** We find no evidence that the Davis county jail diversion program, which serves as an alternative to the traditional criminal justice path, has a negative impact on public safety, when public safety is defined as either increases in the volume of bookings, drug related bookings or the number of charges associated with these bookings after program roll-out. Preliminary cost analysis suggests that the program is effective in regards to reduced bookings within the county.

**Recommendations:** Extend the study period and analyze outcomes of those that participated in the program. These outcomes may be associated with re-arrest rates and engagement in treatment. The established and strong link between substance use disorders and low level property offenses, including theft warrants a closer look at the current inclusion criteria to see if additional offense types could be eligible for the program which has the potential to capture a larger share of those in need of substance use services.

# Introduction

A robust body of literature has shown that a significant share of those being booked in jails have an underlying substance use and often co-occurring mental health disorder.<sup>1</sup> Estimates suggest that in the United States on any given day, over 725,000 persons are in custody, and of these, over 380,000 inmates with serious mental health issues are incarcerated in jails and prisons.<sup>2</sup> Recent data show that US jails hold ten times the number of mentally ill persons than state hospitals.<sup>3</sup>

The economic consequences are startling. In the US, annual costs associated with just substance abuse disorders exceed \$442 billion as measured by health care costs, lost productivity, and criminal justice expenditures.<sup>4</sup> The aggregate economic burden of incarceration has been estimated at nearly one trillion dollars.<sup>5</sup>

Such statistics hold true for Utah's population as well.<sup>6</sup> When left untreated, individuals often get caught in a cycle of re-incarceration which has proven to be very costly, both for the individual themselves and their family, but also for society as a whole.<sup>7</sup>

In response to this, many states have in recent years undergone criminal justice reform. While these reforms vary by state, many share in common the emphasis on treatment as an alternative to incarceration for individuals involved in lower-level crimes and who have a demonstrated need for treatment as shown by actuarial screenings and assessments. Furthermore,

research continues to show a weak link between incarceration as a form to treat or deter crime associated with substance use disorders.<sup>8</sup>

## What are Diversion Programs?

Dating back to 1947 in the United States, diversion programs provide alternatives to traditional criminal justice pathways that allow offenders, for example, to avoid the stresses associated with arrest and detention, to be able to remain employed, and to have more fluid access to treatment and assistance that might address issues behavior or mental health.<sup>9</sup> While sharing a common thread, criminal justice diversion programs vary across different programs and typically include some form of supervision while the individual undergoes treatment. Today, jail diversion programs are still considered experimental and the research regarding the efficacies of various kinds of programs is a rich research topic.<sup>10</sup>

Despite a vast amount of current research on this pressing issue, very few studies have examined the joint overall effectiveness regarding cost coupled with keeping individuals out of the criminal justice system.<sup>11</sup> Cowell et al., (2004) provided one of the first cost-effectiveness studies for four programs in Arizona, New York, Tennessee, and Oregon. The findings suggested that reduced jail costs could offset treatment costs. In a more detailed later study, Cowell et al., (2013) found that diversion programs lowered taxpayer costs by about \$2,800 per person two years after the time of

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1 <https://www.drugabuse.gov/publications/drugfacts/criminal-justice#ref>

2 See, Copp and Bales (2018) and Hill and Stathas (2016).

3 McCarthy (2014).

4 <https://addiction.surgeongeneral.gov/vision-future/time-for-a-change>

5 <https://nicic.gov/economic-burden-incarceration-us-2016>, <https://joinnia.com/wp-content/uploads/2017/02/The-Economic-Burden-of-Incarceration-in-the-US-2016.pdf>, and <https://www.jstor.org/stable/resrep28428>

6 [https://justice.utah.gov/wp-content/uploads/JRI\\_2019\\_Annual\\_Report.html#match\\_resources\\_to\\_offenders%E2%80%99\\_needs](https://justice.utah.gov/wp-content/uploads/JRI_2019_Annual_Report.html#match_resources_to_offenders%E2%80%99_needs) and [https://justice.utah.gov/wp-content/uploads/Risk\\_And\\_Needs\\_Screenings\\_in\\_Utah\\_2020.html](https://justice.utah.gov/wp-content/uploads/Risk_And_Needs_Screenings_in_Utah_2020.html)

7 <https://nicic.gov/economic-burden-incarceration-us-2016>; <https://joinnia.com/wp-content/uploads/2017/02/The-Economic-Burden-of-Incarceration-in-the-US-2016.pdf>

8 <https://www.pewtrusts.org/-/media/assets/2017/06/the-lack-of-a-relationship-between-drug-imprisonment-and-drug-problems.pdf>

9 See Center for Prison Reform, (2015), "Diversion Programs in America's Jail System." <https://centerforprisonreform.org/wp-content/uploads/2015/09/Jail-Diversion-Programs-in-America.pdf>

10 Over the past five years, Google Scholar indexed over 1000 scholarly references found by searching "jail diversion." Since 2020, over 300 articles have been indexed.

11 See, for example, Lindquist-Grantz et al., (2021) who provide a meta-analysis of research related to rigorous studies of jail diversion programs from 1997 to 2019. Only 31 studies met the authors' criteria for inclusion in their analysis and their research did not find definitive conclusions regarding the efficacy of programs. None of the studies examined cost-effectiveness.

diversion. The two year cumulative taxpayer savings were reflected in lower costs associated with arrest, court, incarceration, and diversion.

Research has shown that 1 out of 3 adult Utahns have a criminal record.<sup>12</sup> To date, a small number of states (Utah being one) have passed legislation involving automatic expungement of selected records. These bills typically focus on lower-level drug convictions and other less severe convictions. Even with these efforts, it typically takes several years before an individual is eligible to have their record expunged. As such, focusing on “avoiding” a criminal conviction in the first place, which is an objective of diversion programs, has the potential to result in significant cost savings.

## The Davis County Diversion Programs

Introduced in December of 2019, the Davis County jail diversion program is a collaborative venture between behavioral health, law enforcement, and the criminal justice system. The goal of the program is to provide officers in the system discretion relating to the potential arrest of individuals who have committed certain misdemeanor offenses while suffering from substance abuse and/or mental health problems. In lieu of arrest, individuals can be taken to the Davis County Receiving Center where they are immediately connected with recovery resources and appropriate treatment.

A primary goal of the program is to allow individuals to avoid the extremely costly traditional criminal justice path. If the individual successfully follows through with treatment within a specified time-line, then the initial charges that could have been realized will be “forgiven” and hence, not pursued. Selection into the program is voluntary and placement is based on well defined characteristics of the individual’s charges. The theory is that individuals will be incentivized to engage in treatment if by doing so their charges will not be pursued. In this sense, the program follows

principles seen in the more “structured” Drug Court programs in which successful participants will avoid a criminal sentence.

Critics of programs that provide alternatives to incarceration often argue that public safety will be compromised as individuals offered treatment in the community now have the opportunity to commit similar and even more severe crimes.<sup>13</sup> If this occurs, then diversion is costly to taxpayers and as such, this present study evaluates outcomes of the Davis county jail diversion program with an emphasis on this aspect of public safety. Specifically, we pose the question whether there is evidence that the Davis County jail diversion program has had an adverse effect on public safety. Additionally, we provide preliminary evidence of potential cost savings to Utah taxpayers as a result of the Davis County diversion program, making the program fiscally responsible.

## Data & Methods

### Data

Data on jail bookings between January 2018 and July 2020 by month and by selected characteristics was received from Davis County Jail. On average, there were around 800 bookings per month prior to the program roll-out, which significantly declined shortly thereafter to an average of around 280 bookings per month (seen in Figure 1). Indeed, it should be emphasized March of 2020 was when many law enforcement agencies could refer individuals to the program.<sup>14</sup> Covid-19 brought an extraordinary decline in booking volume in Davis County, across the state as well as nationally as evident in the figures shown here.<sup>15</sup> To account for this and other general time effects that could impact jail bookings and their characteristics, we use a *difference-in-difference* approach comparing law enforcement agencies that could refer to the program to the law enforcement agencies that could not to estimate the effect of the program on 3 distinct outcomes after program roll-out:

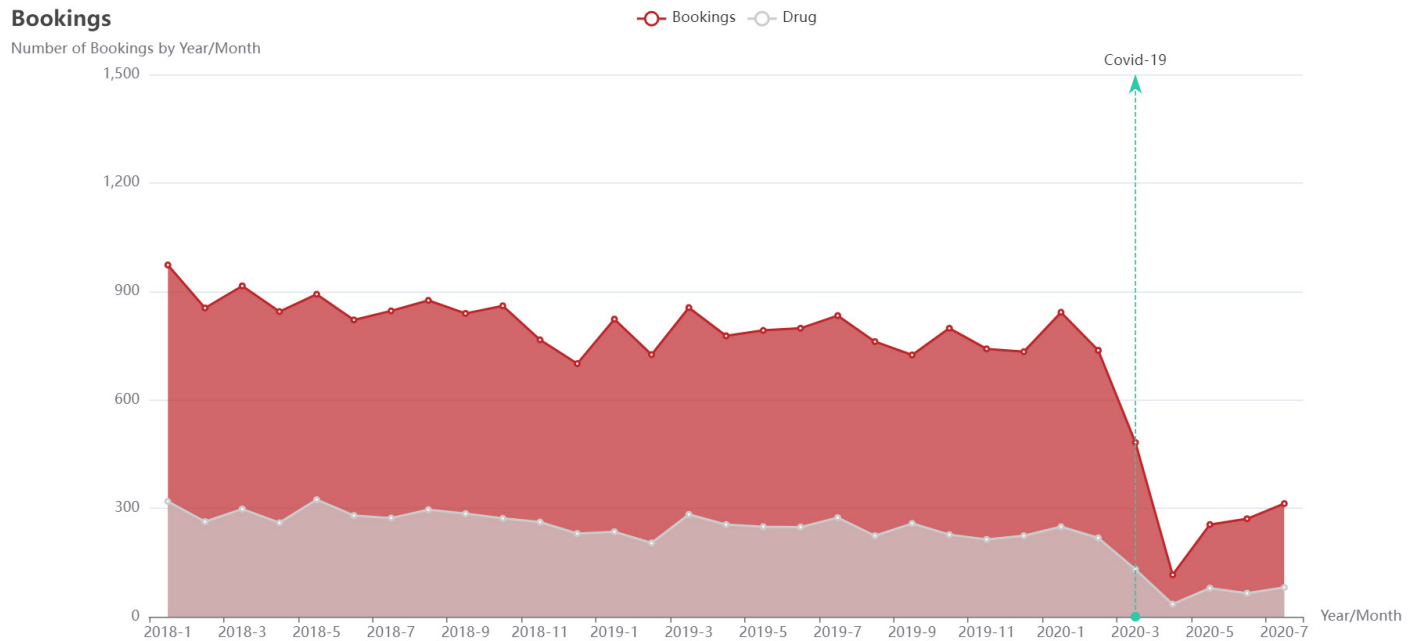
<sup>12</sup> <https://ccresourcecenter.org/2020/02/06/new-2019-laws-authorize-expungement-other-record-relief/> and <https://idc.utah.gov/wp-content/uploads/2021/03/Final-Clean-Slate-2-pager.pdf>

<sup>13</sup> These issues are well described in, for example, Mackenzie (2001, 2006). For a comprehensive review of jail diversion programs, see Sirotych (2009). The relationship between criminal justice reform and aspects of deterrence is discussed at length in Garner et al., (2021).

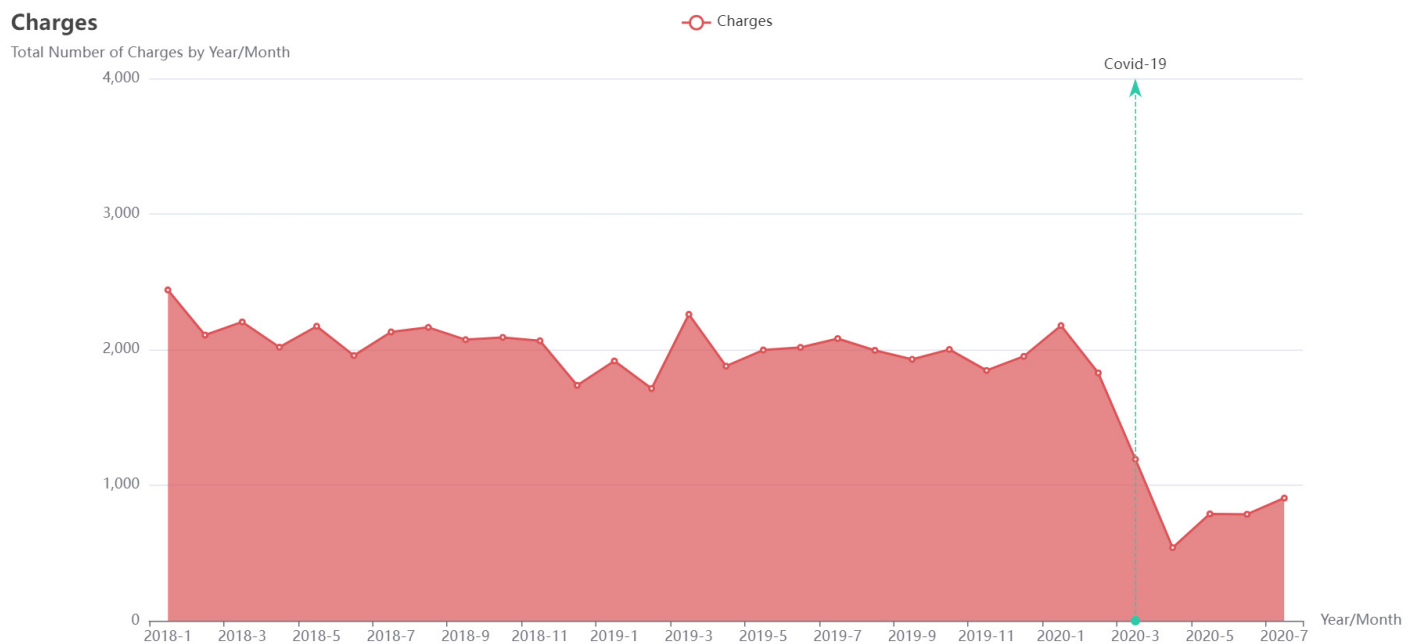
<sup>14</sup> Note that a few law enforcement agencies could refer to the program a few months prior to this.

<sup>15</sup> <https://bjs.ojp.gov/library/publications/impact-covid-19-local-jail-population-january-june-2020>

**Figure 1: Trends in total bookings and drug related bookings over time: Jan-2018-July-2020**



**Figure 2: Trends in total charges over time: Jan-2018-July-2020**



1. Volume in total bookings
2. Volume in drug<sup>16</sup> related bookings and
3. Volume in charges associated with these bookings.

## Method

The difference-in-difference (DID) framework is commonly used to study policy and program effects that have a time element.<sup>17</sup> In broad strokes, the DID framework compares the performance of a treatment and a control group (or groups), before and after a new policy or program is introduced, the former being the group who was affected by the new policy or program. As such, the DID method is able to estimate a treatment effect while accounting for general time effects, or trends that are independent of the new policy or program. It is calculated by taking the difference in the measure of interest at time 1 (prior to the policy or program) between the treated and the untreated, and subtracting that difference by the average difference in the measure of interest at time 2 (after the new program or policy was implemented). The approach has a few critical assumptions, in particular, the assumption that the treatment and control group(s) follow the parallel assumptions, which state that the trends are parallel through time (before the new policy or program is introduced).

For the present study, we argue that the DID approach has advantages over other traditional approaches, in particular summary statistics alone. Broadly, we argue that the 3 outcomes previously outlined are useful in capturing whether the program had any adverse effects on public safety. While Covid-19 poses a significant challenge in estimating a treatment effect on the population and program at hand, we find that the current framework is sufficient to provide an initial insight into the impact of the program as it relates to public safety.

## Creating the Treatment & Control Groups

The Davis County Jail Diversion program had 3 distinct roll-out periods starting in December of

2019 and extending to July of 2020. While Roll-out Group 1 was able to refer to the program starting in December of 2019, few law enforcement agencies did. As such, this analysis groups roll-out time 1 and 2 (December 2019 and March 2020 roll-out), calling it the “Treatment group” and compares its performance to those that could not refer to the program at the time, called the “Control group”. Specifically, we hope to study whether trends in the Treatment group were different or remained the same before and after program roll-out, using our Control group to account for general and particularly, Covid-19 related time effects. The Treatment group represented on average 70 percent of all bookings into Davis county jail prior to program roll-out.

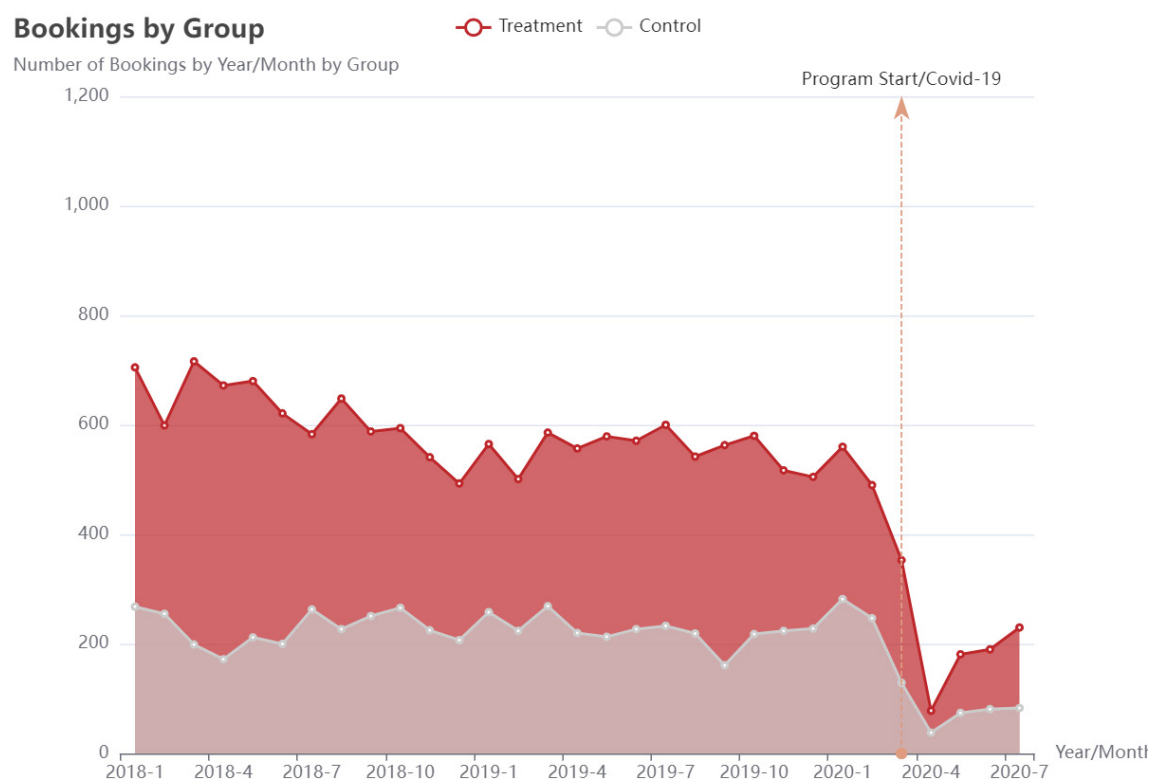
## Discussion

As previously discussed, we define public safety in 3 distinct ways; 1.) volume in total bookings, 2) volume in drug related bookings and, 3.) volume in charges associated with these bookings before and after program roll-out by those that could refer to the new program to those where referral was not available at the time. Figures 3-5 show trends in bookings and charges for each of the 3 selected measures by the treatment and control group. Prior to the program roll-out (and Covid-19), the treatment group booked on average 583 individuals (~70% of all bookings) in Davis county jail per month in comparison to an average of 230 bookings for the control group. This was reduced to an average of 206 bookings post program roll-out (and Covid-19) and 81 for the control group. In terms of drug related bookings, the treatment group booked on average 186 individuals (~32% of all bookings) in Davis county jail per month in comparison to an average of 72 bookings (~32% of all bookings) for the control group. This was reduced to an average of 51 bookings post program roll-out (and Covid-19) and 27 for the control group. In terms of total charges, which is defined as the number of charges associated with each booking, as expected the volume of these declined significantly with the onset of Covid-19 for both the treatment and the control group (seen in Figure 5).

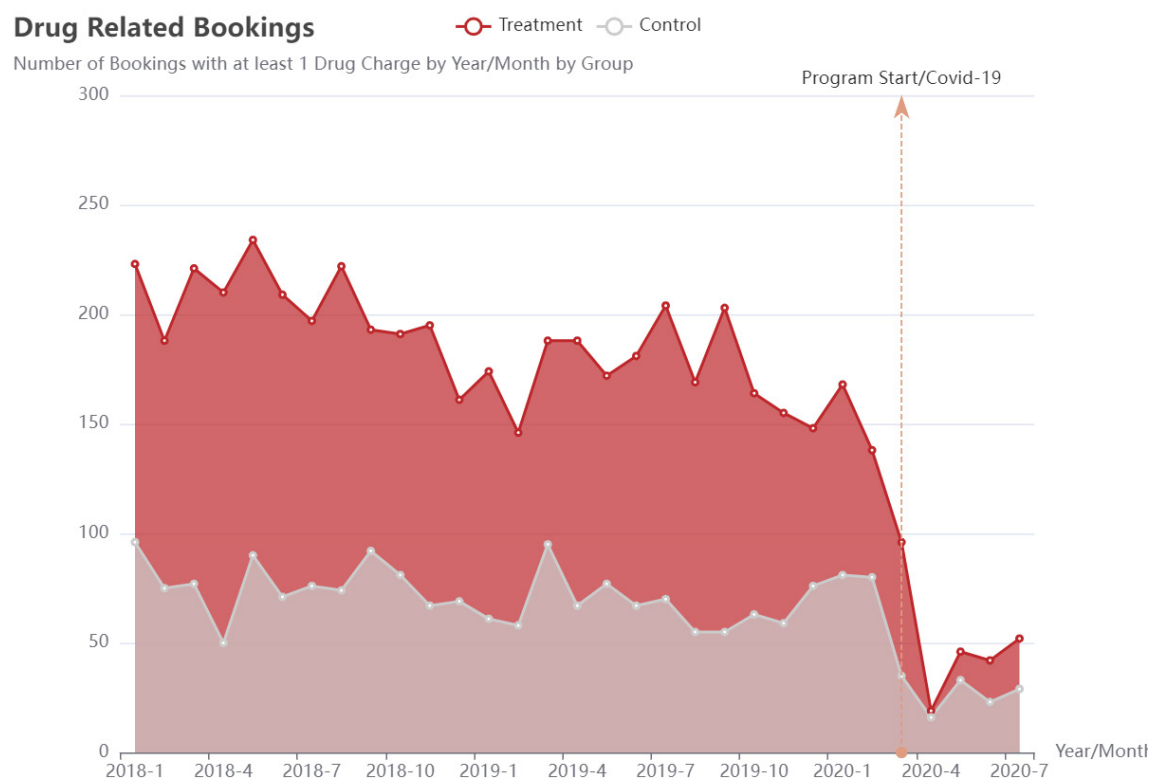
<sup>16</sup> A drug related booking is defined as a booking that had at least one charge of the NCIC code: 35XX, “Drug crimes (manufacturing, distributing and sale of drugs, possession and smuggling of drugs).”

<sup>17</sup> <https://www.emerald.com/insight/content/doi/10.1108/RAUSP-05-2019-0112/full/html>

**Figure 3: Trends in bookings over time: Jan-2018-July-2020**

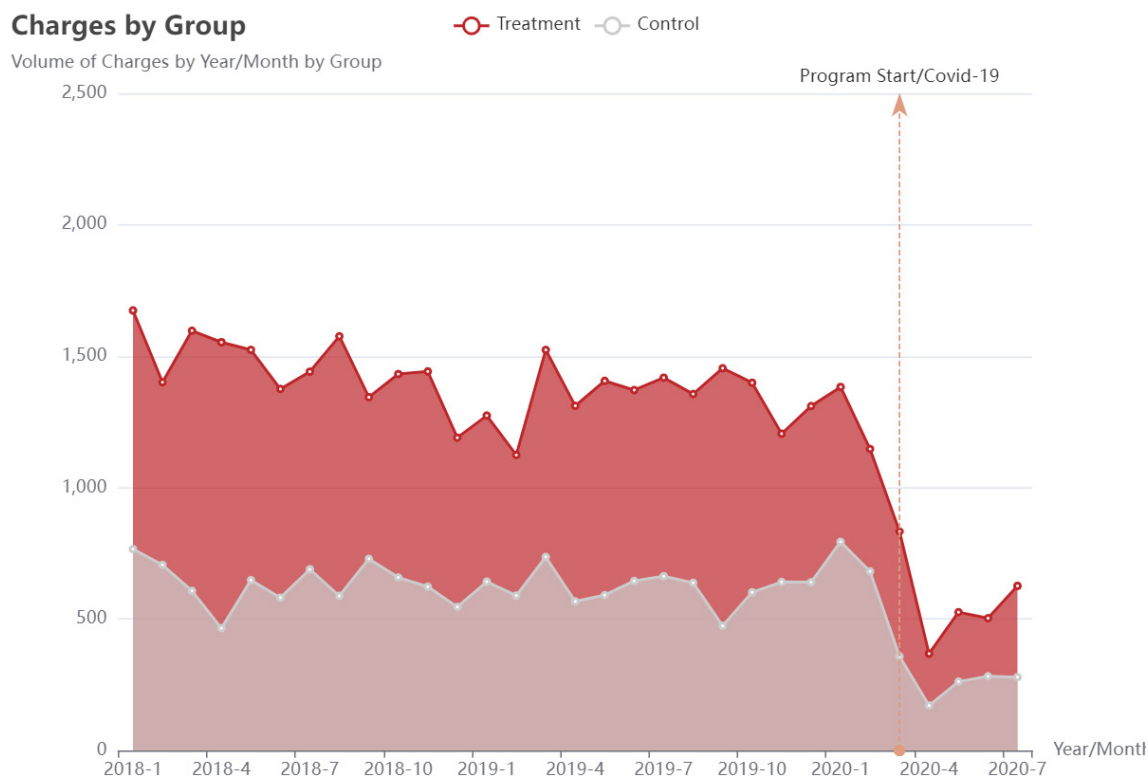


**Figure 4: Trends in drug related bookings over time by group: Jan-2018-July-2020**





**Figure 5: Trends in total charges over time by group: Jan-2018-July-2020**



**Figure 6: Number of charges, bookings, and drug related booking avoided due to the implementation of Davis County jail diversion program**

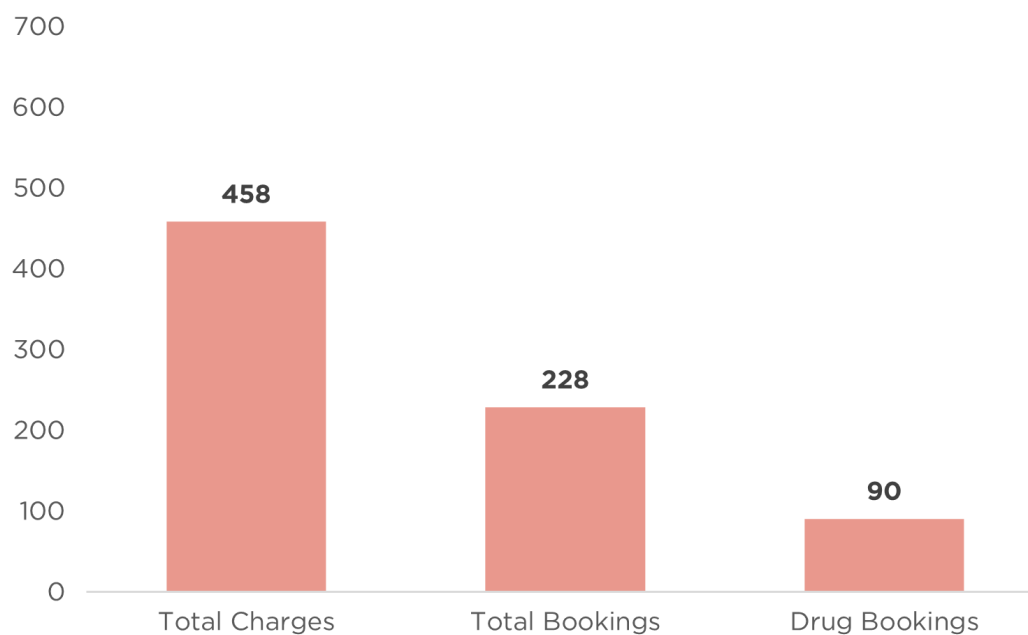


Figure 6 shows the difference-in-difference treatment effects for each of the 3 outcome measures. When utilizing the difference-in-difference framework, we find no evidence of an adverse public safety effect as the Davis County Jail diversion is introduced. On the contrary, we find evidence that the program may have “avoided” ~228 bookings, including ~90 drug related bookings and ~450 charges that were associated with these bookings after the program was introduced. These findings, while promising, should be interpreted with caution as discussed further below in the limitations section.

## Cost Comparison Analysis

Cost comparison analyses typically consider the cost of engaging an individual in a particular treatment or preventative program to the cost of an alternative. In criminal justice research, this alternative is typically the cost of going down the “traditional” criminal justice path. In this section, we provide a “birds-eye view” comparison of the individual tangible cost of participating in the Davis County jail diversion program and the expected treatment program afterwards with the cost of the traditional criminal justice path.

The cost of Davis County jail diversion program measured at \$3,044 per client per day in 2020, with the average client expecting to stay one day.<sup>18</sup> While this daily cost may appear high, it includes costly items such as evaluations by qualified staff and room and board. Additionally, since the program is new, it is operating with higher capital costs on a smaller clientele. It is expected that once the program reaches a larger scale, these per client costs will be reduced.

Because the goal of the program is to make appropriate treatment referrals outside their facilities, including such costs is vital when making cost comparisons

for the two different trajectories. While substance use treatment costs vary depending on the type and intensity of programming and in what setting they occur, the average cost to engage in a substance use treatment program in Utah has been estimated to be \$4,163 in state fiscal year 2020.<sup>19</sup> This is the average cost of receiving substance use treatment in the public substance use disorder treatment system and will vary based on the exact need and nature of the program.

Taking these two estimates, the cost of referring an individual to the Davis County jail diversion program, with the expectation that this will lead to a treatment referral is approximately \$7,200 per treatment episode in Utah. This average cost can then be compared to the cost of going down the traditional criminal justice path, including time spent when initially booked into jail, the judicial process, and any jail and possible prison time the individual is expected to receive as well as forgone economic earnings while serving time in jail.<sup>20</sup>

The median cost to house an individual in jail was \$83 per day in 2020. Data from Davis County jail show that the median, or “typical” number of days spent in jail was around 70 days for those being held in jail for a convicted drug crime.<sup>21</sup> Taking this average length of stay and a short expected initial jail stay (one day) prior to sentencing and multiplying it by the median cost of jail housing, this estimate comes to \$5,810. It should be noted that current jail housing estimates do not include information on medical costs during incarceration which is an important cost for this clientele.<sup>22</sup> Here we utilize the same treatment cost estimate as we use for the diversion path discussed above. This estimate is expected to be lower than the actual in-jail treatment cost. When adding in the estimated cost of prosecution and court of \$2,716,<sup>23</sup> our estimate increases to \$12,772.<sup>24</sup>

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18 This is the average cost of Medicaid (bundled rate), insured and uninsured clients obtained from the program staff.

19 Treatment cost estimate obtained from conversations with the Utah Department of Substance Use & Mental Health.

20 In the state of Utah, an individual convicted of two drug possession crimes is eligible for a prison sentence on the 3rd drug possession conviction.

21 This may be compared to around 40 days for other crimes. It should be noted that this estimate includes drug related convictions of NCIC code 35XX, which also includes more serious drug offenses. It should further be noted that it includes those actually serving days in jail after conviction as not all convictions will lead to jail time being ordered.

22 The cost of housing an inmate in jail is measured at \$83 per day statewide and excludes medical costs.

23 The prosecution and court cost is a Utah specific cost estimate pertaining to processing lower level crimes and was adjusted for inflation. Source: <https://justice.utah.gov/wp-content/uploads/Utah-Cost-of-Crime-2012-Methods-Review-Cost.pdf>

24 Once an individual has entered the jail and prison system, they are more likely to come back. This becomes a cycle of similar occurring costs that can multiply two fold in just a year. Furthermore, Utah’s current sentencing laws allow a Judge to sentence an individual to



When adding in forgone economic earnings during this 70 day period of time, we will add on approximately \$6,865<sup>25</sup> to this “typical” criminal justice path. In this setting we assume that if the individual is treated in the community, that they can maintain their employment status. It should be emphasized that any criminal conviction can hurt the ability and time-line it takes to obtain employment, hence these 70 days are on the conservative side.<sup>26</sup> The estimated costs for the two different paths then measure at \$7,200 and \$19,637 respectively, a net difference of \$12,437 less when the jail diversion path is pursued.

**Table 1. Cost comparison of engaging in Davis County jail Diversion program to a more “typical” criminal justice path per client (in 2020 US dollars)**

Type of Cost	Jail Diversion Program Path	Traditional Criminal Justice Path
Jail Diversion program cost	\$3,044	0
Initial jail booking cost	0	\$83
Full Treatment Cost	\$4,163	\$4,163
Prosecution/ Court Cost	0	\$2,716
Jail cost after conviction	0	\$5,810
Forgone earnings while incarcerated	0	\$6,865
Criminal record afterwards <sup>27</sup>	No	Yes
Total expected cost	\$7,200	\$19,637
Net difference	<b>-\$12,437 per client</b>	

The discussion above does not take into consideration the expected success rate of the program, in other words, the share of people who will avoid being

rearrested for a new crime after going through the diversion treatment path. In moving forward, estimating this impact is imperative to better estimate the expected cost savings of diversion programs.

## Study Limitations

As mentioned, Covid-19 drastically reduced jail populations across the country and in jails across Utah. As such, the estimates provided here along with their associated cost avoidance should be interpreted with caution. Indeed, many individuals that would have been expected to be booked into Davis county jail absent Covid-19 were not during this time to reduce the spread of the pandemic. Additionally, drug related bookings capture a wide spectrum of drug crimes, some that are more severe than the focus of the program. Hence the definition used here goes beyond clients well suited for the diversion program.

## Takeaways & Policy Implications

Many individuals that are held in jail in Utah and nationally end up there due to an underlying substance use and often co-occurring mental health disorder, often independent of the offense they were charged or convicted for. In fact, Utah's state-wide risk and needs screenings, which were implemented as part of justice reform, revealed that about 50% of those booked into jail should be referred for a more thorough substance use evaluation.<sup>28</sup> This represents an opportunity to expand program eligibility criteria beyond those arrested for a lower level drug specific crime which has the potential to translate to an even greater cost avoidance for Utah's taxpayers.

prison on their 3rd drug possession offense. The cost and gravity of a prison sentence is not considered here.

<sup>25</sup> The median personal annual income was \$35,800 in Utah in 2020. Considering this estimate in daily earnings and multiplying it by 70 days, we get \$6,865 in forgone earnings while serving time in jail.

<sup>26</sup> It should be noted that not every individual that is sentenced for a lower level drug crime will serve time in jail.

<sup>27</sup> While shown to be extensive, the individual and societal cost of a criminal record is not considered here.

<sup>28</sup> Current Criminal Justice Policies: 2019 Annual Report (2019). Utah Commission on Criminal and Juvenile Justice. ([https://justice.utah.gov/wp-content/uploads/JRI\\_2019\\_Annual\\_Report.html#policy\\_objectives\\_3-5\\_expand\\_treatment\\_services](https://justice.utah.gov/wp-content/uploads/JRI_2019_Annual_Report.html#policy_objectives_3-5_expand_treatment_services))

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