

A Cost-Benefit Analysis of the Capital Area Teen Court

I. Introduction

The Capital Area Teen Court (CATC) is a juvenile diversion program which seeks to offer juvenile delinquents an alternative to traditional juvenile court adjudication and avoid creating a permanent record of their delinquency. (Davis, Louise, Interview) The CATC operates on an “adult judge model” where all participants, including prosecutor, defense attorney, bailiff, and jurors, are all youths with the exception of the judge, who is typically a local attorney or judge. (Bright and Morris-Compton, 2013) (Davis, Louise, Interview) Juvenile offenders who participate in the CATC are represented and tried by their peers, and after a hearing, are sanctioned by the jury of their peers. Typical teen court sanctions include mandatory jury duty, monetary restitution, letter of apologies and essays, community service, and other sanctions. (Bright and Morris-Compton, 2013) If participating in the CATC, youths can avoid formal adjudication in Wake County Juvenile Court and an official juvenile record, but only if participation in CATC and completion of sanctions is satisfactory. (Davis, Louise, Interview) To be eligible to take advantage of the CATC juvenile offenders must be first time offenders and must admit guilt before participating in teen court. Further, certain serious crimes like murder, rape, and other sexual or violent offenses committed preclude a juvenile from participating in the CATC diversion program. (Davis, Louise, Interview) In the last three years (2012-2015), 1,807 juveniles were referred to CATC from various referral sources including, but not limited to, school resource officers, juvenile intake officers, and the juvenile court in Wake County. The most common offenses for which juveniles were referred to CATC include shoplifting, fighting, alcohol and tobacco use, possession of weapons, and other minor offenses.

The following is a program evaluation of the Capital Area Teen Court program. The program evaluation will cover the most recent three completed fiscal years of the program starting on July 1, 2012 and ending on June 30, 2015. Though the CATC is a county wide program limited to Wake County, NC, the benefits of such a social program are beneficial to all of society. Thus, standing in this evaluation includes all of society. A cost-benefit analysis will be utilized to evaluate the value of the program. Here, there are two options being considered: (1) continue the CATC program, or (2) discontinue the program and no longer use CATC to divert juvenile offenders from juvenile court and other traditional diversion programs. Data collected from CATC and from scholarly articles evaluating comparable teen courts will be used to ascertain how well the CATC performs in regard to its outcomes and whether the benefits reaped from the program are worth the costs of the program. Following the analysis a recommendation as to whether or not to continue the program will be made.

A. Outcomes of the Capital Area Teen Court

While the immediate objective of the CATC is to divert teens from juvenile court, there are more long term outcomes that CATC and other teen courts hope to achieve. One more abstract outcome is an improved opinion of or respect for authority and the justice system. (Bright and Morris-Compton, 2013) (Weisz, Lott, and Thai, 2002) Again, the most immediate outcome is to decrease the number of teens processed through formal juvenile teen courts and receiving permanent records. (Bright and Morris-Compton, 2013) (Stickle et al, 2008) Later outcomes CATC hopes to achieve is a decreased number of juveniles who recidivate, and ultimately a decrease in juvenile delinquency in Wake County. (Davis, Louise, Interview) (Stickle et al, 2013) (Weisz, Lott, and Thai, 2002) (Forgays and DeMilio, 2005)

B. Demographics of the Capital Area Teen Court

It is important to discuss the demographics of the CATC as it is necessary to compare the CATC to other teen courts with similar structure and demographics later in the analysis. This is done in order to get an idea of what outcomes a teen court similar to CATC should achieve. In the three fiscal years from 2012-2015, 1,017 of the 1,807 juveniles referred completed the CATC program successfully. (Davis, Louise, Interview) A large majority of those who participated in CATC were African-American while Caucasians was the second largest racial group. Hispanics, Asian, and Natives made up a very small section of the participants. By law, the CATC can serve clients ranging in age from 9 to 18 years old. Though, the ages of those who participated in CATC from 2012-2015 ranged from 10-18 with the largest portion of referrals being in the age range of 14 to 17 years old. Finally, in regard to gender a majority of participants were male, about 60%, and females made up about 40% of participants over the 2012-2015 period. (Davis, Louise, Interview)

II. Costs of the capital Area Teen Court

The CATC is administered by ReEntry Inc., a local non-profit. This non-profit funds the CATC using donations, funding from the NC Department of Juvenile Justice (DJJ), the NC Juvenile Crime Prevention Council (JCPC), and Wake County. The major costs of the CATC include an in-kind lease worth \$48,498 for office space in the old Wake County Courthouse as well as maintenance, some equipment, and utilities. This lease is provided to ReEntry at no charge and it is granted to ReEntry as a whole. Other programs are housed in this office, but the \$48,498 value reflects the portion of the lease utilized by the CATC. Other costs of the program included 3 full-time personnel and the part-time salary of the ReEntry Inc. Director. The ReEntry Inc. Director is officially a part time employee of the CATC because, as director of the entire non-profit, she is also the director of other programs aside from CATC. But, in reality, all of the Director's time is dedicated to the CATC. Since only half of her salary is include in the

budget for the CATC, the other half of her salary must be added to the total budget to accurately represent the actual costs of the CATC and the Director's time dedication to CATC. This part of Director's salary has a value of \$28,600. The CATC also has its own equipment, such as the printer, supplies, and service contracts that add to the cost of the CATC program. Total costs of the CATC are calculated by adding half of the salary and benefits of the Director to the total amount in the budget for each of the three fiscal years covered by the analysis. The total costs are summarized in figure 1 below. Overall, the costs of the CATC was \$245,798 in FY 2012-13, \$252,229 in FY 2013-14, and \$250,098 in FY 2014-15. (Davis, Louise, Interview)

Figure 1: Summary of Total CATC Costs

	CATC Budget	1/2 Director's Salary	Total Cost
FY 2012-2013	\$217,198	\$28,600	\$245,798
FY 2013-2014	\$222,629	\$28,600	\$251,229
FY 2014-2015	\$221,498	\$28,600	\$250,098

Source: Davis, Louise, Interview

III. Outcomes and Benefits of the Capital Area Teen Court

As mentioned before, the CATC has 5 main objectives: (1) reduce the number of juveniles adjudicated in a juvenile court receiving a permanent record, (2) increase exposure to and education on the justice system among youths, (3) increased respect for and improved view of authority, (4) decreased rate of recidivism among CATC participants, and (5) decreased delinquency among participants. (Davis, Louise, Interview) (Bright and Morris-Compton, 2013) (Weisz, Lott, and Thai, 2002) (Stickle et al, 2008) (Forgays and DeMilio, 2005) Some of these outcomes can be evaluated using data obtained from CATC, and some outcomes must be evaluated using data obtained from studies of similar teen courts. This section will discuss and

provide results data for each of the objectives mentioned and will address one additional negative outcome.

A. Outcome One

First, the outcome “decreased number of juveniles adjudicated in juvenile court receiving a permanent record” can be measured by the number of teen successfully diverted from juvenile court by the CATC. Though, not all referrals to CATC can be counted as being diverted from juvenile court, because those who did not participate or who did not satisfactorily complete their sanctions were deferred back to juvenile court. (Davis, Louise, Interview) Thus, only those who successfully completed their sanctions and the CATC program and were successfully diverted from juvenile court should be counted as such. In the 2012-2013 year, CATC successfully diverted 322 participants from juvenile court. In 2013-2014, CATC successfully diverted 389 participants from juvenile court and 306 in 2014-2015. (Davis, Louise, Interview)

B. Outcome Two

The second outcome “increased respect for and improved opinion of authority,” unlike the previous outcome, is more abstract, and thus, more difficult to measure. The most feasible way of measuring this outcome is with pre-test and post-test surveys of participants in CATC. (Bright and Morris-Compton, 2013) Since the CATC does not have the resources to administer such resources and no third party has, at this time, not performed such a study, this analysis will use data from three Maryland teen courts, at least one of which has very similar demographics and serves a similar number of clients each year. In this study, participants were asked questions relating to their options of law enforcement, the juvenile justice system, and model citizenship in general before and after participating in teen court. After participating in the Maryland teen courts, 40% of respondents had positive opinions of law enforcement compared to 47% of

respondents in the pre-test interview who had positive opinions of law enforcement. Prior to participating in teen court, 25% of respondents had negative opinions of law enforcement compared to 22.7% of respondents with negative opinions of law enforcement after participation in teen court. In regard to opinions of the legal system, 63.9% of respondents had a positive opinion before participating and 50% had a positive opinion after participating in teen court. Before participating in teen court, 16.7% of participants had negative opinions of the legal system and 13.6% had negative opinions of the legal system after teen court participation. It should be noted that the number of participants in the post-test interview (22) was far less than the number of participants in the pre-test interviews (36). (Bright and Morris-Compton, 2013) Figure 2 below shows the results of the study as described above.

Additionally, prior to participating in teen court, 50% of respondents included being helpful to others and the environment in their description of being a good citizen, 19.4% included obeying the law, and 11.1% of respondents included being respectful. After participating in teen court, 54.5% of respondents said being helpful defined good citizenship, 22.7% said obeying laws defined a good citizen, and 9.1% included a combination of obeying laws and being helpful. Only 2 of 22 respondents included respect as a trait of a good citizen in the post-test interviews. (Bright and Morris-Compton, 2013) In another study, discussed in detail below, it was found that those who participate in teen court were more likely to view authority as biased and to feel alienated from authority. There seemed to be no correlation between participation in teen court and respect for authority. (Weisz, Lott, and Thai, 2002)

Figure 2: Opinions of Law Enforcement and the Legal System

	Law Enforcement	Legal System
Pre-test Interview (36)		
Positive Opinion	47.2% (17)	63.9% (23)

	Law Enforcement	Legal System
Mixed/No Opinion	27.8% (10)	19.4% (7)
Negative Opinion	25% (9)	16.7% (6)
Post-test Interview (22)		
Positive Opinion	40.9% (9)	50% (11)
Mixed/No Opinion	36.4% (8)	36.4% (8)
Negative Opinion	22.7% (5)	13.6 (3)

Source: Bright and Morris-Compton, 2013

C. Outcome Three

The third outcome, “decreased rate of recidivism,” is the most studied outcome of teen court programs. Since the CATC does not have the resources to provide recidivism data for this evaluation, data from three other comparable teen court programs will be used to give a best estimate of the CATC’s recidivism rates. Each of these three comparisons are teen courts of similar size and with similar demographics to the CATC. However, there may be some variations. Each of the three studies utilized compared the recidivism rates of the teen court studied at 12 months with the recidivism rate of juvenile court or traditional diversion programs at the 12 month mark. It is important to note that recidivism was most commonly measured by re-charge, but sometimes was measured by re-arrest. (Stickle et al, 2008) (Forgays and DeMilio, 2005) (Weisz, Lott, and Thai, 2002) (Bright et al, 2014) The results are as follows.

The least favorable study found that teen courts had a 24% recidivism rate compared to the 16% recidivism rate of juvenile court respondents. In this study, teen court recidivism rates were greater than juvenile court recidivism rates by eight percentage points. (Stickle et al, 2008) In the study most favorable study, the teen court had a recidivism rate of 14% and the comparison group of traditional diversion programs had a recidivism rate of 31%. Here, teen

court recidivism rates were sixteen percentage points lower than those of traditional diversion programs. (Forgays and DeMilio, 2005) The final study yielded more moderate results where the teen court group had a recidivism rate of 13% compared to the 24% recidivism rate of the juvenile court group. The teen court in this study yielded recidivism rates that were eleven percentage points lower than the recidivism rates of the juvenile court group. (Weisz, Lott, and Thai, 2002) Since the results here are from studies of teen courts similar to CATC and the teen court recidivism rates reported are on par with other teen court programs, it can be argued that teen courts, like CATC, on average, have recidivism rates 6.3 percentage points lower than the recidivism rates of traditional juvenile adjudication. (Bright et al, 2014) This figure can now be used to demonstrate the benefits of the CATC in regard to decreasing recidivism among participants.

D. Outcome Four

Finally, the outcome “decreased incidences of delinquent behavior among teen court participants” is not as studied as the previous outcome. Thus, there is data only from one source for this outcome. Again, a comparison to other teen court results will be used to get an idea of how the CATC should perform in the achievement of this goal. In a study of four teen courts with randomized control groups, teen court participants self-reported an average of 1.31 incidents of juvenile delinquency following teen court participating and those from the juvenile court group self-reported 1.16 incidences of delinquent behavior in the 12 months following their adjudication. Teen court participants, on average, had statistically significantly more incidences of delinquency after teen court than the control group. (Stickle et al, 2008)

E. Outcome Five

One additional outcome of the program that is not an outcome as intended by the CATC is the time loss of the volunteers who support the program. The CATC relies heavily on volunteers and the time of these volunteers should be considered as a negative outcome, a sort of cost. Adult volunteers participated as CATC judges, which were typically judges, lawyers, and law students, and courtroom monitors. Youth volunteers served as jurors, bailiffs, prosecutors, and defense attorneys. Some of the youth participated as jurors as part of their sentencing from prior teen court participation. (Louise, Davis, Interview) Figure 3 below shows the hours volunteered by individuals in each of the above mentioned volunteer positions. In addition to the bi-monthly CATC hearings, there are quarterly meetings which are typically attended by an average of 35 youths and 3 adults, all contributing 5 hours per meeting. Combining the volunteer hours from regular hearings with the volunteer hours from quarterly meetings, adults volunteered an average of 1,500 hours and youths volunteered a total of 5,884 hours. (Louise, Davis, Interview)

Figure 3: Volunteer Hours

	Number of Volunteers	Hours Per Session	Sessions Per Year	Hours Per Year
Adult Volunteers				
Judges	6	3	24	432
Monitors	12	3.5	24	1,008
				Total Hours: 1,440
Youth Volunteers				
Attorneys (3)	18	4	24	1,728
Jurors	48	3	24	3,456
				Total Hours: 5,184

Note: Youth Bailiffs often serve as bailiffs and jurors, so the bailiff hours are included in the juror hours.

Source: Davis, Louise, Interview

IV. Monetizing

In order to compare the costs and benefits of the CATC, the outcomes must be monetized. Unfortunately, not all of the outcomes of the CATC are easily monetized with the limited resources of this evaluation. The second outcome “increased respect for and improved opinion of authority,” is an outcome that can only be monetized via a willingness to pay technique, which is not possible here and, unfortunately, no such monetization has been found in other evaluations. Monetization of the remaining outcomes is difficult, but possible here. The majority of monetization of these outcomes will be done via a cost-savings technique, and the final outcome will be monetized using a value of time estimation.

A. Monetizing Outcome One

In order to monetize the outcome “decreased number of juveniles adjudicated in juvenile court receiving a permanent record” can be monetized with a cost savings approach. Here, the juvenile court costs saved from juveniles who were successfully diverted from juvenile court by CATC are used to get a monetary value of this benefit of CATC. A cost evaluation study of juvenile courts and the amount by which these courts reduce crime provided a range of unit costs for one juvenile to be processed in court. The lowest unit costs were that of traditional family court juvenile adjudication while the highest unit costs were that of juvenile drug courts with specialized treatments. An average of the unit costs of each type of juvenile court was taken and is used here as the most likely cost of processing one juvenile in a juvenile court. The unit costs derived and used here is \$9,597 per juvenile. (McCollister et al, 2009) Of course, not all teens who were successfully diverted would have necessarily been referred to DJJ if CATC were not an option. Statistics show that about 90% of offenses are referred to juvenile court programs, 58% for public order offenses such as public drunkenness. (Hockenberry and Puzanchera,2013)

Here, a conservative estimate will be used and only 80% of successful diversions will be counted as costs saved. As stated on page 5, paragraph 2, the CATC successfully diverted 322 teens in FY 2012-2013, 258 of which would have been referred to juvenile court programs, for a cost savings of \$2,472,167 (\$9,597 times 80% of 322). In FY 2013-2014, CATC successfully diverted 389 juveniles, 311 of which would have been referred to juvenile court programs, for a total cost savings of \$2,986,586. Finally, in FY 2014-2015 CATC successfully diverted 306 youths, 255 of which would have been referred to juvenile court programs, for a cost savings of \$2,447,235.

B. Monetizing Outcome Three

The third outcome, “decreased rate of recidivism,” is also monetized using a cost savings approach. Recidivism’s major costs include juvenile court costs, cost of crime, and detention costs. Most teen court evaluations that study recidivism are limited to the 12 months following teen court completion, so the monetary benefits of the CATC in this evaluation will only reflect 1 year of cost savings. (Stickle et al, 2008) (Forgays and DeMilio, 2005) (Weisz, Lott, and Thai, 2002) (Bright et al, 2014) For this outcome, the same figure of \$9,597 for unit cost of juvenile court will be used since a vast majority of offenders who recidivate will return to juvenile court because the recidivism captured in the data occurs within 12 months. (McCollister et al, 2009) It is important to note that there is no overlap or double counting of court costs saved between this outcome and the “reduced participation in juvenile court” outcome since the “reduced participation in juvenile court” outcome covers court costs saved in the first offense while this outcome encompasses court costs saved from the second offense. The cost of crime will not be counted in this section as it is counted in a different outcome, the “reduced delinquency” outcome. This is done to avoid double counting of benefits. As for the cost of detention, there

are several factors in determining the costs saved from detention. The average daily cost of youth detention is \$258 and the most common duration of detention is around 3 months. The average length of detention is seven months, but this would not be a good representation of the typical detention since the average is affected by multi-year sentences that are outliers. (Justice Policy Institute, 2009) (Winokur, Cass, Blankenship, 2002) Additionally, only 20% of juvenile court participants are subjected to detention. (Key Facts: Youth in the Justice System, 2012) To monetize recidivism, the difference between the average recidivism rates of each comparison group was applied to the number of CATC clients who completed the program. This number was multiplied by court costs estimate to yield the court cost savings. Then, 20% of those who did not recidivate had detention costs applied to them to yield the cost savings of detention. So, as found on page 9, paragraph 1, the teen court group had a recidivism rate 6.3 percentage points lower than the juvenile court group. (Weisz, Lott, and Thai, 2002) (Stickle et al, 2008) (Forgays and DeMilio, 2005) This rate 6.3% is applied to the number of successful CATC completers yielding 20 less youth recidivating in FY 2012-2013, 24 less youth recidivating in FY 2013-2014, and 19 less youth recidivating in FY 2014-2015. Court costs saved from decreased recidivism equate to \$191,940 in FY 2012-2013, \$230,328 in FY 2013-2014, and \$181,013 in FY 2013-2014. Next, 20% of less youths recidivating in each year, 4 in FY 2012-2013, 5 in FY 2013-2014, and 4 in FY 2014-2015, was multiplied by the average daily cost of detention for a 3 month period, \$23,220. This yielded detention costs saved worth \$92,880 in FY 2012-2013, \$116,100 in FY 2013-2014, and \$92,880 in FY 2014-2015. This was then added to the saved court costs as demonstrated in figure 4 below to get the total costs saved from youth not recidivating.

Figure 4: Total Costs Saved From Lower Recidivism Rates

	FY 2012-2013	FY 2013-2014	FY 2014-2015
Court Costs	\$191,940	\$230,328	\$181,013
Detention Cost	\$92,880	\$116,100	\$92,880
Total Costs Saved	\$284,820	\$346,428	\$273,893

C. Monetizing Outcome Four

Monetizing the outcome “decreased incidences of delinquent behavior among teen court participants” is done by calculating the costs saved from delinquent behavior that is not occur. A study is used which calculates the costs of crimes based on data collected from law enforcement and criminal justice agencies. (McCollister et al, 2009) An average of the costs of various crimes ranging from vandalism to aggravated assault was taken to get an estimated cost of a single incidence of delinquent behavior. In calculating the average, more weight was given to those crimes which are most commonly committed by juveniles such as vandalism and simple assault. The resulting average, \$7,228, can be used as a unit cost of crime. (McCollister et al, 2009) On page nine, paragraph two, it was stated that a teen court group had, on average, 1.31 incidences of crime and the juvenile court group had an average of 1.16 incidences of delinquent behavior. (Stickle et al, 2008) So, using the unit cost derived above, it can be said that the teen court group had average crime cost of \$9,469 while the control group had an average crime cost of \$8,384. (McCollister et al, 2009) Thus, instead of saving costs and producing a benefit, teen courts produce a negative outcome of \$354,172 in FY 2012-2013, \$419,224 in FY 2013-2014, and \$390,312 in FY 2014-2015.

D. Monetizing Outcome Five

While the volunteer time put into the CATC is not a cost of the program it is to be considered a negative outcome for the purposes of this analysis. The effect of it being a negative outcome is the same as it would be were volunteer hours considered a cost. For youth volunteers, an hour's worth of volunteer time is valued at the minimum wage of \$7.25 per hour. The time of adult volunteers was valued at the average hourly earnings in Wake County of \$28.65 per hour. (indeed.com, 2016) These numbers are based on the probable earning capacity of the volunteers had they used their volunteer time for employment. When multiplying total hours volunteered in Figure 3 by the respective hourly rate, it is determined that youth volunteer hours have a value of \$37,584 and adult volunteers have a volunteer value of \$41,256. (Davis, Louise, Interview) When combining these figures and the quarterly volunteer hours there is a total volunteer value of \$-92,510 per year. This is notated as a negative number since it is a negative benefit.

V. Discounting Benefits

A Cost and Benefit Comparison

Now that most of the benefits have been monetized, the total costs and monetary value of benefits can be calculated. Again, the "education on juvenile justice" will be left out of this section as it was unable to be monetized. The total costs were as follows: \$245,798 in FY 2012-2013, \$251,229 in FY 2013-2014, and \$250,098 in FY 2014-2015. The total benefits for each year are as follows: \$2,663,392 in FY 2012-2013, \$3,239,419 in FY 2013-2014, and \$2,627,533 in FY 2014-2015. The calculation of the benefits total is in figure 5. The next benefit of the CATC for each year are as follows: \$2,417,594 in FY 2012-2013, \$2,988,190 in FY 2013-2014, and \$2,377,435 in FY 2014-2015. Since many of the benefits of the CATC are immediate and

the long-term benefits are supported by data that extends only 12 months, there is no need to discount the benefits for each year.

Figure 5: Total Benefits of CATC

	FY 2012-2013	FY 2013-2014	FY 2014-2015
Outcome 1	\$2,472,167	\$2,986,586	\$2,447,235
Outcome 3	\$284,820	\$346,428	\$273,893
Outcome 4	-\$354,172	-\$419,224	-\$390,312
Outcome 5	-\$92,510	-\$92,510	-\$92,510
TOTAL	\$2,310,305	\$2,821,280	\$2,238,306

B. Recommendation

Now that costs and benefits have been compared, a recommendation can be made regarding whether or not to continue the Capital Area Teen Court Program. When comparing the benefits of the CATC compared with the benefits of traditional juvenile court programs, it is evidenced in this analysis that the CATC yielded additional net benefits in the 2012-2015 period valued at well over \$2 million per year. Additionally, the CATC yields benefits that were not able to be included in the monetary figures. Thus, it is recommended that the CATC program be continued as is.

VI. Sensitivity Analysis

In order to ensure that the recommendation above is, in fact, a sound recommendation, a sensitivity analysis must be completed. Here, the most optimistic data and the most pessimistic data will be used to see if the recommendation remains the same in the best and worst of circumstances. The variables that will be subjected to sensitive analysis in this evaluation include: (1) unit cost of court, (2) unit cost of crime, (3) unit cost of detention, (4) value of adult volunteer time, (5) duration of detention, and (6) most importantly, recidivism rates. Figure 6

has the most optimistic estimates, pessimistic estimates, and most likely estimates of each of these variables. The most likely estimate was the estimate used to make the recommendation above. In most variables, the optimistic and pessimistic estimates were taken from the same sources which gave the most likely estimate. For example, the optimistic and pessimistic estimates of recidivism were taken from the most favorable and least favorable studies from the same group of studies used to obtain the most likely recidivism rate. (Weisz, Lott, and Thai, 2002) (Stickle et al, 2008) (Forgays and DeMilio, 2005) The optimistic and pessimistic cost of court estimates were made using the cost of the most expensive and least expensive court in the range of courts used to calculate a most likely court cost. (Hockenberry and Puzanchera, 2013) Again, the optimistic and pessimistic estimates of detention duration were made using the average detention length as the longest length of detention and the shortest duration estimate was first 1/6th of the most popular duration group, 0-3 months. These were taken from the same data used to obtain the 3-month most likely duration estimate. (Winokur, Cass, Blankenship, 2002) Optimistic and pessimistic detention costs were obtained in the same way with the least expensive detention cost as the pessimistic and the most expensive detention cost as the optimistic estimate. (Justice Policy Institute, 2009) The value of adult volunteer time took an optimistic value using the minimum wage as the lowest value of adult volunteer time. The average of an attorney in Wake County was used to estimate the pessimistic value of time since attorney's make up a large proportion of adult volunteers. (Davis, Louies, Interview) (indeed.com) Finally, the pessimistic value of crime was derived using the value of the least costly crime, vandalism. The optimistic value of crime was derived from the average costs of crime taken from a separate study which included the nontangible costs of crime. (Petteruti,

Schindler, and Ziedenberg, 2016) The results of the sensitivity analysis for each outcome are listed in Figure 7.

The CATC does not survive a sensitivity analysis of optimistic and pessimistic circumstances. Given optimistic variables, the CATC had a net benefit of \$4,351,923 in FY 2012-2013, \$5,336,112 in FY 2013-2014, and \$4,272,739 in FY 2014-2015. However, given pessimistic situations, the CATC had a net cost of \$714,777 in FY 2012-2013, \$768,848 in FY 2013-2014, and \$850,203 in FY 2014-2015. This sensitivity analysis is not robust and it can be concluded that the recommendation to continue CATC does not make sense in pessimistic circumstances. In pessimistic circumstances the CATC has no net benefits, at least no net benefits that are monetizable. In order to make this a robust analysis, the CATC would need to reduce costs in volunteer time or improve CATC's performance in regard to outcomes. This would include improvements such as diverting more teens, decreasing recidivism rates compared to juvenile court, and decreasing the rate of delinquent behavior.

Figure 6: Optimistic, Pessimistic, and Most Likely Estimates

	Optimistic	Most Likely	Pessimistic
Recidivism Rates	-16%	-6.3%	8%
Cost of Court	\$12,994	\$9,597	\$3,718
Cost of Detention	\$726	\$258	\$24.44
Cost of Crime	\$616	\$7,228	\$24,738
Adult Volunteer Value	\$7.25	\$28.65	\$38
Length of Detention	210 Days	90 Days	30 Days

Sources: Winokur, Cass, Blankenship, 2002; McCollister et al, 2009; Forgays and DeMilio, 2005; Stickle et al, 2008; Weisz, Lott, and Thai, 2002; Davis, Louise, Interview

Figure 7: Results of Sensitivity Analysis

Optimistic	FY 2012-2013	FY 2013-2014	FY 2014-2015
Outcome 1	3,352,452	4,041,134	3,313,470

Optimistic	FY 2012-2013	FY 2013-2014	FY 2014-2015
Outcome 3	\$1,272,534	\$1,567,928	\$1,233,552
Outcome 4	\$30,184.00	\$35,728.00	\$33,264.00
Outcome 5	-\$57,449	-\$57,449	-\$57,449
TOTAL	\$4,597,721	\$5,587,341	\$4,522,837
Pessimistic	FY 2012-2013	FY 2013-2014	FY 2014-2015
Outcome 1	959,244	1,156,298	948,090
Outcome 3	-95,882	-118,924	-92,164
Outcome 4	-\$1,212,162.00	-\$1,434,804.00	-\$1,335,852.00
Outcome 5	-\$120,179.00	-\$120,179.00	-\$120,179.00
TOTAL	-\$468,979	-\$517,609	-\$600,105

VII. Discussion and Conclusion

The data on the effectiveness of teen courts is conflicting. These variations in data have important implications for this evaluation of the Capital Area Teen Court. In circumstances using most likely estimates of a multitude of variables, the CATC manages to produce a net benefit of over \$2 million in each of the three years covered in this evaluation. This is remarkable given the conflicting data mentioned. However, the conflicting data on effectiveness takes effect when evaluating the CATC under pessimistic situations. It is recommended that the CATC be continued as it will most likely continue to provide net benefits to the community. Even under the pessimistic circumstances, the net costs of the CATC is low, less than \$1 million each year covered in this evaluation., but the CATC's effectiveness compared to juvenile courts as evidenced by other evaluations is not enough to produce large marginal benefits. It would be interesting to see how monetization of outcome 2 would have affected the analysis, though the data doesn't favor teen courts. Unfortunately, such benefits as those included in outcome two

cannot be monetized in this evaluation because the resources to do such a thing are not available here. To monetize such benefits would require the ability to survey a good number of individuals who have a stake in CATC to see how they value the improved opinions of authority and the justice system. This would be utilizing a “willingness to pay” monetization technique. Perhaps if these outcomes were able to be monetized here, and if more concrete data showing the benefits of teen courts over juvenile courts can be gathered, the sensitivity analysis here would have been robust and more favorable to CATC. Interestingly, some of these articles suggest that teen courts are least effective because of their primary appeal, the youth jury. Some say the youth jury is even more intimidating and can have negative effects on youth. One final interesting note, outcomes such as crime rates that are self-reported may be affected by a third variable. For example, it may be that those who participated in teen court were more open about their delinquent behaviors than juvenile court counterparts. This would drive up the reported delinquency rate among the teen court groups. To conclude, though the sensitivity analysis was not robust, given the benefits that are monetizable the CATC is a cost effective program that should remain in operation.

References

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