

# **Cumulative Cost-Benefit Analysis of Pima County's Drug Treatment Alternative to Prison (DTAP) Program**

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**January 2017**

## 1. Summary

The Pima County Drug Treatment Alternative to Prison program (DTAP) provides residential and intensive out-patient drug treatment and recovery support services as an alternative to prison for selected eligible non-violent repeat drug offenders. To implement the DTAP program, the Pima County Attorney's Office collaborates with a judge assigned to DTAP, Pima County Adult Probation, the Pima County Public Defender's Office, the Pima County Jail, the Pima County Sheriff's Office, the Tucson Police Department, and state and community organizations providing health and behavioral health services, substance use treatment, job development and housing assistance, and varied other support services. This report contains an assessment of the net benefit to the Arizona criminal justice system associated with the DTAP program.<sup>1</sup> This analysis focuses on the first two cohorts of participants in the program: 45 individuals who entered the program between January 1, 2011 and September 25, 2012. Because all participants in the first two cohorts have completed their three-year program participation, this report is able to include estimates of the total cost of the DTAP program for these participants, and to include preliminary recidivism costs for cohort one. In order to determine the net benefit of the program, estimated costs for program participants (including non-completers) are compared with estimated costs for a control group of similar non-violent repeat drug offenders who were sentenced prior to the implementation of the DTAP program<sup>2</sup>.

Accounting for all state, county, and individual expenditures, the total direct financial cost of the DTAP program is estimated to be \$30,203 per participant. When compared with a per-person total of \$47,540 spent on incarceration and associated costs for the control group, this implies a cost savings, or net benefit, of \$17,336 per person. **This translates to a cost savings to taxpayers of 36 percent when offenders participate in DTAP compared to a similar group of offenders sentenced to prison.**

These cost savings are likely to increase over time, due to a lower recidivism rate for DTAP participants compared to the prison control group. To illustrate this, we restricted the sample to a comparison between cohort one and the control group (to allow for adequate post-program time to observe recidivism). The net benefit of the program *examining only cohort one* is estimated to be \$11,986.<sup>3</sup> With recidivism costs included, the benefit increased by about \$1,500 to \$13,545 per participant. This suggests that the cost savings estimated for the cohorts combined (\$17,336) is also likely to increase when recidivism can be assessed for both cohorts.

Because this analysis does not account for other possible benefits from the program, such as reduced crime, increased tax revenues, or reduced expenditures on child welfare services, these estimates are likely to understate the true net benefit of the program for the state of Arizona.

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<sup>1</sup> Two earlier cost studies examining the Pima County DTAP program were previously commissioned by the Pima County Attorney's Office. The first was Herman, P. & Poindexter, B (2012). *Cost-Benefit Analysis of Pima County's Drug Treatment Alternative to Prison (DTAP) Program Final Report*. The second was Maimon Research LLC (2013). *Cumulative Second Year Cost-Benefit Analysis of Pima County's Drug Treatment Alternative to Prison Program Report*.

<sup>2</sup> The control group was first identified and utilized in Herman & Poindexter (2012).

<sup>3</sup> This is somewhat less than the \$17,336 estimate when both cohorts are combined, because a greater proportion of participants in cohort two successfully completed the program.

## 2. Program Overview – Cohorts One and Two

This section outlines the program components of the DTAP program. As this report focuses on the first two cohorts, this discussion emphasizes the guidelines and processes that were in place during the early years of the program. At the end of this report, we discuss changes in eligibility guidelines and program implementation in subsequent years of DTAP that may have implications for program costs in those years.

### *Eligibility*

To be eligible for DTAP participation during the first two years of the program, a potential participant must have had:

- 1) A pending felony charge for simple possession of a narcotic or dangerous drug and two prior felony convictions for simple possession of a narcotic or dangerous drug, or a pending charge for possession of methamphetamine, with one prior felony conviction.
- 2) A drug addiction.
- 3) Motivation for treatment.

In addition, the participant must **not**:

- 1) Have had a severe mental illness that rendered him or her a poor candidate for treatment without special mental health services (specialized services were not available for participants in years one or two due to limitations on funding).
- 2) Have had a sexual offense history.
- 3) Have had a violent offense history.
- 4) Have been an illegal resident.

Screening of potential participants was conducted in two parts, by two county entities. First, the Pima County Attorney's Office (PCAO) Narcotics Prosecutor and investigators oversaw the initial screening. Second, potential participants were referred to Pima County Adult Probation for further screening. Two assessments were administered to screen possible participants: the Adult Substance Use Survey-Revised (ASUS-R) and the Offender Screening Tool (OST). To be eligible for DTAP, potential participants would score medium-high to high risk based on these assessments. In some cases, professional psychological contractors were additionally paid to perform psychological assessments to ensure that participants did not have serious mental illness that would render them unable to benefit from treatment. After the results of the assessments were reviewed, Pima County Adult Probation made a recommendation to the PCAO regarding whether a prospective participant screened for DTAP should be offered the program. PCAO then would make the final decision about who would be offered a DTAP program plea.

### *Court Process*

After being recommended for DTAP, potential participants were offered a plea agreement that included a deferred prison sentence. Instead of going to prison, defendants who agreed to participate accepted three years of probation, were enrolled in the DTAP program, and attended twice monthly review hearings with the DTAP judge. Staffings attended by the Judge, Defense Attorney, Prosecutor,

Resource Manager, and probation and treatment staff occurred before each of these hearings to discuss participant progress. These hearings could be decreased to once monthly after a participant had been sober at least 180 days in the community and was compliant with other rules of the program.

### *Residential Treatment in DTAP*

Immediately following their plea, participants were transported to a residential treatment program where they would stay for an average of 90 days. Two providers offered most of the residential treatment for participants in the DTAP program during the first two years of DTAP. The providers of the men's residential treatment were Compass Health Care (Compass) and the Southern Arizona Mental Health Corporation (SAMHC), who later merged to be known as Pasadera. Male DTAP participants were housed at Serene Life, a co-ed treatment facility run by Pasadera. Although the facility was co-ed, housing in the facility was separated by gender and treatment for male DTAP participants was provided in male-only sessions. The Haven provided residential treatment to female DTAP participants in a female-only facility. Both facilities offered 90-day residential treatment programs that were phased and advanced each month. If participants were discharged by one of these programs and had not been revoked to prison by the DTAP judge, they could be transferred to another residential treatment facility in Tucson, for example Teen Challenge's Tucson Men's Center or La Frontera Center Casa de Vida (co-ed).

### *Sanctions and Incentives*

DTAP applied sanctions and incentives in response to participant behavior while in DTAP. Sanctions were progressive and designed to align with the difficulty or ease of meeting program goals. Short-term jail sanctions, where a participant reports to jail for a number of days, were occasionally applied in response to more serious infractions. These are included in the analysis. Incentives could also be applied to reward participants for achieving goals or engaging in productive behaviors. For the first cohorts, these included sobriety discs, or additional positive reinforcement from the judge. These incentive costs were negligible, and are not included in the analysis.

### *Transitional Housing*

In the first years of DTAP, following completion of residential treatment, DTAP participants either entered transitional housing provided by Old Pueblo Community Services, or, if a suitable friend or family placement was available, the participant was released to their home.

### *Supportive Services and Coordination of Services*

Multiple agencies worked with participants in DTAP and provided ongoing supervisory or supportive services. First, Pima County Adult Probation completed a case plan with individuals once they were enrolled in DTAP, outlining expectations and goals. Staff with the Primavera Foundation served as the resource manager for cohorts one and two, tracking all services provided to DTAP participants and their associated costs. These services included residential treatment, drug testing, educational and job development support, clothing, transportation assistance, dental and vision care, and out-patient substance use educational services. Residential treatment providers also completed a treatment plan

and updated it with participants individually and with DTAP partners at Adult Recovery Team (ART) meetings. ART meetings took place at the treatment facility during residential treatment, and in years one and two of DTAP were attended by the Probation Officer, the Resource Manager and staff from the treatment facility.

### **3. Methods**

This report estimates the dollar value of the total costs to the Arizona criminal justice system, including costs at both the state and county level, associated with participation in the DTAP program for participants in the first and second cohorts of the program. These cohorts entered the program between January 1, 2011 and September 25, 2012. The last participant was discharged in July 16, 2015, and no services were recorded for any participants in these two cohorts after this date. Thus, this report summarizes the full cost of participation for these individuals. In order to calculate net benefits, we also use a control group to estimate a counterfactual of what costs would have been had DTAP participants served the typical prison sentence. All costs and benefits are reported in 2016 dollars, with all past costs adjusted for inflation using the Consumer Price Index (CPI) from the Bureau of Economic Analysis.

Costs for both the DTAP participants and the control group are first calculated from the perspective of the Arizona criminal justice system, meaning all state, county, and individual expenditures are included. A second analysis calculates costs and benefits based on the assumption that individuals pay for the fees of their probation and parole, meaning these costs are excluded from program costs. A third analysis is restricted to cohort one and the control group, and includes comparison of program costs with and without recidivism costs included.

Importantly, the costs of the program have likely changed for subsequent cohorts, as program eligibility guidelines and implementation have changed. These changes are outlined below under *Changes to the DTAP Program for Cohorts Three through Six and Implications for Future Cost Estimates*. This analysis will not accurately estimate the cost of completion of the current DTAP program.

Although this report will include some costs related to recidivism for both DTAP participants and the control group, it should be understood that it does not include all potential benefits to the state. For example, no information is available on taxes paid to the state for DTAP participants who successfully get employment after completing the program or reductions in Department of Child Safety costs for DTAP participants who can now care for their children. Benefits to the state from reductions in crime are also unobservable, beyond the difference in prison and related costs for those who recidivate, compared to those who do not. Likewise, reduction in emergency room costs for drug overdoses are not considered in this report.

#### *Control Group*

Counterfactual costs for DTAP participants are estimated by quantifying costs incurred for individuals who would have been eligible for DTAP, but went through the prison system instead. The control group was composed of drug offenders in Pima County who were arrested before the DTAP program became available and would have been eligible for DTAP if it had existed. This control group was identified through search of Pima County's court case records starting from the date before the DTAP

program start date (December 31, 2010) and working backward until 50 individuals suitable to be in the control group were identified.<sup>4</sup>

### *Included Costs and Benefits*

As in the previous cost reports, this report assesses the net benefits associated with the DTAP program beginning when the DTAP participants and prison control group diverge in their interactions with the criminal justice system. This divergence occurred when the DTAP participant pled guilty to the drug charges and received three years of probation, including participation in the DTAP program.

Before the guilty plea, both the control group and the treatment group were arrested and placed in Pima County Jail, appeared in court, and some were released on bail until trial, while others remained in jail custody pending sentencing. These costs *before the guilty plea* were assumed to be similar between groups and are not included in the analysis. After the individual accepted their DTAP plea, they were transported immediately to a residential treatment facility for an approximately 90-day program if they were in the treatment group. After the control group participants accepted their plea, they then awaited a sentencing hearing. These costs are discussed in the following sections and summarized in Tables 1 and 2 in the pages that follow.

### *Costs for DTAP Completers*

Of the 45 DTAP participants who were the subject of this analysis, 25 individuals completed the DTAP program. For cohorts one and two, costs for these individuals included psychological evaluations, hearing costs, DTAP service costs, housing costs, and probation fees. Before being enrolled in the DTAP program, some individuals were evaluated by a professional psychologist in order to make sure they meet the program requirement of having no evidence of severe mental illness. Because this cost was accrued by the program, it is included when applicable.

After the DTAP participants accepted their pleas, they were immediately transported to a residential treatment facility for approximately 90 days of care. All residential treatment costs included in the evaluation were the actual costs paid by the program for each DTAP participant.<sup>5</sup> Upon completion of residential treatment, the participant moved to transitional housing or to a family residence. Costs of housing were included as needed. Services participants received post-residential treatment could include transportation vouchers, clothing assistance, vision and dental services, educational and job training supports, and continued outpatient substance use treatment services and drug testing. The actual service costs for each participant were included in this study. Staff costs were also included in the study. These were estimated using payroll data for the Program Director and Resource Manager

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<sup>4</sup> This strategy is the same strategy used in the year one cost report (Herman & Poindexter, 2012). The year two cost report (Maimon Research, 2013) did not use a control group, but instead estimated counterfactual costs based on the sentencing range associated with participants' plea bargains.

<sup>5</sup> Because the analyses are being conducted from the perspective of the Arizona criminal justice system, only costs charged to the program are included here. Actual costs to replicate the program could be higher. For instance, staff at the women's residential treatment facility (the Haven) report that costs for treatment were subsidized by approximately \$40/day per participant (Higgins, M. 2016. Personal Correspondence). Charged out at the full rate, treatment costs could be up to \$3,600 more per participant. However, as noted, a number of additional cost *savings* over time are also not included, such as increased tax revenue and child welfare savings.

from 2011-2015. Aggregate staff costs were estimated to be an average of \$195 per participant per month between 2011 and 2015, accounting for the fact that costs decreased as the program gained participants.

Finally, DTAP participants were required to attend two review hearings per month (one every two weeks) in Drug Court to assess progress, satisfy probation requirements, and address any problems. As data on the number of hearings attended per participant were not available, this was estimated as the number of months between the plea date and promotion divided by two. The cost of the review hearings was estimated in the first cost report based on the 2011 salary values of the staff and Pima County personnel involved, using a five-minute average per review hearing (Herman & Poindexter, 2012). The cost was estimated to be \$21.68 per participant per review hearing in 2011 dollars (2011\$). Using actual raise data for Pima County employees, the review hearing cost was adjusted for each time employees received a raise (1% cost of living raise in July 2013 that was increased to 2% in December 2013).

During DTAP participation, sanctions could also be applied in response to program progress. Short-term jail sanctions, where a participant reports to jail for a number of days were occasionally applied in response to more serious infractions. Seven out of the 20 participants who were eventually revoked from the program spent an average of 20 days in jail as part of sanctions, which added a total of \$727 per non-completer to the average cost. Four participants out of 25 who successfully completed the program were sanctioned an average of 19 days, which added an average cost of \$289 per completer. The average jail sanction costs were calculated using actual days sanctioned and the reported Pima County Jail costs for each year 2011-2015.

Once the DTAP completer was promoted, they did not have to go to review hearings, but they still incurred the monthly probation fee until the end of the three-year probation sentence.

#### *Costs for DTAP Non-Completers*

Those who did not complete the DTAP program could have their probation revoked by the court and be sent to the Department of Corrections at any time during the program. When a DTAP participant failed to meet the requirements of the program, they attended a number of revocation hearings before getting sent to prison. There are three types of these hearings: initial application on petition to revoke probation hearing, violation hearing, and violation/change of plea hearing. Costs for each of these hearings were calculated based on the average time of hearing, hourly rate plus benefits for Pima County employees attending the hearing, and transportation costs to and from court. The value ranges for the time period 2011-2015 can be found in Table 2. These costs are in 2016\$, adjusted up from the incurred costs between 2011 and 2015 using the CPI. Since the number and types of hearings attended for each DTAP non-completer were not available, it is assumed that each individual attended one application hearing to revoke probation, one violation hearing, and one change of plea hearing. DTAP non-completers were also subject to costs related to sanctions prior to the offense that led to their revocation and review hearings that occurred twice per month until their probation was revoked.

The cost of incarceration (both jail and prison time) and parole fees were also added to the total costs for DTAP non-completers. Jail costs were calculated using the actual costs from Pima County and the

average number of days spent was calculated from the average cost given in Herman and Poindexter (2012). Since individuals were not booked in the jail once they were revoked, they spent an average of 2.68 days in jail before being sent to prison, which cost an average of \$280. The daily per capita cost of incarceration for an Arizona state prison was used to calculate the incarceration costs for the same year that probation was revoked for the non-completer (adjusted to 2016\$). The annual prison costs ranged from \$21,742 in 2011 to \$23,826 in 2016. Although an adjusted daily per capita prison cost was used in the first cost study, the current analysis used unadjusted prison costs because the adjusted cost data are not available after 2011. Therefore, medical costs are included in the prison costs but are not available for DTAP participants (except for dental and vision care, as well as HIV testing and medications, which were paid for by the program). The inclusion of medical costs in the prison costs may mean that prison costs for non-completers and the control group are not directly comparable to the DTAP program costs. The prison costs for both DTAP non-completers and the control group will be higher including the medical costs, which may bias the net cost savings upward. In 2011, the adjusted daily per capita prison cost for a minimum security prison was \$54.20 while the adjusted daily per capita cost was \$46.56. The magnitude of the cost differential remains about the same (\$7 to \$8) for all levels of security in the prison. This implies that prison cost estimates may be overestimated by about 15 percent, depending on the time trend of the medical costs after 2011. Parole costs were calculated using prison release and end of parole date data for DTAP non-completers.

### *Costs for the Control Group*

The costs included in the estimate for the control group are the cost of their sentencing hearing, jail time between change of plea and sentencing, transportation to prison, prison, and parole fees paid by the individual. The cost of prison for the controls was the 2011 per capita daily prison cost (\$64.20 per day, adjusted to 2016\$). The sentencing hearing cost for the control group was based on the estimated duration of the hearing in minutes multiplied by the salaries including benefits for the Drug Court Judge, Prosecutor, Court Reporter, Clerk for the Judge, Pima County Sheriff's Office Deputy Bailiff, and adult probation officers plus transportation to and from the court house plus one hour of time for the Defense attorney. More Defense Attorney time was added for control group participants as each defendant could use a different attorney and each attorney needs to wait at the courthouse and prepare until his or her defendant's hearing. All DTAP participants used the same attorney and were seen on the same day, which meant less time was required for this attorney.

If the control group defendant was in custody at the time of sentencing only one day of subsequent jail time was added to his or her costs (Table 2-\$98.33). If the defendant was not in custody at the time of sentencing, one "first" day of jail time (Table 2-\$241.67) was added to his or her costs, but transportation costs were not added if they were not in custody at the time of sentencing. The actual prison sentences are used for all individuals in the control group, as they had all completed their prison sentences at the time of this report. The unadjusted prison costs were used to estimate the costs of their prison time, as was done for the the estimated prison costs for the DTAP non-completers. The actual parole days were also observed for each individual in the control group.



*Recidivism Costs*

Costs for a prison incarceration following a participant’s successful or unsuccessful completion of DTAP, and in the 2.5 years following the control group’s release from prison for their eligibility offense were estimated based on the actual sentencing data and prison/parole costs used in other parts of the analysis.

Table 1: Cost Components for DTAP Completers, Non-completers, and the Prison Control Group

<b>DTAP Completer Costs</b>	<b>Added Costs for DTAP non-completers</b>	<b>Control Group Costs</b>
Residential Treatment	Jail Time	Jail Time
Supportive Services	Prison	Sentencing Hearing
Sanction Costs	Parole	Prison
Review Hearings	Revocation Hearings	Parole
Probation Fees	Sentencing Hearings	Recidivism Costs
Additional Staff Costs		
Psychological assessments (cohorts one and two)		
Recidivism Costs		

Table 2: Unit Cost Estimates and Actual Costs for DTAP Program and Control Group Cost Components

Activity	Cost per person (2016\$)
Psychological Assessment	\$161-\$428
Residential Treatment	\$83.17-\$87.81 per day
Hearings (Pima County Costs)	
Review Hearing	\$22.11-23.20 per hearing
Initial application on petition to revoke probation	\$63.88-67.01 per hearing
Violation hearing	\$57.01-59.81 per hearing
Violation/change of plea hearing	\$75.04-78.72 per hearing
Disposition/Sentencing for controls w/transportation	\$109.60-114.98 per hearing
Disposition/Sentencing for controls w/o transportation	\$87.57-91.86 per hearing
Jail Costs (Pima County)	
First Day in jail	\$241.67-282.31 per day
Subsequent Days in jail	\$80.90-98.33 per day
Transportation to prison from jail	\$25.66
Prison costs (depending on year of sentence)	\$64.20-\$69.30 per day
Probation fees	\$65 per month
Parole fees	\$65 per month
DTAP Staff Costs	\$195.36 per month
DTAP Service Costs	\$740.25-\$13,774.43 per participant
DTAP Sanction Costs	\$189.31- \$4,342.28 per participant

*\*Cost ranges are given for the years 2011-2016 in 2016 dollars*

#### 4. Cost Analysis

Costs of the DTAP program were calculated from the Arizona criminal justice system perspective for the year one and two cohorts.

This analysis was based on the following assumptions:

1. All individuals were sent to prisons in Arizona;
2. The monthly DTAP staff cost per person was estimated using the number of individuals enrolled in DTAP in that month and the salary information received (billing data for the staff members);
3. The number of hearings each DTAP participant received was estimated using the number of weeks between plea date and promotion divided by two.

#### 5. Results

Table 3 presents comparisons of race, age, and sex for the participant and control groups. Observable characteristics were fairly similar between the two groups, although DTAP participants were less likely to be male or white than the prison comparison group. As individual-level data for control group characteristics were no longer available, the statistical significance of the difference was not calculated.

Table 3: Selected Characteristics of DTAP Participants and Prison Comparison (Control Group)

Demographics	DTAP Participants (n=45)	Prison Comparisons (n=50)
Age	39	35
Male	58%	70%
Race/Ethnicity		
White	69%	74%
Hispanic/Latino	20%	24%
Black/African-American	7%	2%
Asian	4%	0%

### *Aggregate Cumulative Costs*

Cost estimates for the DTAP program completers, non-completers, and control group are presented in Table 4. The total cost of the DTAP program was \$30,203 per participant from the criminal justice system perspective. This included all relevant costs incurred during the program as it existed for cohorts one and two. Therefore, the cost estimate included psychological assessments (as they were done for some participants in these cohorts (10-20%)), residential treatment, service costs, and staff costs. DTAP completers had a higher estimated DTAP program cost per participant (\$10,481) than those who did not complete the program (\$8,427). This was because the non-completers left the program early. Staff costs were also lower for non-completers for this reason.

Prison time during the program period was only included for DTAP non-completers and the prison control group, as these costs were not incurred for the DTAP completers (recidivism costs are addressed below). The cost of prison was higher for DTAP non-completers as they were sent to prison in a different year (prison rates were higher in 2012 than in 2011) and they spent more days in prison on average than the prison control group.

When all DTAP participants in cohort one and two were considered, the average cost of the DTAP program per participant was estimated to be \$30,203 per person. This can be compared with the average prison control group cost of \$47,540. **This difference in average costs implies a cost savings of \$17,337 per participant to the criminal justice system.**

If only costs for those who completed the DTAP program are considered, the cost savings is larger at \$30,275 (Table 4). This implies that the cost savings should increase as the proportion of people who successfully complete the program increases. This suggests that there is value added to improving the program to support participants to completion.

Table 4: Mean Costs per Person for DTAP Participants and Prison Comparisons from the Criminal Justice System Perspective (2016\$)

	N	DTAP Costs	DTAP Staff Costs	Sanction Costs	County Hearing Costs
<b>DTAP All</b>	45	\$9,568.70	\$3,453.73	\$483.95	\$1,118.52
Completers	25	\$10,481.86	\$4,958.73	\$289.22	\$1,535.77
Non-completers	20	\$8,427.25	\$1,572.48	\$727.37	\$798.30
<b>Control Group</b>	49	\$0.00	\$0.00	\$0.00	\$110.21

  

	N	Jail Before Prison*	Prison Costs	Total costs
<b>DTAP All</b>	45	\$124.43	\$15,454.13	\$30,203.46
Completers	25	\$0.00	\$0.00	\$17,265.58
Non-completers	20	\$279.97	\$34,771.80	\$46,577.17
<b>Control Group</b>	49	\$2,481.33	\$44,948.55	\$47,540.09
			<i>Cost Difference:</i>	\$17,336.63

\*Includes transport from jail to prison

DTAP participants and the prison control group also incur monthly probation and parole fees, which are set by Arizona Revised Statutes at \$65 per month. The average cost of the DTAP program was estimated by imposing the assumption that all probation and parole fees were paid by the probationers or parolees themselves, and were therefore excluded from DTAP program costs. This implies a total cost of \$30,203 and a net benefit of \$17,337, per person, as shown in Table 4.

The control group spent an average of 145 days on parole and the DTAP revoked group spent an average of 174 days on parole. The average total parole fees paid by the control group was \$368 and DTAP non-completers paid \$297 in parole fees in present value terms. Additionally, the average DTAP participant paid \$1,145 in probation fees, which can be broken into \$1,315 for DTAP completers and \$932 for non-completers. These probation fees are often lowered or removed for specialty court participants, such as those in DTAP, and so absorbed as costs to the program, though they are not paid by the program. Because we do not have data on those waivers, we assume that all fees were paid by the individual (thus are not a cost to the criminal justice system). If all fees were assumed to be waived (and so handled as costs to the criminal justice system), the estimated net cost savings of the DTAP program would be reduced \$909 to \$16,380 per person. Therefore, the savings are likely to be between \$17,336 and \$16,380, depending on the proportion of waivers issued.

### *Cost Analysis with Recidivism Costs (Using Cohort One Only)*

Participation in the DTAP program is hypothesized to make it less likely that one will commit another crime. Therefore, costs associated with recidivism were added for participants from cohort one and the control group. The follow up period for the observation of recidivism was 2.5 years. This was the optimal period to both allow for inclusion of the maximum number of participants in DTAP and to be close to the three- to five-year follow-up period used in the majority of recidivism studies. The recidivism follow-up period began after the DTAP participant was discharged from the program for completers and upon discharge from prison for non-completers and the prison control group.

One participant in DTAP recidivated within the 2.5-year observation period out of the 18 that participated in cohort one, while six out of the 50 participants in the control group had new charges and went to prison during this period. This implies a recidivism rate of 5.6 percent for DTAP participants within 2.5 years of discharge from the program and a rate of 12 percent for the control group within 2.5 years of being released from prison. Because the proportion who recidivated in the control group is twice as large as the proportion who recidivated in the DTAP group, the average cost of prison and jail for the control group is about twice as high as the average costs for the DTAP participants.

Jail costs for the recidivism portion of the current study are estimated under the assumption that individuals in DTAP spend a similar time in jail, on average, to jail time for the control group in the first part of the study (24.5 days). This would not be accurate if time spent in jail before prison changed during this time period. Hearing costs are also estimated under the assumption that a similar proportion of individuals who recidivated will need transportation to hearings to the proportion needing transit in the control group (79%). **The overall cost savings based on cohort one data is \$11,986; the cost savings increase by about \$1,500 to \$13,545 when the differential recidivism rate and associated costs are taken into consideration** (see Table 5).

Table 5: Mean Costs per Person for Cohort One DTAP Participants and Prison Comparison with added Recidivism Costs

	N	DTAP Costs	DTAP Staff Costs	Sanction Costs	County Hearing Costs	Jail Before Prison*
<b>DTAP All</b>	18	\$9,424.11	\$2,496.61	\$515.59	\$973.08	\$172.98
Completers	7	\$11,204.17	\$3,926.35	\$853.72	\$1,537.45	\$0.00
Non-completers	11	\$8,291.34	\$1,586.78	\$300.43	\$816.01	\$283.06
<b>Control Group</b>	49	\$0.00	\$0.00	\$0.00	\$110.21	\$2,481.33

  

	N	Prison Costs	County Hearings Recidivism	Jail Before Prison Recidivism*	Prison Costs Recidivism	Total
<b>DTAP All</b>	18	\$21,970.98	\$5.89	\$121.31	\$455.41	\$36,135.96
Completers	7	\$0.00	\$0.00	\$0.00	\$0.00	\$17,521.69
Non-completers	11	\$35,952.52	\$9.64	\$198.50	\$745.21	\$48,183.49
<b>Control Group</b>	49	\$44,948.55	\$12.91	\$287.41	\$1,840.75	\$49,681.16
					<i>Cost Difference:</i>	\$13,545.20

## Discussion

### *Summary of Findings*

From these cost estimates, it is clear that the DTAP program costs substantially less per person than the prison alternative for the first two cohorts of the program. We were also able to examine the net benefit of the program over time by looking at the recidivism rates of the first cohort compared to the control group with a similar time at liberty. The benefit increased from \$11,986 to \$13,545 when recidivism out to 2.5 years was accounted for (Table 5). This suggests that the cost savings for the cohorts combined (\$17,336), is likely to increase over time, as more data on recidivism become available.

### *Accuracy*

While many assumptions had to be made to estimate the costs of this program, it is unlikely that these assumptions substantially altered the cost estimates. The vast majority of the cost calculations were performed using the actual cost data and thus are correct to the extent the records are correct. First, the estimated number of hearings is likely an upper bound of the number of hearings the DTAP participants actually received, as the hearings may have been reduced for good behavior. Second, the staff costs were calculated using billing data, so they are accurate provided that the billing data includes all staffing costs. Finally, jail days were estimated given the values in the 2012 cost study,

since individual days spent in jail are unavailable for both DTAP participants and the control group. If lengths of jail stays or the proportion needing transportation to hearings changed significantly during this period, the jail and hearing estimates may be inaccurate.

While this report estimates the direct costs of the DTAP program and costs to the criminal justice system due to recidivism, many indirect or intangible costs and benefits cannot be included. No information was available on the employment outcomes of the control group or the DTAP participants, so taxes paid to the state cannot be included. Also, reductions in Department of Child Safety costs for DTAP completers who can now care for their children cannot be estimated. Benefits to the state reductions in crime are additionally unobservable.

#### *Comparison with Previous Cost Report Projections*

According to this cost analysis, accounting for all state and county expenditures, the total direct financial cost of the DTAP program without recidivism is estimated to be \$30,203 per participant. This number is higher than the projected full cost of the DTAP program from the second year cost report, which was \$23,279. At least some of this difference is due to the fact that the second-year report projections were based on the assumption that all 27 participants who had not yet graduated or dropped out would complete the program. In reality, at least four of these participants did not complete DTAP, and thus had higher costs due to time spent in prison. Also, staff and sanction costs are included in this report, but were absent in the previous report. This increased the estimated costs by about \$3,938 per DTAP participant. This report also takes into account changing jail costs and staff salary changes over the period 2011-2015, which improves the accuracy of estimates.

**The costs savings, or net benefit, to the Arizona criminal justice system is estimated to be \$17,336 per person** (Table 4). This is higher than the estimate from the 2012 cost analysis, which estimated \$7,325 saved per participant from the criminal justice system perspective.

This is lower than the predicted \$32,373 per person that was estimated in the second-year cost report. This discrepancy is likely due, at least in part, to different methodology. The second year report did not use a control group, instead using the cost of the expected incarceration associated with the participant's plea bargain as a counterfactual. This is similar to the estimated costs savings when only those who completed the DTAP program are considered (\$30,275) (Table 4).

#### *Changes to the DTAP Program for Cohorts Three through Six and Implications for Future Cost Estimates*

It is important to note that the costs estimated in this report are only relevant for those participants who were part of cohort one and two of DTAP. Many components of the DTAP program have changed in subsequent years that may impact these estimated costs. The changes most likely to impact costs of the program, which are discussed below, relate to eligibility, treatment and supportive services. Although certain elements of the evolving program may be costlier, if they can successfully increase DTAP program completion and reduce recidivism for participants at higher risk than those in cohorts one and two, the benefits for the criminal justice system over time could increase.

Eligibility criteria have changed since year two of the program. Changes in year three included expansion of the crime type to include drug sales in limited circumstances, and some property offenses related to drugs. Another change in year three was allowing individuals with multiple pending felonies to be eligible if all pending felonies would fall within DTAP eligibility guidelines. Towards the end of year three, the eligibility criteria were also expanded to include potential participants with a diagnosis of a serious mental illness (SMI).

The type and provider of treatment for the DTAP program has also evolved over the course of the program. An Intensive Outpatient (IOP) option for DTAP participants who may not have the level of addiction or need that requires residential treatment was added beginning in year four and these services are provided by a number of providers. A preference for transitional housing, rather than placement in a family member's or friend's home, accompanied this change to offer a more structured environment for participants. The costs of this housing and IOP treatment would need to be considered in future cost studies.

Several staff positions were also added over the years to DTAP to enhance support service delivery. These include a Job Specialist, Peer Support Specialist and an additional Probation Officer and Surveillance Officer to adjust to increasing DTAP caseloads. The additional costs associated with these added staff would likely adjust cost savings of the DTAP program slightly downward. However, the additional staff costs would be offset as the size of the DTAP program increases, and to the extent that these additional staff and the services they provide increase the program completion rate and keep recidivism low.