



User Guide for the Criminal Justice Cost-Benefit Model

I. Introduction

This guide will help users populate the Criminal Justice Cost-Benefit Model. The model was designed to allow users to estimate the value of programs in their jurisdiction that are designed to reduce recidivism.¹ The model measures costs and outcomes in the same way, which allows for the comparison of different criminal justice policy programs. Users may compare the impacts of up to 10 programs at a time in the *Program* table.²

Cost-benefit analysis (CBA) is an analytical method that compares various policy alternatives and allows users to determine which program generates the highest net benefit to taxpayers and society over time. CBA is a systematic approach to determining the efficiency of alternative policies and programs by comparing the total expected costs of each to the total expected benefits. For more information on cost-benefit analysis and methods, please see [Cost-Benefit Methodology](#).

Exhibit 1. Screenshot of Criminal Justice Cost-Benefit Model: Inputs Tab

The screenshot shows the 'Inputs' tab of the Criminal Justice Cost-Benefit Model. It is divided into several sections:

- Enter Programs and Justice System Costs:** A table with columns for Program Name, Cost, Year of Dollars, ES, SE/CI, and Local Evaluation. Programs listed include Day Reporting Cei, Graduated Sanctic, CBT, DV Duluth, Intensive Outpatie, Drug Court, Employment Train, RNR Supervision, Sex Offender Treat, and Therapeutic Comn.
- Justice Costs:** A table with columns for Felony, Misdemeanor, Year of Dollars, and % Local. Rows include Arrest, Conviction, Jail, Probation, Prison, and Parole/PPS.
- Enter Justice System Usage:** Two tables. The first shows 'Criminal Justice System Use' with percentages for Jail Only, Probation Only, Jail and Probation, Prison, Other, and Supervision Post Prison for Felony and Misd. The second shows 'Length of Stay (Months)' for Jail Sentence, Jail Prior to Prison Sentence, Probation, Prison, and Supervision Post Prison for Felony and Misd.
- Choose a Recidivism Cohort:** A dropdown menu set to 'National Recidivism' and a table for 'Local Recid' with columns for Local Recid and Local Recid. Rows 1-10 show values for Local Recid and Local Recid.
- Jurisdictional Felonies:** A table with columns for Felony and Number of Felonies. Rows include Murder, Sex, Robbery, Assault, Burglary, MV Theft, Theft, Drug, and Other.
- % of Convictions-Felonies:** A table with columns for % of Convictions-Felonies and % of Convictions-Felonies. Rows show 40% and 33%.
- Total Recidivating Events:** A table with columns for Total Recidivating Events and Total Recidivating Events. Rows 1-10 show values for Total Recidivating Events and Total Recidivating Events.
- Adjust National Recid Rate:** A dropdown menu set to '0%'.

¹ Benefits from reduced recidivism are based on taxpayer savings from reduced criminal justice resource usage and avoided victimizations.

² The model works in most web browsers but for optimal layout and performance it is recommended to use Google Chrome.

The model includes six important links at the top right of the screen on each tab:

- *Instructions*- links to the User Guide.
- *Methodology*- links to Cost-Benefit Methodology document.
- *Print screen*- allows users to print the information on the Program Results, Summary, and Inputs screens.
- *Save scenario*- allows users to save different versions of the model. To save a version, users should click on the “Save Scenario” button, then click “Save” and name the scenario. Historical versions may be accessed by clicking “Save Scenario”, then clicking “Load” and selecting the name of the desired scenario from the list.
- *Download results*- allows users to download the model results in an Excel workbook.
- *Download inputs*- allows users to download their jurisdiction-specific input parameters in an Excel workbook.

Exhibit 2. Screenshot of Model Links

Criminal Justice Cost-Benefit Model
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Program Results Summary Inputs

Show Sensitivity Analysis and Advanced Options

Program	Recidivism Reducti	Program Cost	Taxpayer Be	Crime Victim Be	Total Benefits	NPV Benefit	Benefit to Cost Rati
Day Reporting Center	-25%	\$3,996	\$5,521	\$3,017	\$8,538	\$4,541	\$2.14
Graduated Sanctions	-19%	\$5,229	\$4,223	\$2,308	\$6,531	\$1,302	\$1.25
CBT	-11%	\$434	\$2,459	\$1,344	\$3,802	\$3,369	\$8.77
DV Duluth	7%	\$1,437	\$(1,673)	\$(914)	\$(2,588)	\$(4,025)	\$(1.80)
Intensive Outpatient Drug Treatm	-2%	\$1,043	\$461	\$252	\$712	\$(331)	\$0.68
Drug Court	-21%	\$6,379	\$4,612	\$2,520	\$7,133	\$753	\$1.12
Employment Training	-7%	\$125	\$1,472	\$804	\$2,276	\$2,151	\$18.21
RNR Supervision	-20%	\$5,130	\$4,400	\$2,405	\$6,805	\$1,675	\$1.33
Sex Offender Treatment	-17%	\$1,663	\$3,723	\$2,035	\$5,758	\$4,095	\$3.46

Each avoided recidivist generates \$62,338 in total \$40,310 are benefits to taxpayers. \$22,028 are benefits to avoided crime victims.

The model includes three tabs:

Program Results: The Program Results tab displays the following information for each program entered on the Inputs tab:

- The expected crime reduction, cost, benefits (taxpayers and crime victims), and the benefit to cost ratio are displayed in the top table; and
- Users may graphically display the expected effects of the program in a number of different ways, including: recidivism impact, cash flow (how benefits accrue over the years following the intervention and benefit disaggregated by perspective); and benefits disaggregated by criminal justice resource area.
- This tab also displays the total benefits of avoiding a recidivist and disaggregates the total by taxpayer and avoided crime victim benefits.

Summary: The Summary tab graphically illustrates the benefit to cost ratio by program and breaks down the benefits of each program by taxpayer and crime victim perspectives.

This tab also displays the jurisdictional cost of felony and misdemeanor offenders by criminal justice resource.

Inputs: The Inputs tab requires users to enter jurisdiction-specific information on programs and justice systems costs, justice system usage, and recidivism patterns.

The remainder of this guide will discuss the information needed to populate the model and the results produced by the model, beginning with the Inputs tab.

II. Inputs Tab

The Inputs tab is divided into three sections: *Program Information and Justice System Costs*, *Justice System Usage*, and *Recidivism*. Users will need to calculate and enter jurisdiction-specific information for all applicable fields.

The remainder of this section discusses the parameters needed to populate the Inputs tab. Note that users may enter data by double clicking on the cell, deleting the existing value, typing in the new value, and pressing Enter to save the updated information.

Exhibit 3. Screenshot of Inputs Tab

mw consulting Criminal Justice Cost-Benefit Model
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Instructions | Print Screen | Download Results
 Methodology | Save Scenario | Download Inputs

Program Resu... | Summ... | **Inputs**

Enter Programs and Justice System Costs

Program Name	Cost	Year of Dollars	ES	SE/CI	Local Evaluation
Day Reporting Cei	\$3,500	2007	-0.316	0.171	
Graduated Sanctic	\$4,968	2011	-0.237	0.078	
CBT	\$412	2011	-0.134	0.038	
DV Duluth	\$1,365	2011	-0.094	0.124	
Intensive Outpatie	\$1,043	2014	-0.025	0.093	
Drug Court	\$4,959	2003	-0.254	0.036	
Employment Train	\$125	2014	-0.031	0.032	
RNR Supervision	\$4,976	2012	-0.242	0.044	
Sex Offender Trea	\$1,613	2012	-0.204	0.151	
Therapeutic Comn	\$1,557	2014	-0.182	0.042	

Justice Costs	Felony	Misdemeanor	Year of Dollars	% Local
Arrest	\$750	\$750	2012	85%
Conviction	\$4,000	\$1,000	2014	50%
Jail	\$20,000	\$20,000	2012	100%
Probation	\$1,000	\$1,000	2012	50%
Prison	\$15,000	\$15,000	2012	0%
Parole/PPS	\$2,500	\$2,500	2014	0%

Enter Justice System Usage

Criminal Justice System Use	Felony	Misd
% Jail Only	10.0%	25.0%
% Probation Only	20.0%	25.0%
% Jail and Probation	25.0%	30.0%
% Prison	40.0%	0.0%
% Other	5.0%	20.0%
% Supervision Post Prison	75.0%	88.0%

Length of Stay (Months)	Felony	Misd
Jail Sentence	6.0	3.0
Jail Prior to Prison Sentence	3.0	0.0
Probation	36.0	18.0
Prison	42.0	0.0
Supervision Post Prison	22.0	0.0

Jurisdictional Felonies	Number of Felonies
Murder	30
Sex	150
Robbery	125
Assault	500
Burglary	250
MV Theft	500
Theft	750
Drug	1,500
Other	1,000

Choose a Recidivism Cohort

National Recidivism

	Local Recid	Local Recid
1	150	100
2	100	80
3	75	70
4	50	50
5	25	30
6	20	25
7	15	20
8	10	15
9	10	10
10	5	5
No	400	500

% of Convictions-Felonies
 40% 33%

Total Recidivating Events

	Local Recid	Local Recid
1	250	200
2	200	150
3	150	100
4	150	80
5	110	70
6	70	50
7	50	25
8	40	20
9	30	15
10	20	10

Adjust National Recid Rate
 0%

Enter Programs and Justice System Costs

Program Information

There are six pieces of information users should enter for their jurisdictions programs.

Exhibit 4. Screenshot of Program Information Table



Program Name	Cost	Year of Dollars	ES	SE/CI	Local Evaluation
Day Reporting Ce	\$3,500	2007	-0.306	0.171	<input type="checkbox"/>
Graduated Sancti	\$4,968	2011	-0.232	0.078	<input type="checkbox"/>
CBT	\$412	2011	-0.134	0.038	<input type="checkbox"/>
DV Duluth	\$1,365	2011	0.091	0.124	<input type="checkbox"/>
Intensive Outpat	\$1,043	2014	-0.025	0.093	<input type="checkbox"/>
Drug Court	\$4,959	2003	-0.254	0.026	<input type="checkbox"/>
Employment Trai	\$125	2014	-0.08	0.032	<input type="checkbox"/>
RNR Supervision	\$4,976	2012	-0.242	0.044	<input type="checkbox"/>
Sex Offender Trei	\$1,613	2012	-0.204	0.151	<input type="checkbox"/>
Therapeutic Com	\$1,557	2014	-0.152	0.042	<input type="checkbox"/>

Program Name

Users may enter the name of up to 10 programs to run in the cost-benefit model. The user should only enter programs that have been rigorously evaluated (in terms of their impact on recidivism) within their jurisdiction or that have been meta-analyzed by the Washington State Institute for Public Policy (WSIPP).

Cost

Users must enter the cost of each program. For programs currently operating in a jurisdiction, program costs should generally include the direct expense of providing treatment to a small number of additional clients (referred to as the marginal or incremental cost). The cost for programs that are currently being operated should be based on all participants admitted, rather than only those who successfully complete the program.

If the jurisdiction does not currently provide the program (but is considering implementing it for example), users can estimate the average cost, which would include administrative and start-up costs.

Year of Dollars

Enter the year of the cost estimate for the program. The model uses this information to adjust for inflation.

Effect Sizes (ES)

Effect sizes provide an estimate of how effective a program is at achieving its intended outcome. Effect sizes can provide an indication of how effective a given program is at reducing recidivism by comparing the difference in recidivism outcomes between treatment and control groups from program evaluations.

If a jurisdiction has performed a local evaluation that uses a rigorous research design and controls for selection bias, users should enter the estimated percent change in recidivism in this field.³

In the absence of a jurisdiction-specific evaluation, users should match their jurisdiction's programs to those that have been analyzed by WSIPP (a list of programs along with a description of the program and a summary of findings from the meta-analysis, are available at: <http://www.wsipp.wa.gov/BenefitCost?topicId=2>).

If using WSIPP's effect sizes, users should:

- Match their programs to WSIPP's program descriptions to ensure that their jurisdictional programs target the same population (e.g. the program is provided to a similar population such as offenders in an institution versus community-based offenders) and have similar duration and frequency requirements.
- Once the user has confirmed that the programs align, they should enter the program's effect size into the model. Users should enter the first adjusted effect size into the model for each program.

The ES will turn green if the program reduces recidivism and red if the ES indicates it increases recidivism.

Standard Error/Confidence Interval (SE/CI)

Users must enter the standard error or the 95% confidence interval under the SE/CI column. If using WSIPP's meta-analysis, users should enter the first adjusted standard error. If using a local evaluation, users should enter the 95% confidence interval from the study.

Local Evaluation

If using information from a local evaluation, users must check the box "Local Evaluation".

³ For more information on research designs and effect sizes, see [Cost-Benefit Methodology](#).

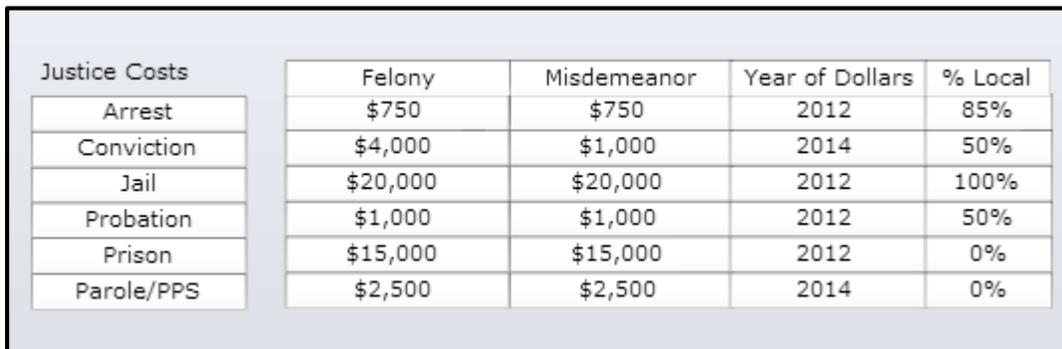
Justice System Costs

Users must enter cost data, broken out by misdemeanor and felony crime categories (if data is available to distinguish between the two), for each area of the criminal justice system. Similar to program costs, users will want to estimate the marginal cost of each resource.

The cost of an arrest and conviction should be per event; whereas jail, probation, prison, and parole costs should be annual.

Users must enter the budget year that the cost was estimated for to allow the model to adjust for inflation. If the user wishes to view benefits by taxpayer type, the percent of each resource cost paid by local taxes must also be entered.

Exhibit 5. Screenshot of Justice System Costs Table



Justice Costs	Felony	Misdemeanor	Year of Dollars	% Local
Arrest	\$750	\$750	2012	85%
Conviction	\$4,000	\$1,000	2014	50%
Jail	\$20,000	\$20,000	2012	100%
Probation	\$1,000	\$1,000	2012	50%
Prison	\$15,000	\$15,000	2012	0%
Parole/PPS	\$2,500	\$2,500	2014	0%

Enter Justice System Usage

Users must enter information about criminal justice system resource usage in their jurisdiction into three tables: *Criminal Justice System Use*, *Length of Stay (in months)*, and *Jurisdictional Felonies*.

The information needed to populate each table is discussed in further detail below.

Exhibit 6. Screenshot of Justice System Usage Tables

Enter Justice System Usage

Criminal Justice System Use	Felony	Misd
% Jail Only	10.0%	25.0%
% Probation Only	20.0%	25.0%
% Jail and Probation	25.0%	30.0%
% Prison	40.0%	0.0%
% Other	5.0%	20.0%
% Supervision Post Prison	75.0%	88.0%

Length of Stay (Months)	Felony	Misd
Jail Sentence	6.0	3.0
Jail Prior to Prison Sentence	3.0	0.0
Probation	36.0	18.0
Prison	42.0	0.0
Supervision Post Prison	22.0	0.0

Jurisdictional Felonies	Number of Felonies
Murder	30
Sex	150
Robbery	125
Assault	500
Burglary	250
MV Theft	500
Theft	750
Drug	1,500
Other	1,000

Criminal Justice System Use

Users must enter information about offenders in their jurisdiction and their likelihood of using various criminal justice resources. For example, if a felony conviction is avoided how many jail, probation, prison, and post-prison supervision days are expected to be avoided on average? If possible, sentencing data should be used to estimate these likelihoods.

The percent jail only, probation only, jail and probation, prison, and other categories should add up to one hundred percent. The percent supervised post prison is conditional upon an offender receiving a prison sentence. This information is normally found from sentencing data from the courts.

Length of Stay

Actual length stay for each resource of the justice system should be used. This data, along with the resource use and costs data described previously, is used to estimate the overall costs of an offender moving through the system.

Length of stay calculations should be based on a recent year’s worth of data that indicates how long offenders use each criminal justice system resource listed in the table.

Jurisdictional Felonies

Users may enter either arrest or conviction data on the number of felonies by broad crime categories. This data is used to estimate victimization costs. The first seven categories have victimization costs attached to them, while the drug and other categories assume no victimization costs. If both conviction and arrest data are available, conviction data should be used.

Recidivism Cohorts

The cost-benefit model applies each program’s effect size to the jurisdiction’s baseline recidivism rate. Shifts in the baseline rate get monetized through reduced victimization and system costs. A higher baseline recidivism rate results in greater benefits from effective programs.

Exhibit 7. Screenshot of Recidivism Tables

Choose a Recidivism Cohort
 ▾

1	150	100
2	100	80
3	75	70
4	50	50
5	25	30
6	20	25
7	15	20
8	10	15
9	10	10
10	5	5
No	400	500

% of Convictions-Felonies

Total Recidivating Events

1	250	200
2	200	150
3	190	100
4	150	80
5	110	70
6	70	50
7	50	25
8	40	20
9	30	15
10	20	10

Adjust National Recid Rate
 ▾

Choose recidivism cohort

Users have two options for populating the recidivism cohort table. First, users may create up to two jurisdiction-specific cohorts by analyzing recidivism patterns within their jurisdiction. Local cohorts may be general (e.g. a cohort consisting of offenders released from jail and/or individuals sentenced to serve a probation sentence) or they may be specific cohorts that are tied to program populations (e.g. high and moderate risk offenders).

If recidivism information is not available that allows for at least 5 years of follow-up, users may choose to use the national recidivism rate for their baseline.⁴ The data for the national recidivism rate is prepopulated in the model and comes from the Bureau of Justice Statistics.

Prior to running programs through the model, users will need to select a cohort from the dropdown menu under the “Choose a Recidivism Cohort” table.

Recidivism parameters for follow-up years

Users must enter the cumulative recidivism rate for each follow-up year by counting the number of offenders who recidivate (yes or no) by year. If an offender has multiple recidivating events, only the first event should be counted.

Percent of convictions that are felonies

Users must enter the percent of convictions in the jurisdiction that are felonies. The model uses this information to estimate the cost of an offender moving through the system, as well as the victimization costs.

Total recidivating events

This parameter indicates the frequency of recidivism over the follow-up period. Users should count the number of offenders who recidivate each year of the follow-up and should include multiple conviction events for the same offender.

Adjust national recidivism rate

Users may adjust the national recidivism rate (to make it more reflective of recidivism patterns in their jurisdiction) by up to 20% in either direction.

III. Program Results Tab

There are three sections in the Program Results tab. The *Program* table located at the top of the screen displays information about each program’s expected impact on recidivism, cost, and

⁴ The model allows users to enter up to 10 years’ worth of data.

benefits. The recidivism information at the top right of the screen illustrates the total benefits a jurisdiction can expect from avoiding a recidivist and disaggregates the total benefits into the benefits accruing to taxpayers and from avoided victimizations. Depending on the information selected, the lower half of the tab will display the selected program's effect on recidivism; net benefits of the program (including the breakeven point) and cash flow analysis over the 10 year period following the intervention (disaggregated by perspective); or how program benefits accrue across criminal justice resources and to future crime victims.

Exhibit 8. Screenshot of Program Results Tab



Program Table

The *Program* table displays information about each program's expected impact on recidivism, cost, and benefits on a per participant basis.

Exhibit 9. Screenshot of Results Tab: Program Results

Program	Recidivism Reductio	Program Cost	Taxpayer Be	Crime Victim Be	Total Benefits	NPV Benefit	Benefit to Cost Ratio
Day Reporting Center	-25%	\$3,996	\$5,521	\$3,017	\$8,538	\$4,541	\$2.14
Graduated Sanctions	-19%	\$5,229	\$4,223	\$2,308	\$6,531	\$1,302	\$1.25
CBT	-11%	\$434	\$2,459	\$1,344	\$3,802	\$3,369	\$8.77
DV Duluth	7%	\$1,437	\$(1,673)	\$(914)	\$(2,588)	\$(4,025)	\$(1.80)
Intensive Outpatient Drug Treatm	-2%	\$1,043	\$461	\$252	\$712	\$(331)	\$0.68
Drug Court	-21%	\$6,379	\$4,612	\$2,520	\$7,133	\$753	\$1.12
Employment Training	-7%	\$125	\$1,472	\$804	\$2,276	\$2,151	\$18.21
RNR Supervision	-20%	\$5,130	\$4,400	\$2,405	\$6,805	\$1,675	\$1.33
Sex Offender Treatment	-17%	\$1,663	\$3,723	\$2,035	\$5,758	\$4,095	\$3.46

- *Program*- Program name as entered in the Inputs tab.
- *Recidivism Reduction*- Impact the program is expected to have on recidivism levels in the jurisdiction. Also includes a color code. If the program is expected to reduce crime by more than 5%, it is coded green, a reduction from 0 to 5% is coded yellow, and an expected increase in recidivism is coded red.
- *Program Cost*- Expected cost of the program in the jurisdiction.
- *Taxpayer Benefits*- Expected taxpayer benefits (from avoided consumption of criminal justice resources) as the result of participation in the program.
- *Crime Victim Benefits*- Benefits expected to accrue to crime victims (resulting from avoided future crimes) as the result of program participation.
- *Total Benefits*- Total benefits a jurisdiction can expect from each participant engaging in the program. This column is the sum of taxpayer and crime victim columns.
- *Net Present Value (NPV) Benefit*- Value of the benefits minus costs in today's dollars as the result of discounting future benefits into present dollar values.⁵ Users may select from three discount rates in the "Sensitivity Analysis Tab" (see "Sensitivity Analysis Tab" discussion below for more information).
- *Benefit to Cost Ratio (BCR)*- Calculated by dividing the total discounted benefits by the program costs. A BCR greater than 1 means the benefits of the program outweigh the costs and a ratio less than 1 means the costs outweigh the benefits.

Cost of a Recidivist

The boxes at the top right of the screen indicate the benefits that result from avoiding a recidivist in the jurisdiction and breaks the total down into taxpayer and avoided victimization benefits.

Exhibit 10. Screenshot of Results Tab: Cost of a Recidivist

<p>Each avoided recidivist generates</p> <p style="text-align: center;">\$77,175</p> <p>in total benefits.</p> <p style="text-align: center;">\$57,213</p> <p>are benefits to taxpayers.</p> <p style="text-align: center;">\$19,962</p> <p>are benefits to avoided crime victims.</p>
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⁵ NPV reflects the time value of money which holds that a dollar today has greater value than a dollar will have in the future.

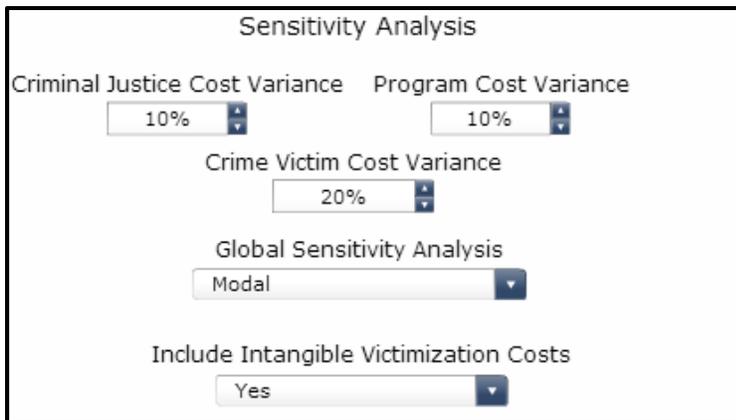
Sensitivity Analysis

The model allows the user to test the sensitivity of their results on assumptions of how costs to the criminal justice system, program costs, and crime victim costs may vary. If users are uncertain about the accuracy of their cost parameters or are concerned that the cost may differ within their jurisdiction, they can set the variance between 0 to 100%.

Additionally, the model allows for different effect size values based on selecting the lower and upper 95% confidence intervals derived from the effect size and its standard error. Finally, low (2%), average (3.5%), and high (5%) values of the discount rate can be used for the sensitivity analysis to show a range of possible benefits. The user can select one of the following options for the sensitivity analysis:

- **Low value** provides the most conservative results by using the high value of program costs, low criminal justice costs, and low crime victim costs based on the user-defined cost variance for each of those cost components. The low value also includes a smaller effect size based on the lower bound of the 95% confidence interval and uses a discount rate of 5%.
- **Modal value** uses costs entered by the user, effect sizes prepopulated in the model (or entered by user if applicable), and a discount rate of 3.5%.
- **High value** uses the low value of the program costs, high criminal justice resource costs, high crime victim costs and a discount rate of 2%.

Exhibit 11. Screenshot of Sensitivity Analysis and Advanced Options



The screenshot displays a 'Sensitivity Analysis' window with the following settings:

- Criminal Justice Cost Variance: 10%
- Program Cost Variance: 10%
- Crime Victim Cost Variance: 20%
- Global Sensitivity Analysis: Modal
- Include Intangible Victimization Costs: Yes

Choose a Graphic

This section of the model allows users to display information about each program's expected effect on recidivism, breakeven point and benefits over the follow-up period, and total benefits by criminal justice resource area. Users should select the program they want to display by double clicking the program in the *Program* table (see Exhibit 9).

Recidivism

The *Cumulative Recidivism Rate for a New Conviction* graph illustrates the baseline recidivism rate (the jurisdiction's recidivism rate in the absence of the program) and the estimated change in recidivism based on program participation. The difference between the two lines is monetized by estimating the reduced consumption of criminal justice system resources and crime victimization.

The *Recidivism Reduction with Confidence Interval* graph shows the 95% confidence interval based on the standard error from WSIPP's meta-analysis or the confidence interval from the local evaluation, if applicable. The lower estimate is the point at which a jurisdiction can have 95% confidence that the actual recidivism reduction is less than or equal to the percentage shown. The average estimate is the point estimate derived by the effect size. The upper estimate is the point at which a jurisdiction can have 95% confidence that that actual recidivism reduction is greater than or equal to the percentage shown. As such, it represents the most conservative estimation of recidivism reduction. The interval in its entirety illustrates how much uncertainty there is around the effectiveness of the program.

Exhibit 12. Screenshot of Recidivism Graph



Cash Flow

The *Net Benefits* graph illustrates the total benefits of the program minus the cost over the follow up period. The point where the shaded area crosses the horizontal axis is the point where program benefits breakeven with the cost. After this point, the benefits exceed costs. The shaded area will always be above the axis if benefits exceed program costs from the first year forward and the shaded area will always be below the axis if costs exceed benefits over the entire follow-up period.

The *Cash Flow Analysis* graph disaggregates the total benefits by perspective (local taxpayers, other taxpayers, intangible and tangible crime victim benefits) for each follow-up year.

Exhibit 13. Screenshot of Cash Flow Graphs



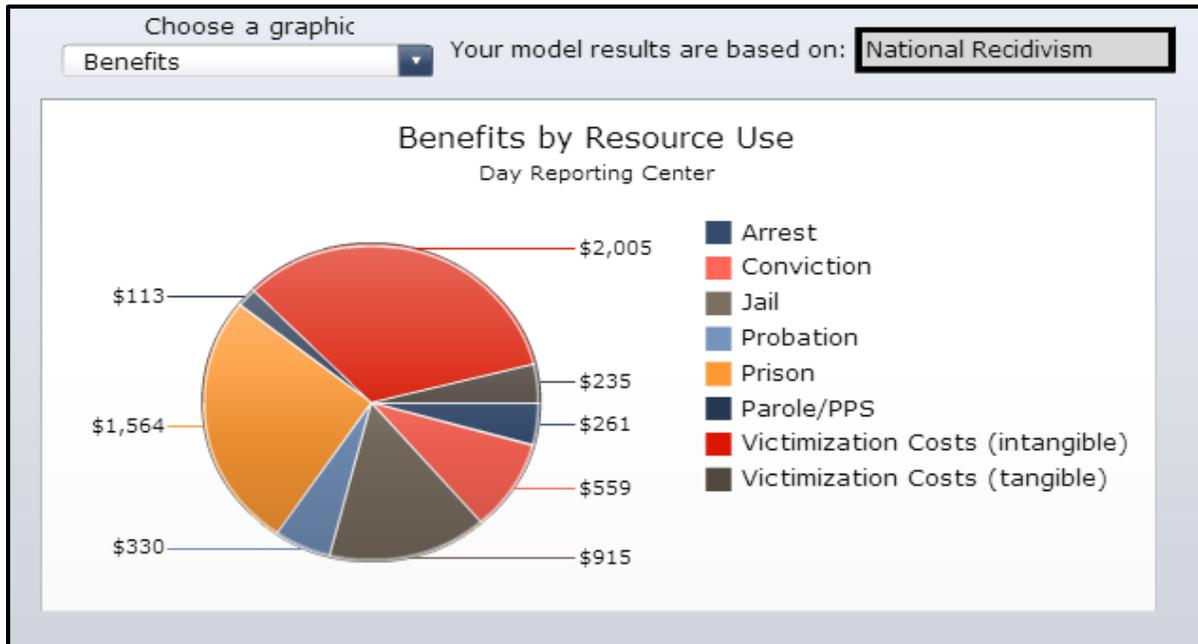
Benefits

The *Benefits by Resource Use* graph disaggregates the total benefits of the selected program by criminal justice resource, including:

- Arrest
- Conviction
- Jail
- Probation
- Prison
- Parole/Post-Prison Supervision
- Tangible Victimization Costs
- Intangible Victimization Costs

By hovering over the pie sections in the graph, users can display the specific percentage of total benefits each resource represents.

Exhibit 14. Screenshot of Benefits Graphs



IV. Summary Tab

There are two sections in the Summary tab: *Benefit to Cost Ratio by Program* and *The Cost of a Trip through the System* (for felony and misdemeanor offense types).

Benefit to Cost Ratio by Program

This table displays the benefit to cost ratio for *all* programs in bar graph form. The results displayed will be based on the cohort selected in the Inputs tab (local recidivism, local recidivism 2, or national recidivism).

Exhibit 15. Screenshot of Cost-Benefits Results Tab

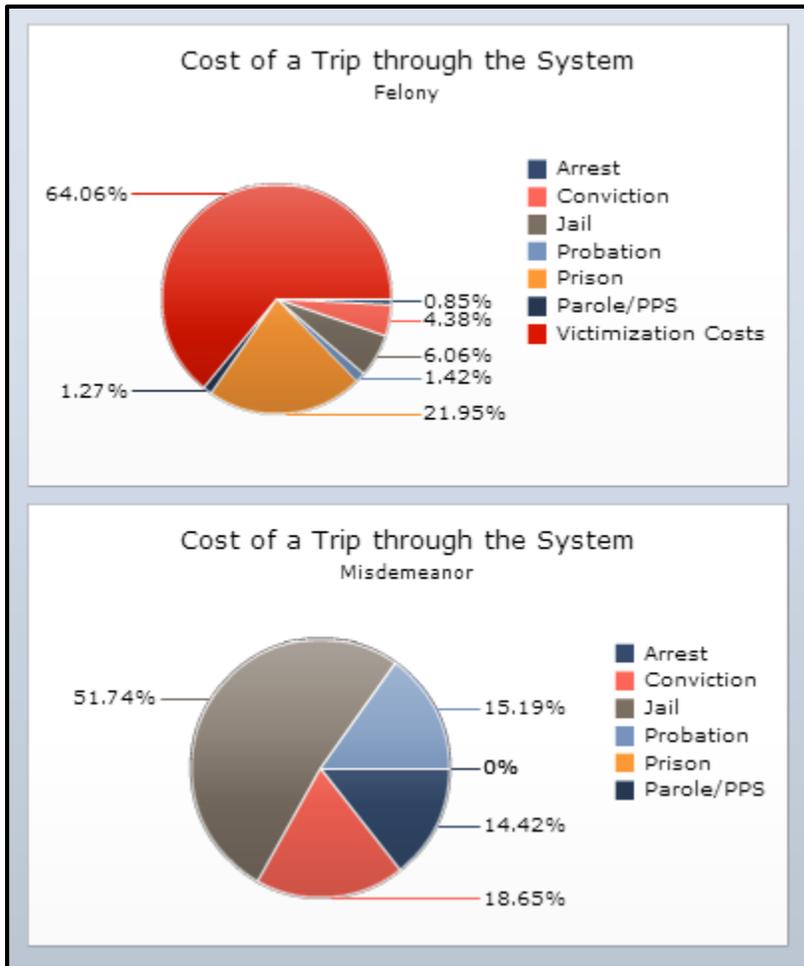


The graph displays the total benefit to cost ratio (blue plus red portion of the bar), the benefits that result from reduced crime victimization (red portion), and the benefits accruing to taxpayers (blue portion). Users can hover over the blue portion of the bar to determine the portion of the ratio attributable to taxpayers and the red portion to identify the amount from reduced victimizations. Using the example of Employment Training from the exhibit above, for each dollar invested in the program the jurisdiction can expect \$12.76 in total benefits. Taxpayer benefits account for \$7.98 of the benefits and crime victims account for \$4.78.

Cost of a Recidivist

The *Cost of a Trip through the System* graphs break down the cost of a recidivist by criminal justice resources and victimization. Felony and misdemeanor offenses are graphed separately. By hovering over a pie section in the graph, users can display the specific dollar amount associated with each resource category.

Exhibit 16. Screenshot of Cost of a Recidivist Graphs



Note that users may want to update the data estimates over time. The model is designed to allow for easy updates on an as needed basis. For any model related questions, please contact Mike Wilson at Mike@m-w-consulting.org.