

## Drug court Juvenile Justice

Benefit-cost estimates updated December 2019. Literature review updated July 2019.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our [Technical Documentation](#).

**Program Description:** In the criminal justice system, problem-solving courts incorporate a therapeutic ideology to address a specific problem outside the traditional adversarial court. Drug courts are problem-solving courts for youth whose substance-abuse issues underlie criminal behavior. Youth typically enter into a contract with the drug court and agree to comply with treatment and supervision requirements. While each drug court is unique in its operations and eligibility criteria, these courts share similar programmatic characteristics. Drug courts typically involve a team of stakeholders (e.g., youth, guardian, judge, treatment provider, case manager, and probation officer). Components of the drug court model may include drug treatment; judicial monitoring; random drug testing; incentives, rewards, and sanctions; and progressive stages (e.g., less monitoring with compliance). Drug courts can be pre- or post-adjudication models and the length of the program may vary from 6 to 18 months.

In this analysis, drug court youth were diverted from the traditional court and instead were adjudicated in drug court. Youth in the comparison group were adjudicated in traditional juvenile court and received probation and treatment as usual services. Participants spent an average of seven months in drug court with a range of 6 to 16 months. Although risk level was not reported in the majority of studies, nearly all studies report that youth had some degree of prior involvement with the justice system. Among included studies that report demographics, 31% of participants were youth of color and 25% were female.

### Benefit-Cost Summary Statistics Per Participant

#### Benefits to:

Taxpayers	\$731	Benefit to cost ratio	\$53.66
Participants	\$163	Benefits minus costs	\$2,761
Others	\$1,621	Chance the program will produce	
Indirect	\$299	benefits greater than the costs	67 %
<b>Total benefits</b>	<b>\$2,813</b>		
<b>Net program cost</b>	<b>(\$52)</b>		
<b>Benefits minus cost</b>	<b>\$2,761</b>		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2018). The chance the benefits exceed the costs are derived from a Monte Carlo risk analysis. The details on this, as well as the economic discount rates and other relevant parameters are described in our [Technical Documentation](#).

## Meta-Analysis of Program Effects

Outcomes measured	Treatment age	No. of effect sizes	Treatment N	Adjusted effect sizes and standard errors used in the benefit-cost analysis						Unadjusted effect size (random effects model)	
				First time ES is estimated			Second time ES is estimated			ES	p-value
				ES	SE	Age	ES	SE	Age		
Alcohol use disorder <sup>^^</sup>	16	1	31	-0.079	0.250	16	n/a	n/a	n/a	-0.079	0.751
Cannabis use disorder <sup>^^</sup>	16	1	31	-0.144	0.250	16	n/a	n/a	n/a	-0.144	0.564
Crime	16	14	2784	-0.036	0.082	17	-0.036	0.082	25	-0.036	0.662
Drug-related offense <sup>^</sup>	16	3	759	0.061	0.334	17	n/a	n/a	n/a	0.061	0.856
Problem alcohol use <sup>^^</sup>	16	1	31	-0.015	0.250	16	n/a	n/a	n/a	-0.015	0.951

<sup>^</sup>WSIPP's benefit-cost model does not monetize this outcome.

<sup>^^</sup>WSIPP does not include this outcome when conducting benefit-cost analysis for this program.

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our [Technical Documentation](#).

## Detailed Monetary Benefit Estimates Per Participant

Affected outcome:	Resulting benefits: <sup>1</sup>	Benefits accrue to:				
		Taxpayers	Participants	Others <sup>2</sup>	Indirect <sup>3</sup>	Total
Crime	Criminal justice system	\$668	\$0	\$1,523	\$334	\$2,525
Crime	Labor market earnings associated with high school graduation	\$81	\$191	\$106	\$0	\$378
Crime	Costs of higher education	(\$18)	(\$27)	(\$8)	(\$9)	(\$63)
Program cost	Adjustment for deadweight cost of program	\$0	\$0	\$0	(\$26)	(\$26)
<b>Totals</b>		<b>\$731</b>	<b>\$163</b>	<b>\$1,621</b>	<b>\$299</b>	<b>\$2,813</b>

<sup>1</sup>In addition to the outcomes measured in the meta-analysis table, WSIPP measures benefits and costs estimated from other outcomes associated with those reported in the evaluation literature. For example, empirical research demonstrates that high school graduation leads to reduced crime. These associated measures provide a more complete picture of the detailed costs and benefits of the program.

<sup>2</sup>"Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance.

<sup>3</sup>"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

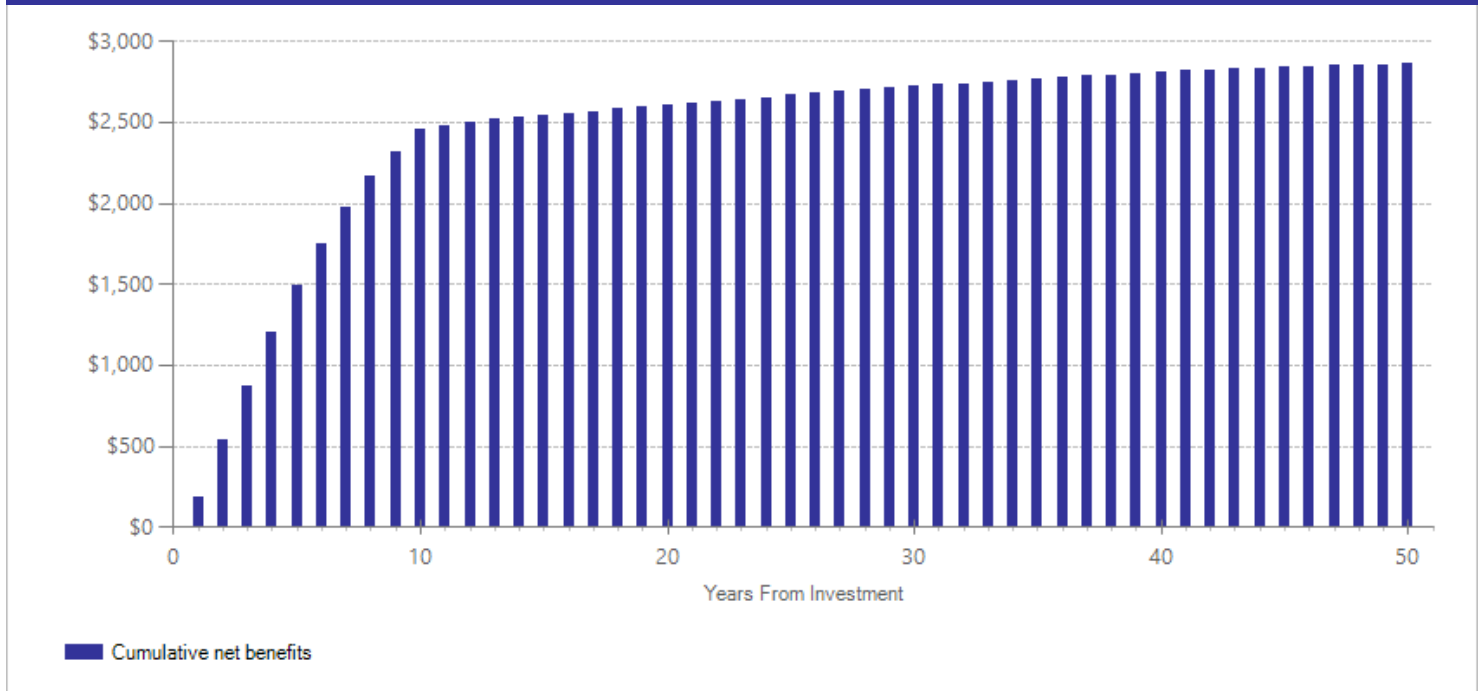
## Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	\$6,611	2004	Present value of net program costs (in 2018 dollars)	(\$52)
Comparison costs	\$6,571	2004	Cost range (+ or -)	20 %

The per-participant costs are from Anspach, D.F., Ferguson, A.S., & Phillips, L.L. (2003). Evaluation of Maine's statewide juvenile drug treatment court program. Augusta, ME: University of Southern Maine. We calculated the cost of drug court compared to traditional adjudication using operating costs, treatment costs, detention costs, and new probationary costs from Table 24 (expected capacity). This annualized per-participant cost estimate was prorated to 7 months of service, the average length of stay in drug court for the studies included in the meta-analysis.

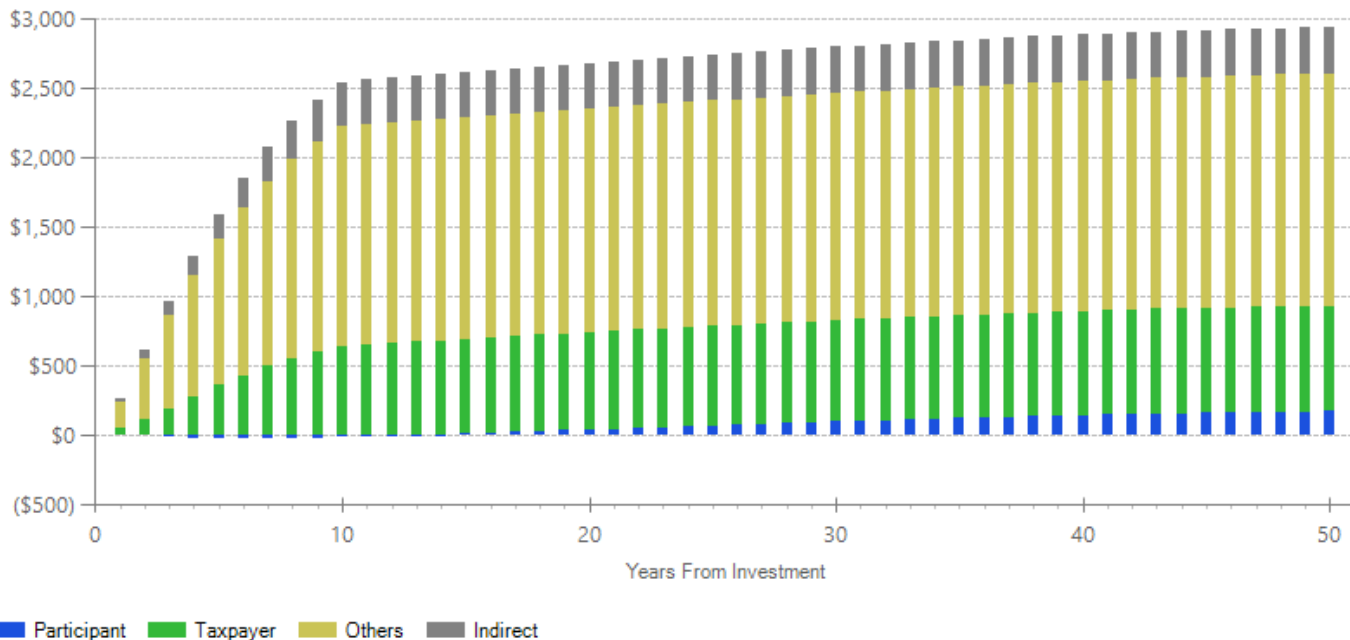
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty in the cost estimate; more detail can be found in our [Technical Documentation](#).

## Benefits Minus Costs Over Time (Cumulative Discounted Dollars)



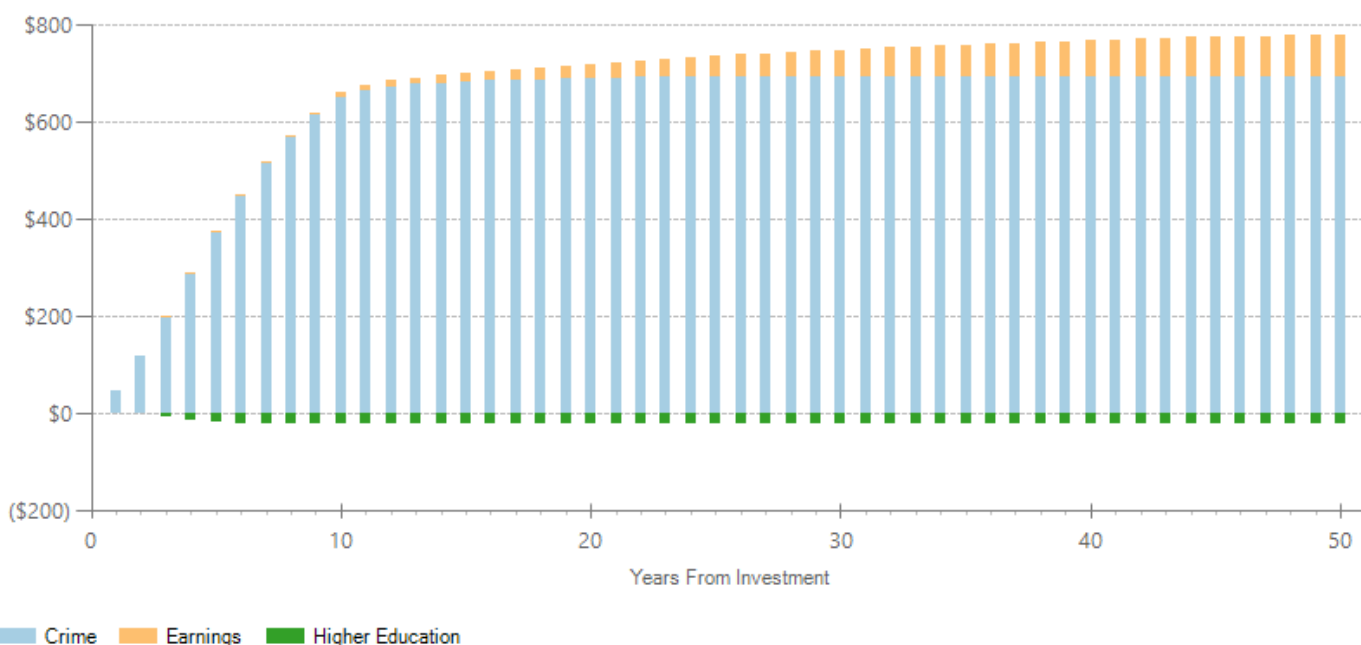
The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below \$0 line), the cumulative benefits do not outweigh the cost of the program up to that point in time. The program breaks even when the dollars reach \$0. At this point, the total benefits to participants, taxpayers, and others, are equal to the cost of the program. If the dollars are above \$0, the benefits of the program exceed the initial investment.

## Benefits by Perspective Over Time (Cumulative Discounted Dollars)



The graph above illustrates the breakdown of the estimated cumulative benefits (not including program costs) per-participant for the first fifty years beyond the initial investment in the program. These cash flows provide a breakdown of the classification of dollars over time into four perspectives: taxpayer, participant, others, and indirect. "Taxpayers" includes expected savings to government and expected increases in tax revenue. "Participants" includes expected increases in earnings and expenditures for items such as health care and college tuition. "Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance. "Indirect benefits" includes estimates of the changes in the value of a statistical life and changes in the deadweight costs of taxation. If a section of the bar is below the \$0 line, the program is creating a negative benefit, meaning a loss of value from that perspective.

## Taxpayer Benefits by Source of Value Over Time (Cumulative Discounted Dollars)



The graph above focuses on the subset of estimated cumulative benefits that accrue to taxpayers. The cash flows are divided into the source of the value.

## Citations Used in the Meta-Analysis

- Byrnes, E.C., & Hickert, A.O. (2004). *Process and outcome evaluation of the third district juvenile drug court in Dona Ana County, New Mexico*. Annapolis, MD: Glacier Consulting.
- Carey, S.M. (2004). *Clackamas County Juvenile Drug Court outcome evaluation: Final report*. Portland, OR: NPC Research.
- Cook, M.D., Watson, L., & Stageberg, P. (2009). *Statewide process and comparative outcomes study of 2003 Iowa adult and juvenile drug courts*. Des Moines, IA: Iowa Department of Human Rights.
- Crompton, D., Carey, S.m., Mackin, J.R., Finigan, M.W., Pukstas, K., Weller, J.M., Linhares, R., & Brekhus, J. (2006). *Harford County juvenile drug court performance evaluation: Program, process, outcome and cost analysis*. Portland, OR: NPC Research.
- Henggeler, S.W., Halliday-Boykins, C.A., Cunningham, P.B., Randall, J., Shapiro, S.B, & Chapman, J.E. (2006). Juvenile drug court: Enhancing outcomes by integrating evidence-based treatments. *Journal of Consulting and Clinical Psychology, 74*(1), 42-54.
- Hickert, A.O., Becker, E., Próspero, M., & Moleni, K. (2011). Impact of juvenile drug courts on drug use and criminal behavior. *Journal of Juvenile Justice, 1*(1), 60-77.
- Kralstein, D. (2008) *Evaluation of the Suffolk County Juvenile Treatment Court: Process and impact findings*. New York NY: Center for Court Innovation.
- Latessa, E.J., Shaffer, D.K., & Lowenkamp C. (2002). *Outcome evaluation of Ohio's drug court efforts: Final report*. Cincinnati, OH: University of Cincinnati, Center for Criminal Justice Research, Division of Criminal Justice.
- LeGrice, L.N. (2004). Effectiveness of juvenile drug court on reducing delinquency. *Dissertation Abstracts International, 64*(12), 4626A.
- O'Connell, J.P., Nestlerode, E., & Miller, M.L. (1999). *Evaluation of the Delaware juvenile drug court diversion program*. Dover: State of Delaware Executive Department, Statistical Analysis Center.
- Organizational Research Services (ORS). (2007). *King County Juvenile Drug Court Program: Program evaluation*. Seattle, WA: Organizational Research Services.
- Parsons, B.V., Byrnes, E.C. (n.d.). *Byrne evaluation partnership program: Final report*. Salt Lake City: University of Utah, Social Research Institute.
- Picard-Fritsche, S., & Kralstein, D. (2012). *The Nassau juvenile treatment court: Program outcomes and impact evaluation*. New York, NY: Center for Court Innovation.
- Sullivan, C.J., Blair, L., Latessa, E., & Sullivan, C.C. (2014). Juvenile drug courts and recidivism: Results from a multisite outcome study. *Justice Quarterly*, online publication doi: 10.1080/07418825.2014.908937.

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