Washington State Institute for Public Policy

Workforce Development Benefit-Cost Results

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.

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

Career and technical education academies

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated December 2016.

Program Description: Federal education policy related to career and technical education (CTE) in high school increasingly emphasizes preparation for both college and career. CTE academies intend to develop both career and academic skill sets to enable a student to pursue postsecondary education or proceed to the workforce. These academies often operate as a "school-within-a-school" and emphasize connections with the workplace through partnerships with local employers. We considered studies of Career Academies and Linked Learning, an approach to career pathways used in California high schools.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$5,760
Participants	$17,339
Others	$40
Indirect	($3,925)
Total benefits	$19,214
Net program cost	($6,542)
Benefits minus cost	$12,673

Benefit to cost ratio	$2.94
Benefits minus costs	$12,673
Chance the program will produce benefits greater than the costs	88%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
High school graduation	15	3	1129	0.057	0.053	18	0.057	0.053	18	0.057	0.285
Test scores	15	3	585	0.051	0.048	17	0.051	0.048	17	0.051	0.288
Public assistance	15	1	799	0.072	0.070	22	0.000	0.000	24	0.072	0.303
Hours worked^	15	1	770	0.056	0.054	26	n/a	n/a	n/a	0.056	0.293
Earnings*	15	1	770	0.106	0.041	26	0.000	0.000	27	0.106	0.010
Food assistance	15	1	799	0.081	0.070	22	0.000	0.000	24	0.081	0.250
Graduate with 2-year degree	15	1	782	0.040	0.099	26	0.040	0.099	26	0.040	0.685
Graduate with 4-year degree	15	1	782	-0.082	0.086	26	-0.082	0.086	26	-0.082	0.339

^WSIPP's benefit-cost model does not monetize this outcome.

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
High school graduation	Criminal justice system	$17	$0	$40	$8	$66
Earnings	Labor market earnings	$7,069	$16,653	$0	$0	$23,723
Public assistance	Public assistance	($938)	$342	$0	($469)	($1,064)
Food assistance	Food assistance	($388)	$344	$0	($194)	($239)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($3,271)	($3,271)
Totals		$5,760	$17,339	$40	($3,925)	$19,214

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

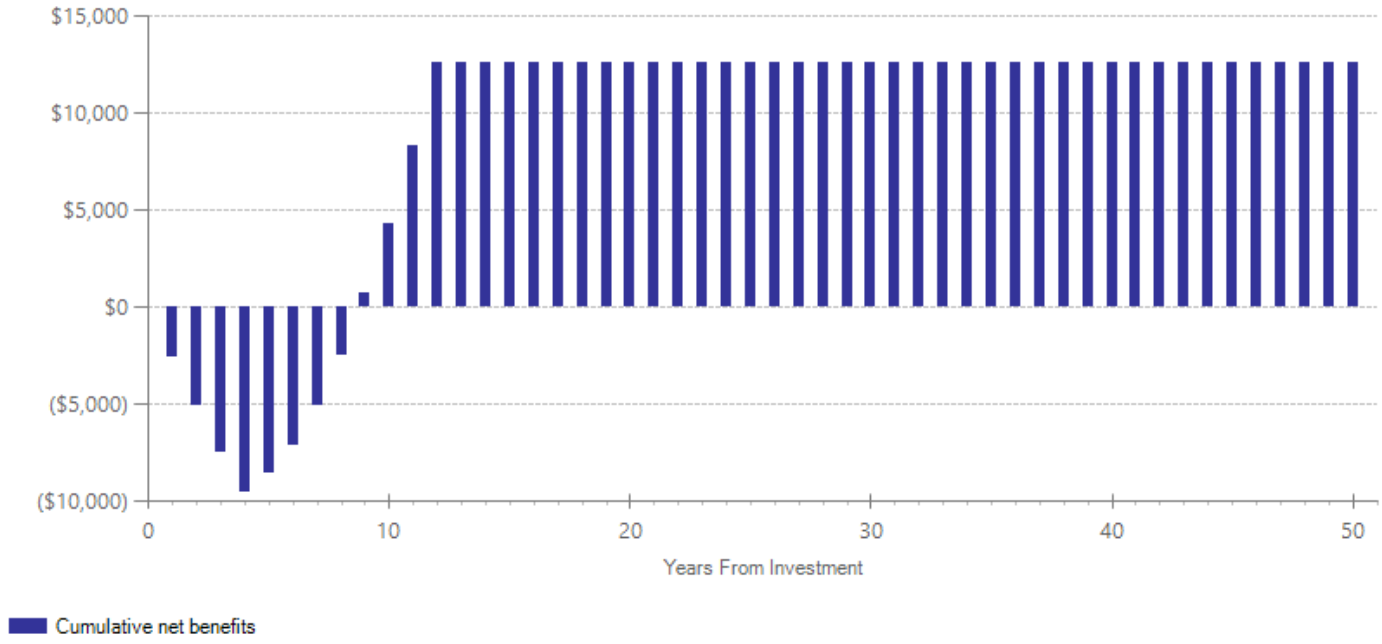
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$1,441	2014	Present value of net program costs (in 2022 dollars)	($6,542)
Comparison costs	$0	2014	Cost range (+ or -)	50%

We estimated the additional cost to operate a career and technical education (CTE) academy, above the cost of a typical high school education. This includes the ongoing cost of additional time from paid school personnel (teachers, administrators, and counselors) as well as time from unpaid work-based learning partners that work with students or participate in academy programs. It also includes the additional cost of materials, supplies, and operating costs that are allocated to CTE programs in Washington. Startup costs for equipment and personnel are also included, annualized over 5 years (or 30 years for facilities).

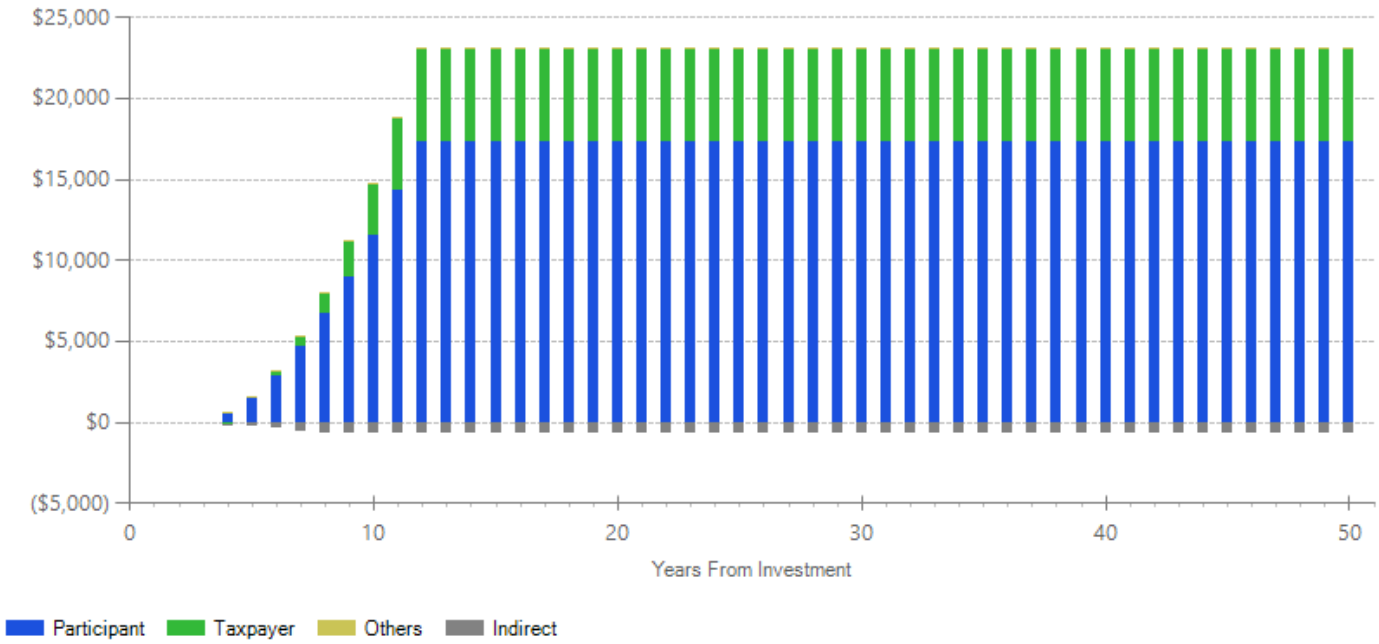
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty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

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)



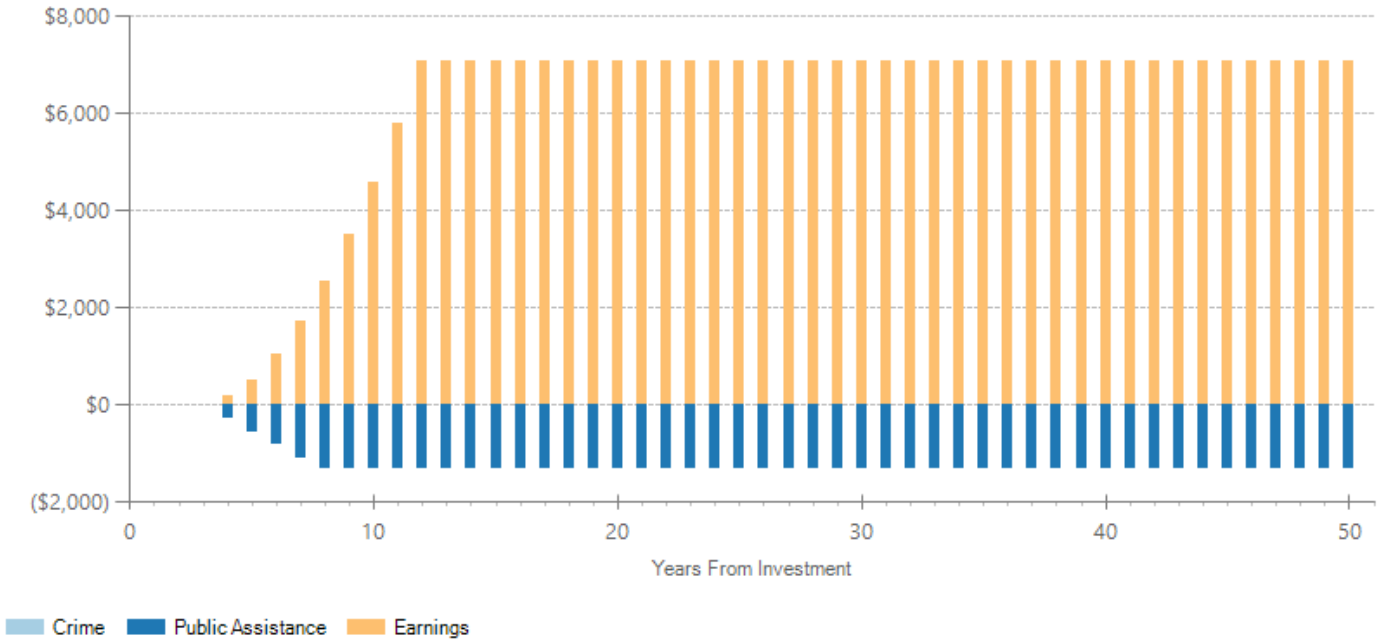
The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost 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

Guha, R., Caspary, K., Stites, R., Padilla, C., Arshan, N., Park, C., Tse, V., Astudillo, S., Black, A., & Adelman, N. (2014). *Taking stock of the California Linked Learning district initiative: Fifth-Year evaluation report.* Menlo Park, CA: SRI International

Kemple, J.J., & Scott-Clayton, J. (2004). *Career academies: Impacts on labor market outcomes and educational attainment.* New York: Manpower Demonstration Research Corporation.

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Case management for unemployment insurance claimants

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Case managers work with Unemployment Insurance (UI) claimants in individual or group sessions to provide counseling, job search assistance or job retention services through orientations, assessments, interviews, or telephone calls. Case managers usually provide referrals to child care subsidies, transportation assistance, and other support services. They may also refer clients to education and training, particularly if job searches are unsuccessful. Case management may end when clients find employment, or continue with post-employment support services. UI programs usually provide these services to eligible dislocated workers, lasting anywhere from one week to three months.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$1,014
Participants	$2,388
Others	$0
Indirect	($108)
Total benefits	$3,294
Net program cost	($215)
Benefits minus cost	$3,079

Benefit to cost ratio	$15.31
Benefits minus costs	$3,079
Chance the program will produce benefits greater than the costs	69%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	39	11	102201	0.036	0.015	42	0.000	0.014	43	0.036	0.019
Employment	39	13	209702	-0.002	0.007	42	0.000	0.014	43	-0.002	0.820

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$1,014	$2,388	$0	$0	$3,401
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($108)	($108)
Totals		$1,014	$2,388	$0	($108)	$3,294

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

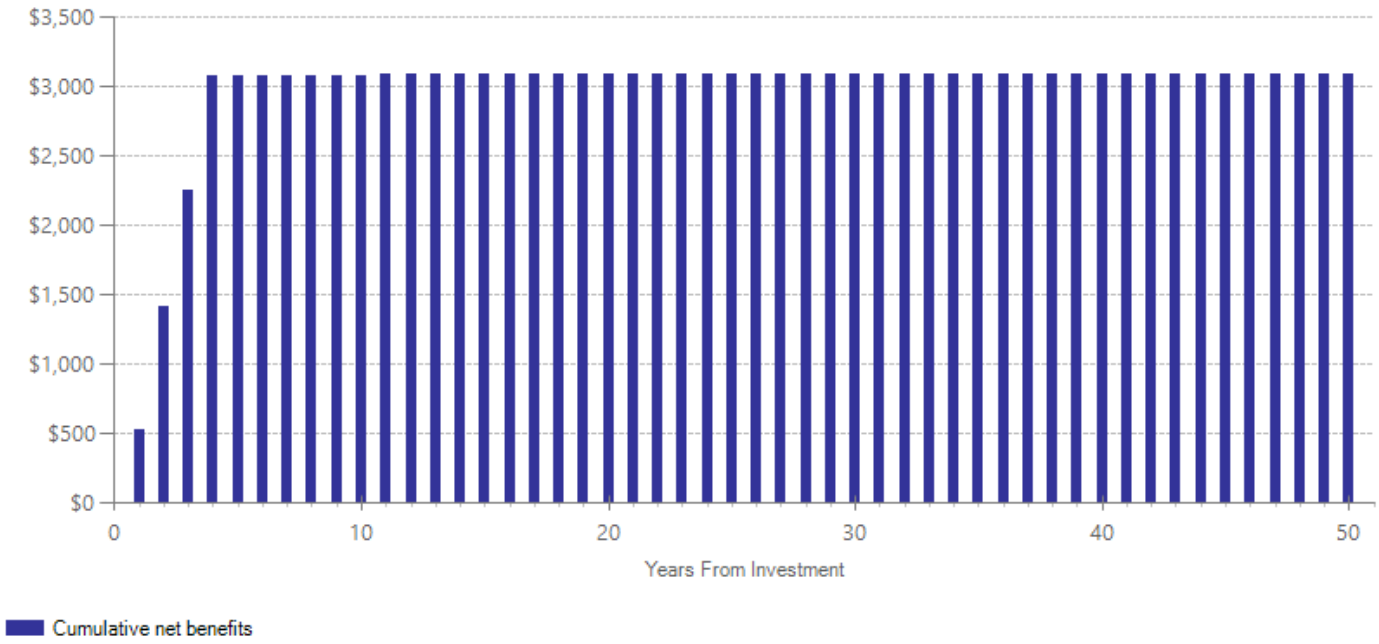
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$180	2014	Present value of net program costs (in 2022 dollars)	($215)
Comparison costs	$0	2014	Cost range (+ or -)	75%

Case management services typically last between one week and three months. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Black et al., 2003; Decker et al., 2000; Michaelides et al., 2012). Costs vary by study but may include central administration, staff salaries, staff benefits, recruitment, assessment services, job placement and retention services, short-term training provided by staff, transportation, and medical treatments.

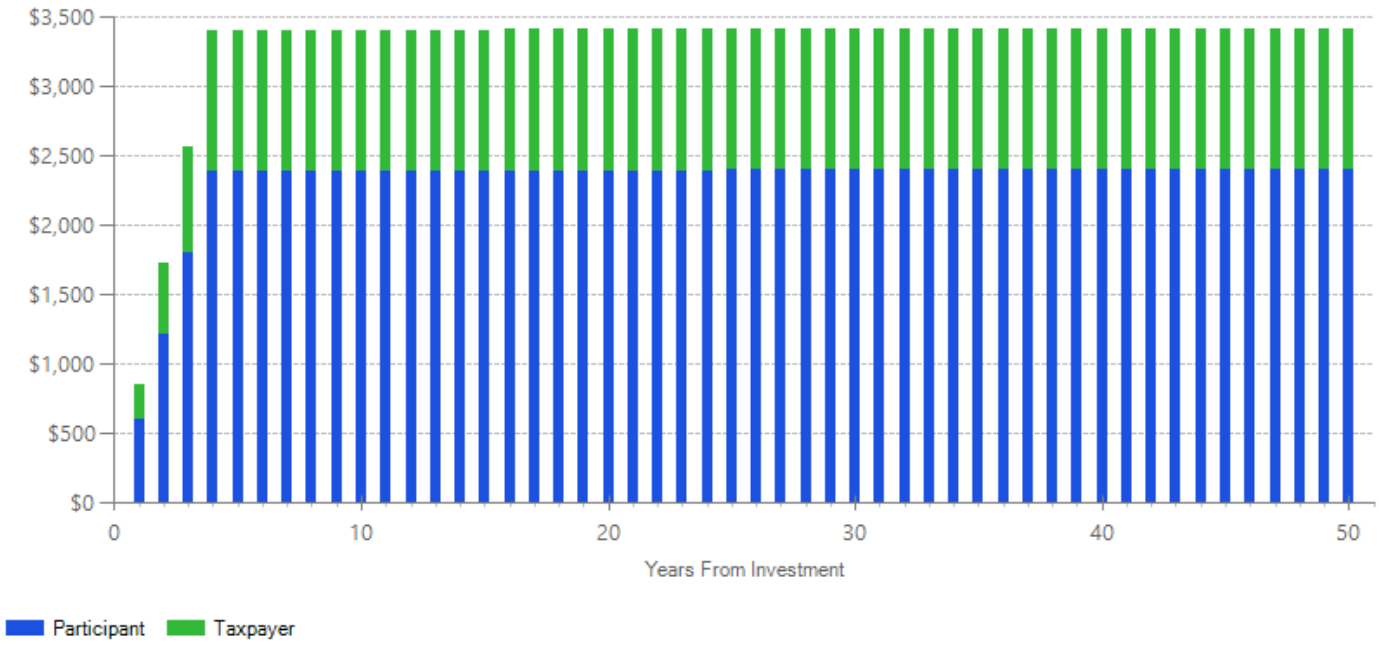
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty 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)



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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

Benus, J.M., Poe-Yamagata, E., Wang, Y., & Blass, E. (2008). *Reemployment and Eligibility Assessment REA) study: FY 2005 Initiative.* Columbia, MD: IMPAQ International.

Black, D.A., Smith, J.A., Berger, M.C., & Noel, B.J. (2003). Is the threat of reemployment services more effective than the services themselves? Evidence from random assignment in the UI System. *American Economic Review, 93*(4), 1313-1327.

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Poe-Yamagata, E., Benus, J., Bill, N., Carrington, H., Michaelides, M., & Shen, T. (2011). *Impact of the Reemployment and Eligibility Assessment (REA) Initiative.* Washington, DC: U.S. Department of Labor, Employment and Training Administration.

Job search and placement

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Unemployed individuals conduct a supervised job search, attend job search workshops or participate in job clubs, similar to peer support groups for the unemployed. This intervention is very brief, lasting anywhere from a few hours in one day to two months. State Unemployment Insurance (UI) programs, employment departments, and welfare agencies usually provide these program services. UI claimants and TANF/AFDC recipients are the most common participants.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$1,558
Participants	$825
Others	$0
Indirect	$215
Total benefits	$2,599
Net program cost	($615)
Benefits minus cost	$1,984

Benefit to cost ratio	$4.23
Benefits minus costs	$1,984
Chance the program will produce benefits greater than the costs	65%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	36	8	13539	0.038	0.024	38	0.000	0.017	40	0.038	0.103
Employment	36	9	14070	0.079	0.038	38	0.000	0.017	40	0.079	0.040
Public assistance	36	5	6841	-0.070	0.017	38	0.000	0.017	40	-0.070	0.001

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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.

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Detailed Monetary Benefit Estimates Per Participant

Affected outcome:	Resulting benefits:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$512	$1,207	$0	$0	$1,720
Public assistance	Public assistance	$1,046	($382)	$0	$523	$1,187
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($307)	($307)
Totals		$1,558	$825	$0	$215	$2,599

[1]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.

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[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

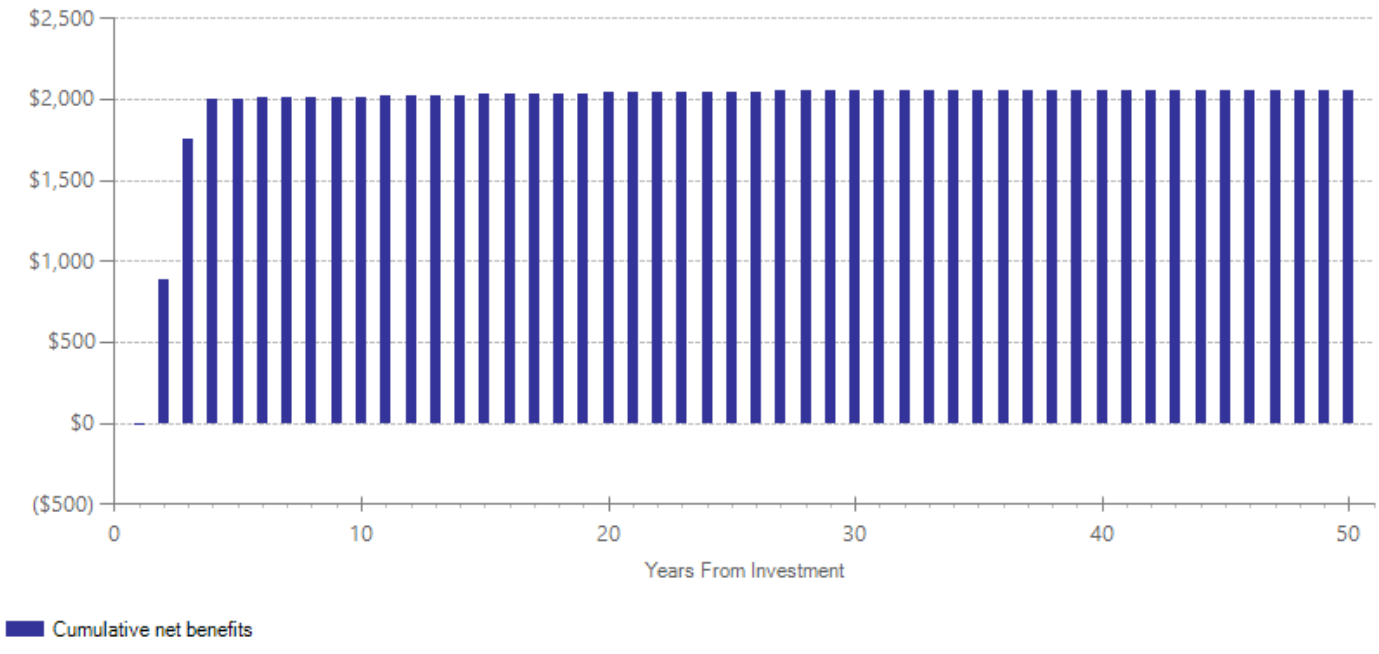
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$515	2014	Present value of net program costs (in 2022 dollars)	($615)
Comparison costs	$0	2014	Cost range (+ or -)	56%

Job search and placement services are typically provided for a brief period; between one day and two months. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Corson et al., 1985; Corson & Haimson, 1996; Friedlander et al., 1987; Goldman et al., 1986; Goldman et al., 1981; Vinokur et al., 1991; Wolfhagen & Goldman, 1983). Costs vary by study but may include administrative costs, operating costs, transportation payments, lunches, child care and work-related expenses, staff salaries, and sometimes small stipends for clients.

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)



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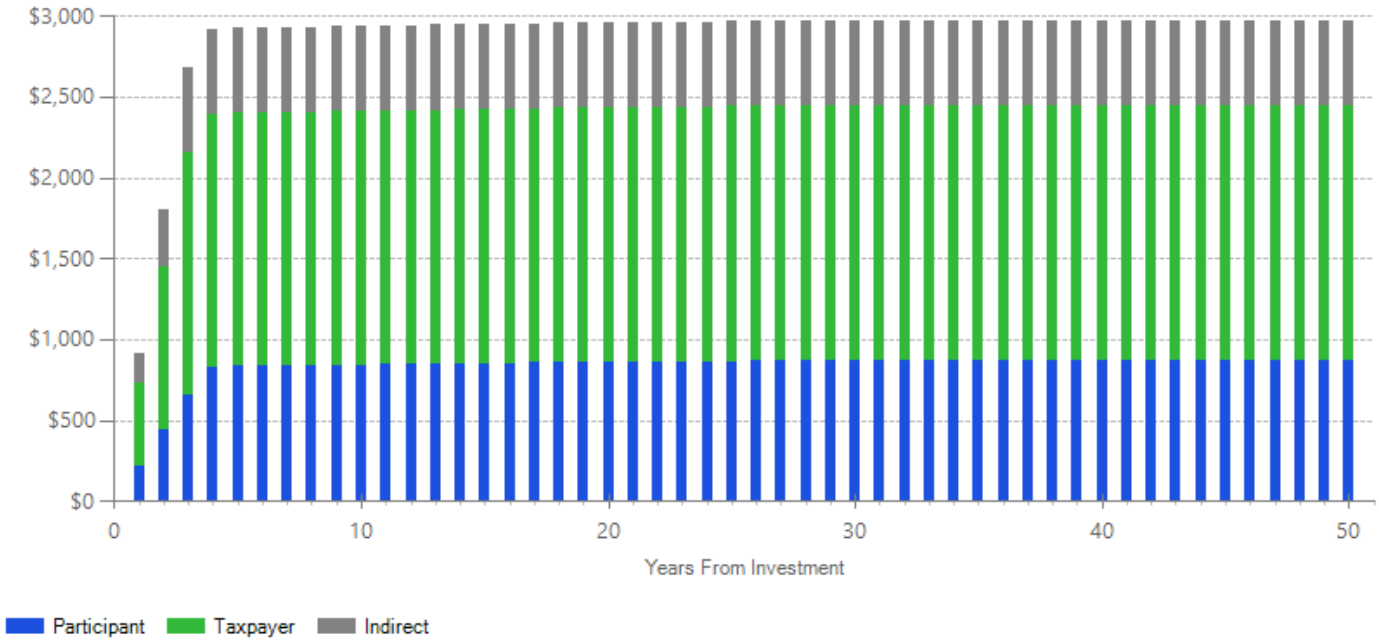
Benefits by Perspective Over Time (Cumulative Discounted Dollars)



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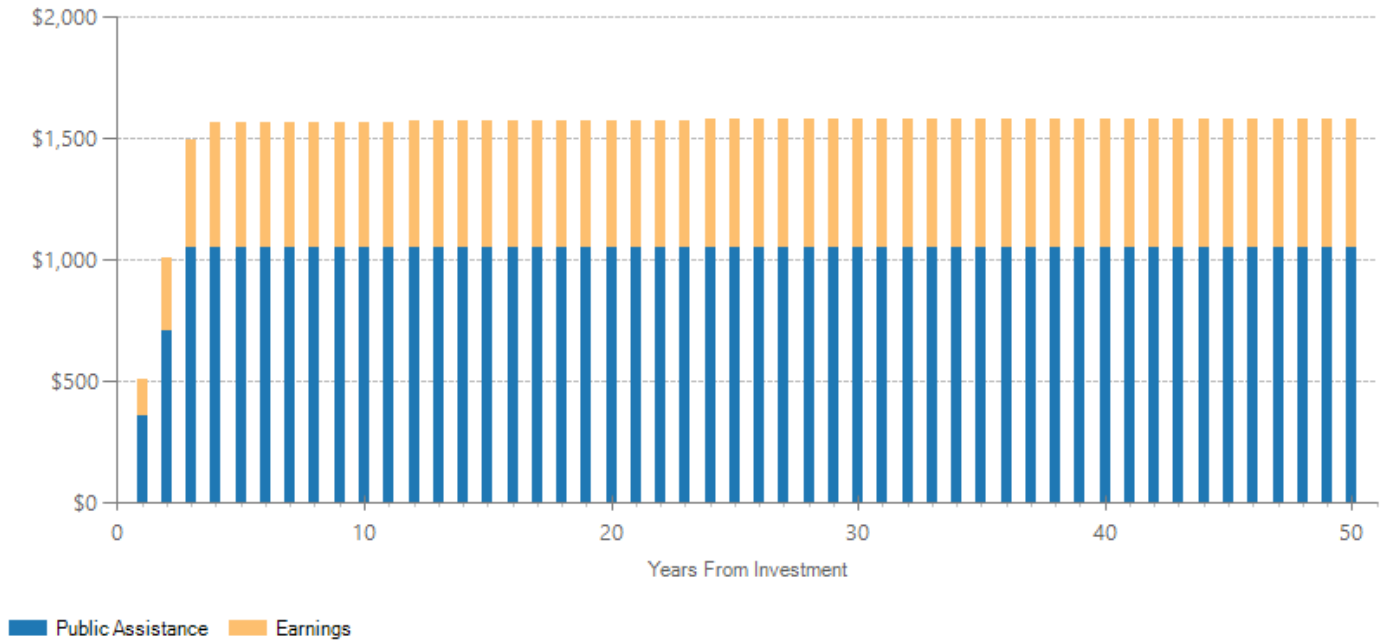
Taxpayer Benefits by Source of Value Over Time (Cumulative Discounted Dollars)



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

Corson, W., & Haimson, J. (1996). *The New Jersey Unemployment Insurance Reemployment Demonstration Project: Six-year followup and summary report*. Washington, DC: U.S. Department of Labor, Employment and Training Administration, Unemployment Insurance Service.

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Work experience

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Unemployed clients receive work experience, ranging from unpaid community service jobs to paid (partially or fully subsidized) jobs in the private, public, or nonprofit sector. Clients often participate in work experience after failing to find employment through job search and placement assistance. These programs sometimes take the form of "welfare-to-work" programs, where participants must participate in job searches or work experience to receive welfare benefits. For paid employment, employers may or may not be required to retain employees after wage subsidies end. Welfare agencies and community organizations typically provide these program services to TANF/AFDC recipients, offenders, or low-income* individuals, lasting anywhere from one month to one year.

*The low-income population may be defined in a variety of ways, including all workers in the 25th percentile of hourly wages, individuals at or below 130% of the federal poverty line, individuals at or below 200% of the federal poverty line, or an income that meets eligibility requirements for welfare or food stamps.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$2,529
Participants	$2,134
Others	$0
Indirect	($547)
Total benefits	$4,115
Net program cost	($2,451)
Benefits minus cost	$1,664

Benefit to cost ratio	$1.68
Benefits minus costs	$1,664
Chance the program will produce benefits greater than the costs	77%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	33	13	14335	0.093	0.030	35	0.000	0.001	37	0.093	0.002
Employment	33	12	13242	0.098	0.027	35	0.000	0.001	37	0.098	0.001
Food assistance	33	3	2222	-0.046	0.061	35	0.000	0.001	37	-0.046	0.446
Public assistance	33	13	14332	-0.074	0.018	35	0.000	0.001	37	-0.074	0.001

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$1,172	$2,762	$0	$0	$3,934
Public assistance	Public assistance	$1,101	($402)	$0	$550	$1,249
Food assistance	Food assistance	$256	($226)	$0	$128	$157
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($1,225)	($1,225)
Totals		$2,529	$2,134	$0	($547)	$4,115

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

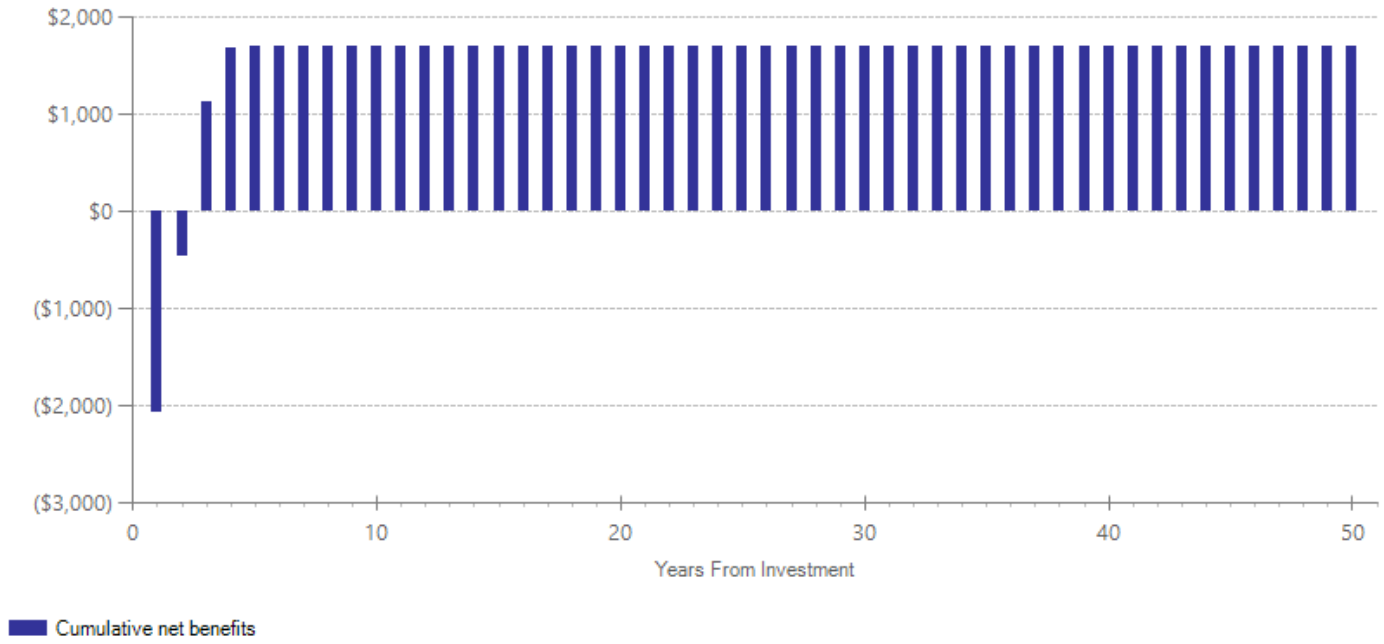
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,052	2014	Present value of net program costs (in 2022 dollars)	($2,451)
Comparison costs	$0	2014	Cost range (+ or -)	62%

These programs typically last anywhere from one month to one year. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Duncan et al., 2008; Freedman et al., 1988; Friedlander et al., 1987; Friedlander et al., 1986; Friedlander et al., 1985; Goldman et al., 1986; Hamilton & Friedlander, 1989; Redcross et al., 2012). Costs vary by study but may include costs of program registration, orientation, administration, operations, case management, wage subsidies, earnings supplements, health care, transportation, and child care subsidies.

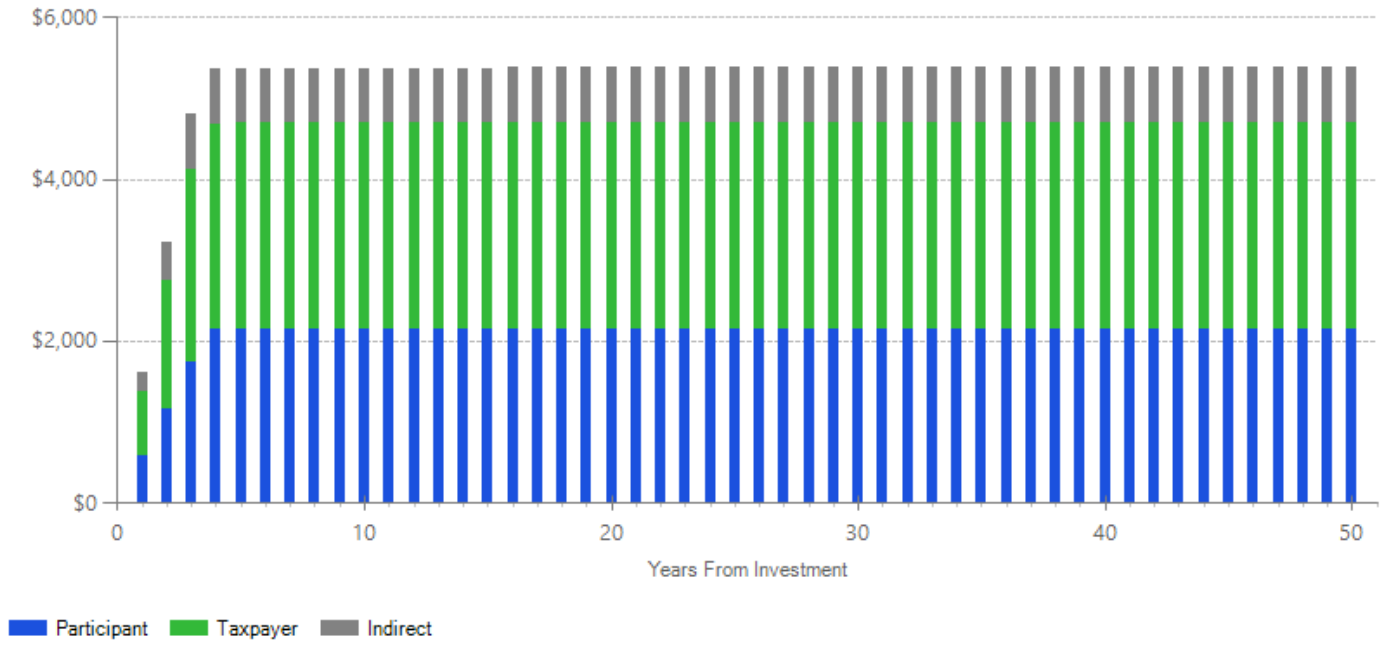
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty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

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)

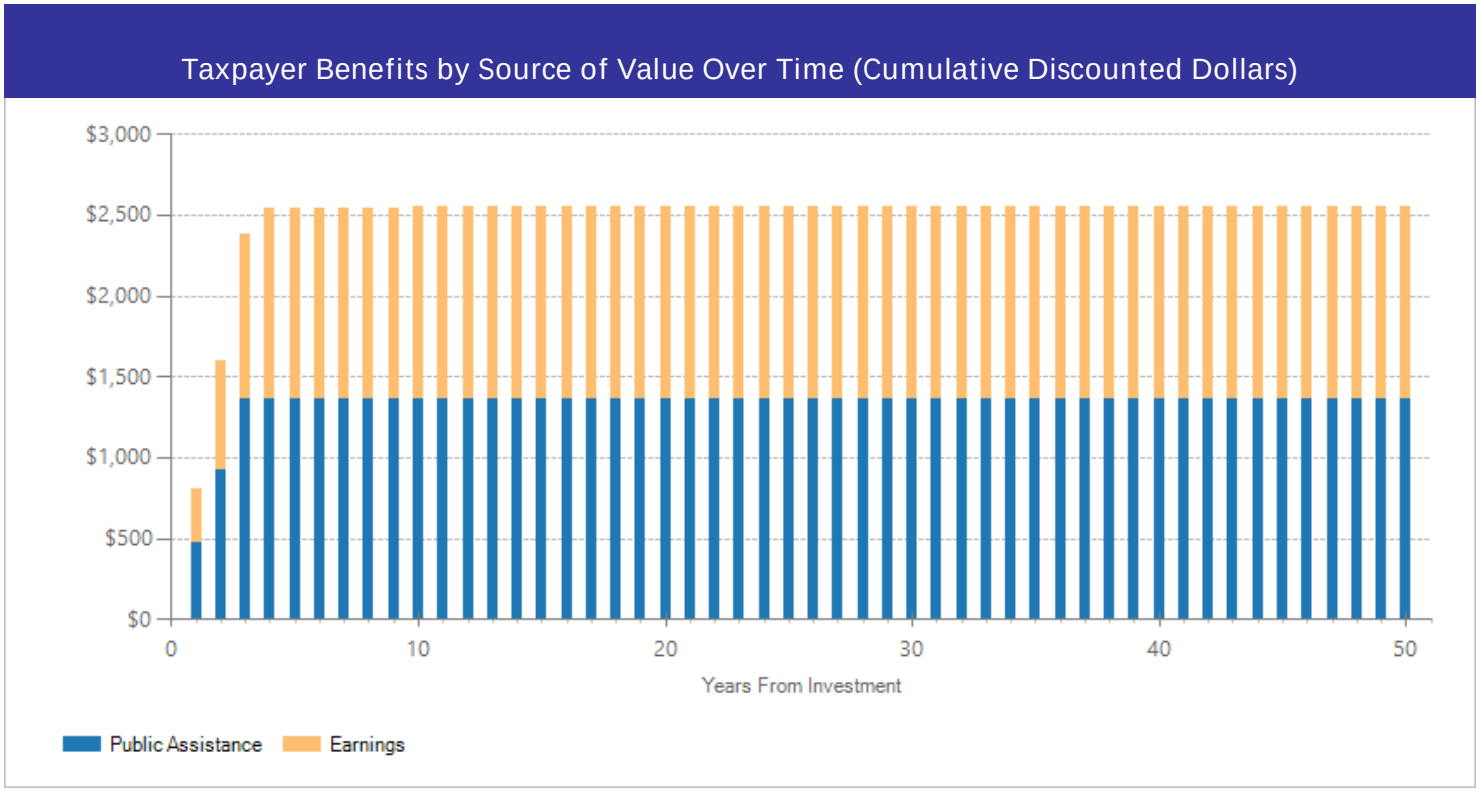


The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost 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.



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

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Training with work experience for adult welfare recipients

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Adult TANF/AFDC recipients may receive job search and placement assistance, adult basic education, ESL and GED preparation, vocational training, or support services such as child care and housing support. All participants in these programs also receive some type of work experience, paid or unpaid. Most studies define the adult population to be age 18 and over. Treatment may be sequential, where participants first undergo training and then receive work experience, or follow individualized employment plans for each participant. These programs sometimes take the form of "welfare-to-work" programs, where participants must participate in employment activities to receive welfare benefits. Community organizations, welfare agencies, and federally or state-funded programs administered by state, county, or local government agencies typically provide these services. Programs last anywhere from two months to one year.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$3,472
Participants	$4,767
Others	$0
Indirect	($1,881)
Total benefits	$6,358
Net program cost	($4,961)
Benefits minus cost	$1,398

Benefit to cost ratio	$1.28
Benefits minus costs	$1,398
Chance the program will produce benefits greater than the costs	63%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	34	36	95653	0.146	0.026	39	0.000	0.018	40	0.149	0.001
Employment	34	32	95650	0.091	0.014	39	0.000	0.018	40	0.094	0.001
Food assistance	34	19	42878	-0.055	0.010	39	0.000	0.018	40	-0.058	0.001
Public assistance	34	38	91383	-0.064	0.015	39	0.000	0.028	40	-0.065	0.001

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$2,273	$5,355	$0	$0	$7,629
Public assistance	Public assistance	$909	($332)	$0	$455	$1,032
Food assistance	Food assistance	$289	($256)	$0	$145	$178
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($2,480)	($2,480)
Totals		$3,472	$4,767	$0	($1,881)	$6,358

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

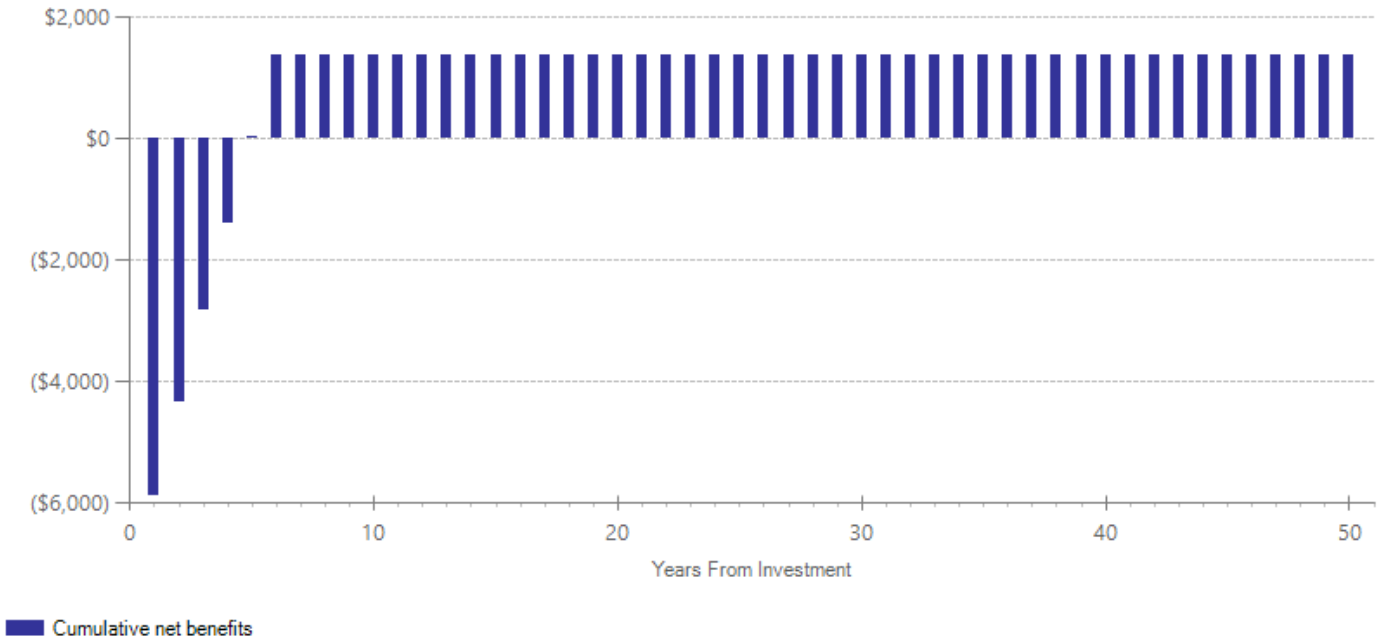
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$4,154	2014	Present value of net program costs (in 2022 dollars)	($4,961)
Comparison costs	$0	2014	Cost range (+ or -)	43%

These programs typically last between two months and one year. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Auspos et al., 1988; Bell & Orr, 1994; Blomquist, 1995; Bloom et al., 2000; Farrell, 2000; Freedman et al., 2000; Freedman et al., 1995; Hamilton et al., 1997; Riccio et al., 1986; Scrivener et al., 2002; Scrivener et al., 2001; Scrivener et al., 1998; Storto et al., 2000). Costs vary by study but may include administrative costs, employment services, case management, eligibility-related services, foregone earnings, tuition payments, allowances, support services such as transportation assistance and child care costs, and wage subsidies.

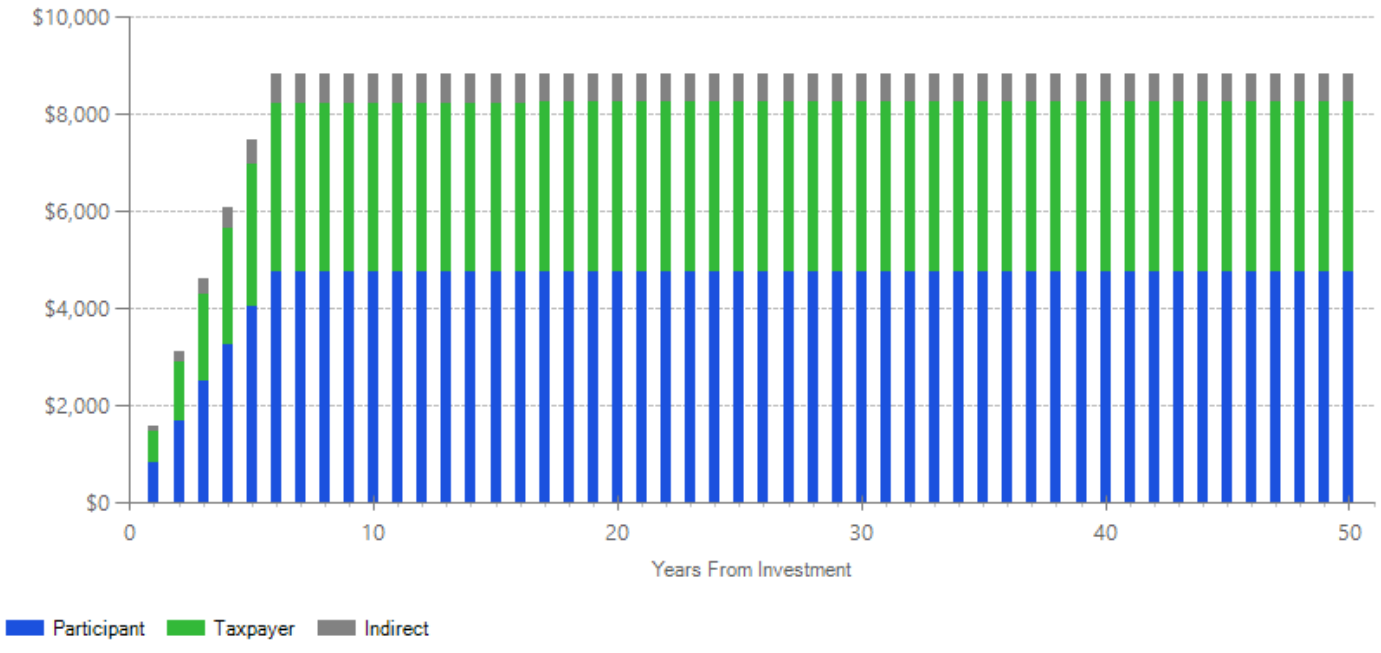
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty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

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)

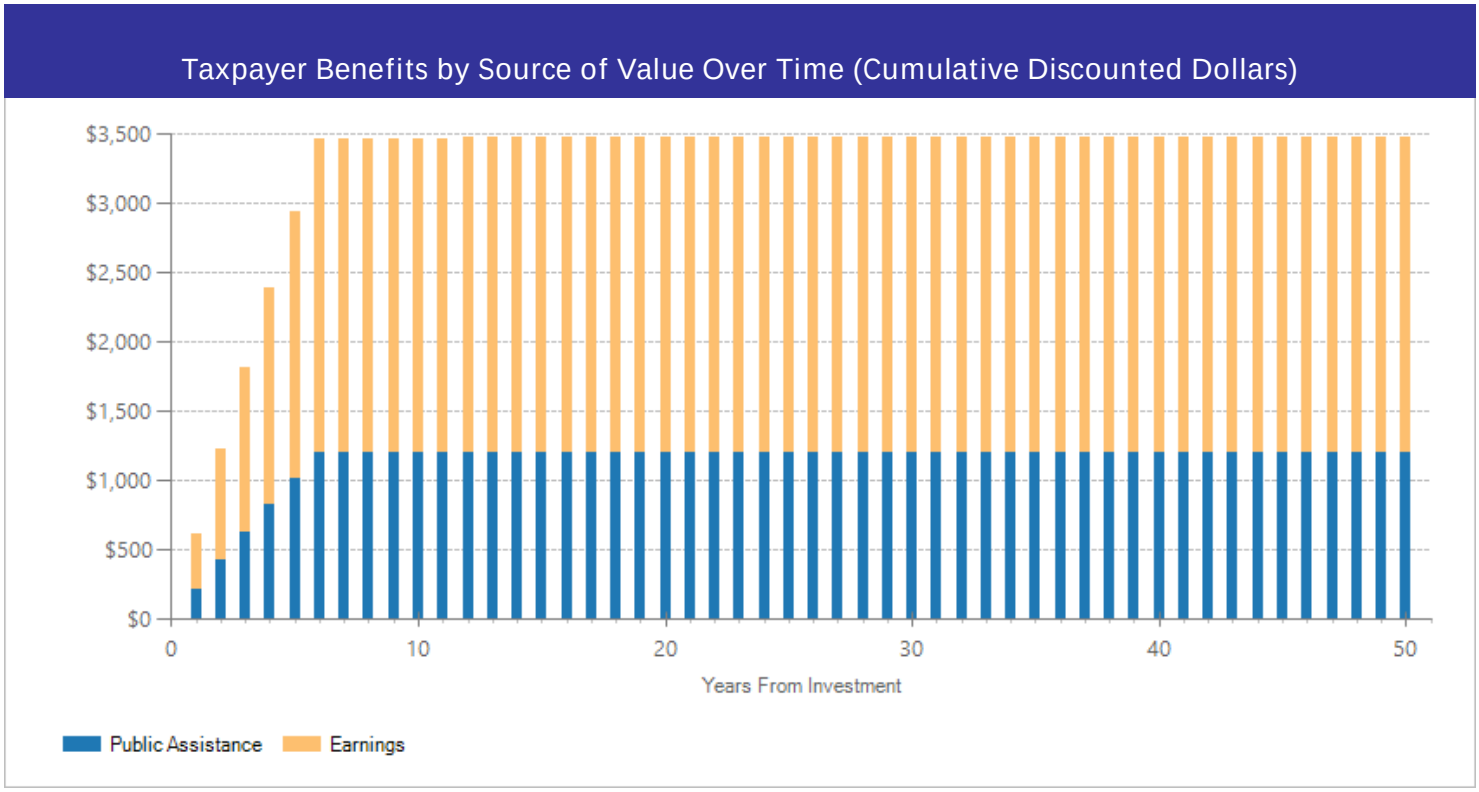


The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost 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.



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

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Training with work experience for adults, not targeting welfare recipients

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Unemployed adults may receive job search and placement assistance, adult basic education, ESL and GED preparation, vocational training, or support services such as child care and housing support. All participants in these programs also receive some type of work experience, paid or unpaid. Most studies define the adult population to be age 18 and over. Treatment may be sequential, where participants first undergo training and then receive work experience, or follow individualized employment plans for each participant. Community organizations, Unemployment Insurance programs, or federally or state-funded programs administered by state, county, or local government agencies typically provide these services to dislocated workers or low-income individuals.* Programs last anywhere from two to 18 months.

*The low-income population may be defined in a variety of ways, including all workers in the 25th percentile of hourly wages, individuals at or below 130% of the federal poverty line, individuals at or below 200% of the federal poverty line, or an income that meets eligibility requirements for welfare or food stamps.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$2,065
Participants	$4,498
Others	$0
Indirect	($2,379)
Total benefits	$4,184
Net program cost	($4,899)
Benefits minus cost	($714)

Benefit to cost ratio	$0.85
Benefits minus costs	($714)
Chance the program will produce benefits greater than the costs	46%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	42	17	59470	0.045	0.021	47	0.000	0.018	48	0.048	0.031
Employment	42	13	45655	0.069	0.070	47	0.000	0.018	48	0.072	0.339
Food assistance	42	6	14460	0.007	0.030	47	0.000	0.018	48	0.007	0.827
Public assistance	42	6	14984	-0.012	0.026	47	0.000	0.018	48	-0.014	0.627

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$1,924	$4,532	$0	$0	$6,455
Public assistance	Public assistance	$176	($64)	$0	$88	$199
Food assistance	Food assistance	($34)	$30	$0	($17)	($21)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($2,449)	($2,449)
Totals		$2,065	$4,498	$0	($2,379)	$4,184

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

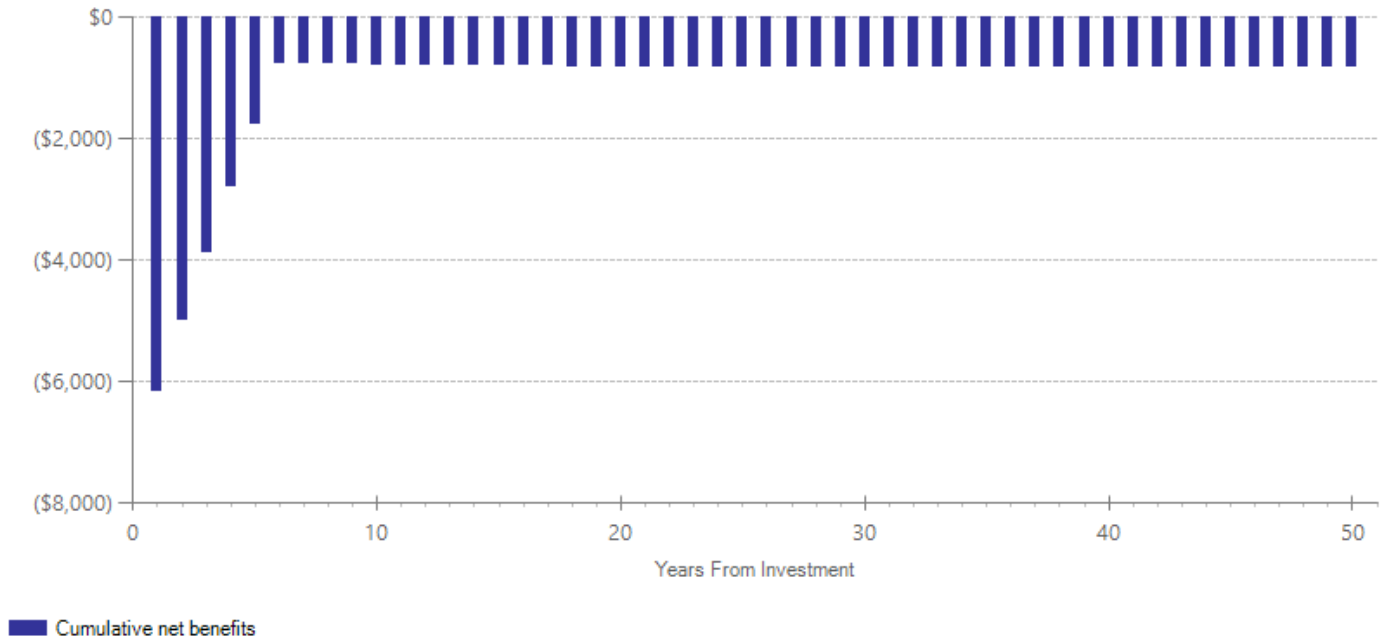
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$4,102	2014	Present value of net program costs (in 2022 dollars)	($4,899)
Comparison costs	$0	2014	Cost range (+ or -)	66%

On average, these programs last about six months, although services may last anywhere from two to 18 months. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Corson & Haimson, 1996; Decker et al., 2000; Farrell, 2000; Hollenbeck, 2009; Hollenbeck & Huang, 2003; Schochet et al., 2012). Costs vary by study but may include administrative costs, employment services, case management, eligibility-related services, foregone earnings, tuition payments, allowances, support services such as transportation assistance and child care costs, and wage subsidies.

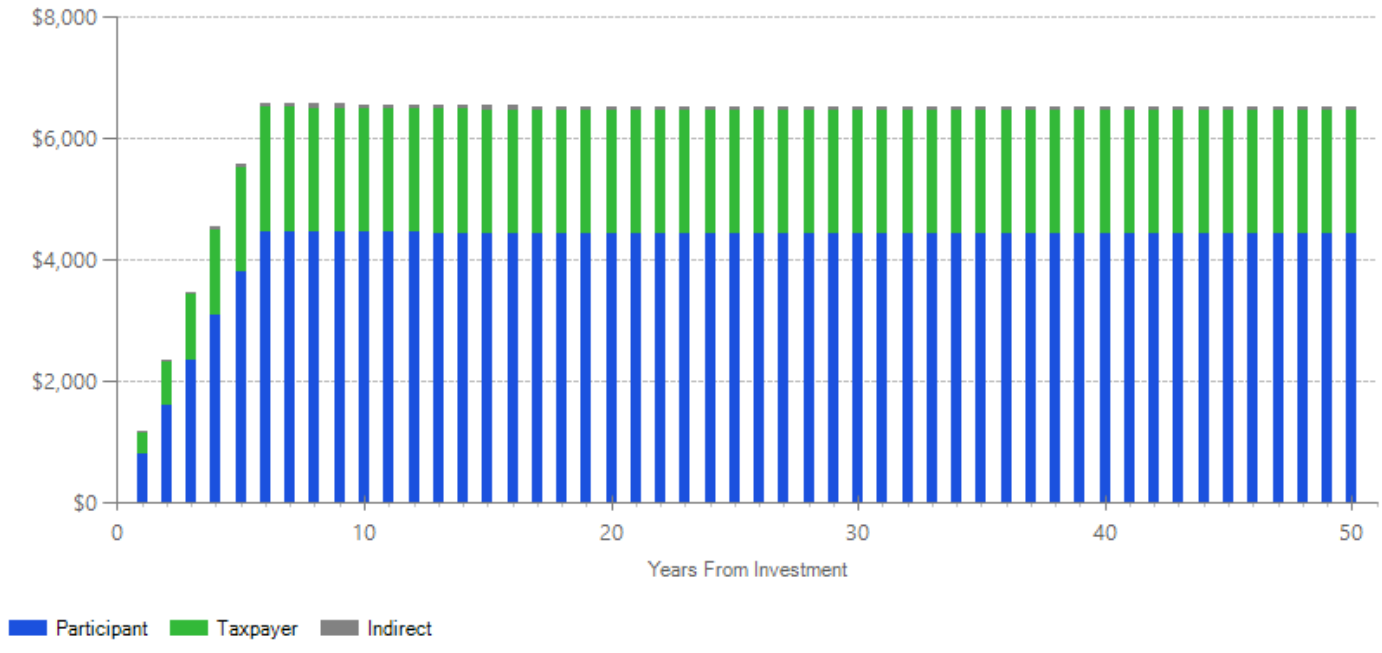
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty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

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)

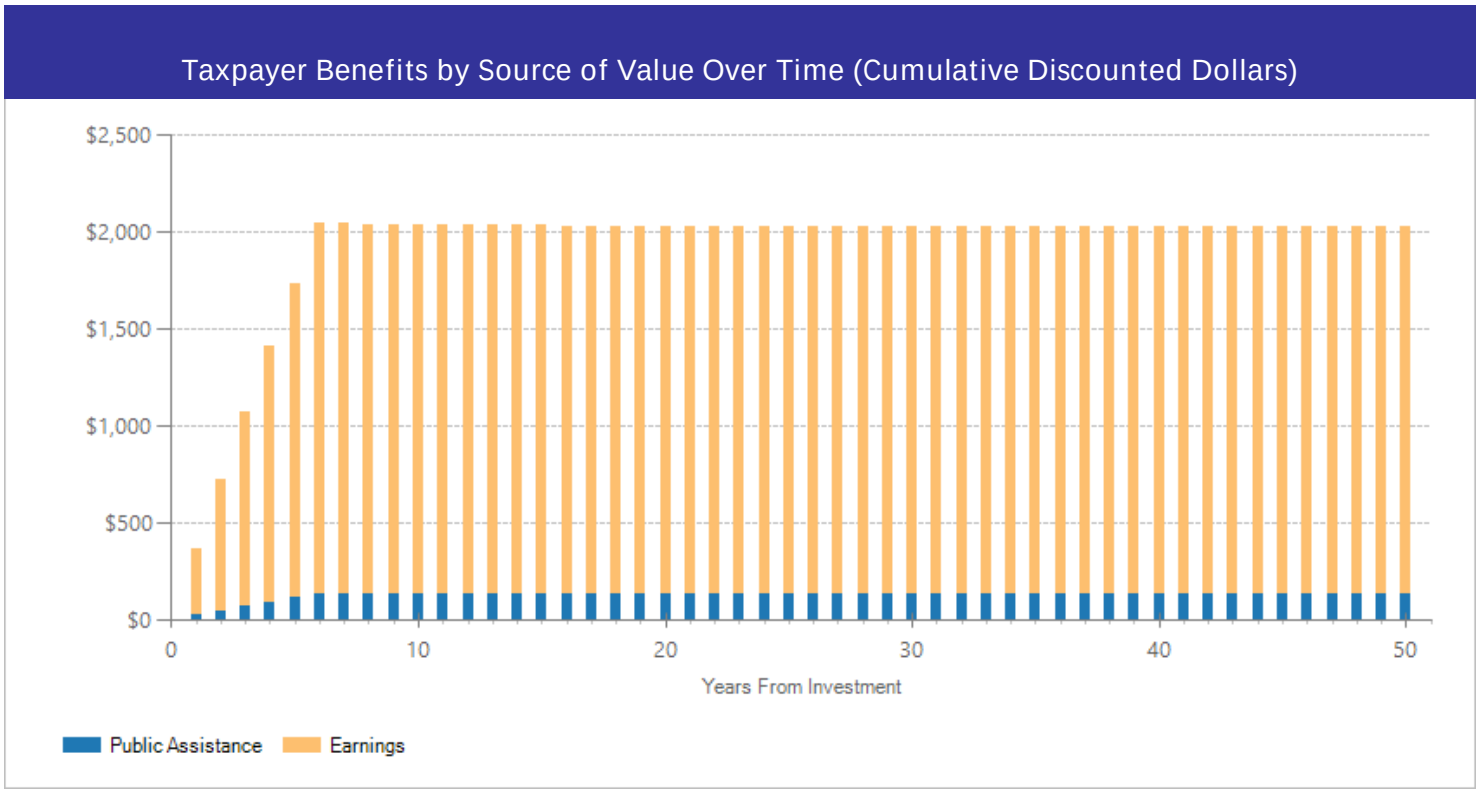


The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost 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.



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

Bloom, H.S. (1990). *Back to work: Testing reemployment services for displaced workers*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

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Case management for welfare recipients or low-income individuals

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Case managers work with TANF/AFDC recipients or low-income* individuals in individual or group sessions to provide counseling, job search assistance or job retention services through orientations, assessments, interviews, or telephone calls. Case managers usually provide referrals to child care subsidies, transportation assistance, and other support services. They may also refer clients to education and training, particularly if job searches are unsuccessful. Case management may end when clients find employment, or continue with post-employment support services. Nonprofit organizations, local welfare agencies, or for-profit employment companies usually provide these program services, lasting anywhere from one month to two years.

* The low-income population may be defined in a variety of ways, including all workers in the 25th percentile of hourly wages, individuals at or below 130% of the federal poverty line, individuals at or below 200% of the federal poverty line, or an income that meets eligibility requirements for welfare or food stamps.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$299
Participants	$216
Others	$0
Indirect	($1,645)
Total benefits	($1,131)
Net program cost	($3,476)
Benefits minus cost	($4,607)

Benefit to cost ratio	($0.33)
Benefits minus costs	($4,607)
Chance the program will produce benefits greater than the costs	18%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	34	16	30680	0.015	0.009	35	0.000	0.014	36	0.015	0.096
Employment	34	15	26520	0.032	0.018	35	0.000	0.014	36	0.032	0.085
Food assistance	34	10	22854	0.007	0.016	35	0.000	0.014	36	0.007	0.688
Public assistance	34	11	25001	-0.015	0.020	35	0.000	0.014	36	-0.015	0.469

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$112	$265	$0	$0	$377
Public assistance	Public assistance	$223	($81)	$0	$111	$253
Food assistance	Food assistance	($36)	$32	$0	($18)	($22)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($1,738)	($1,738)
Totals		$299	$216	$0	($1,645)	($1,131)

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

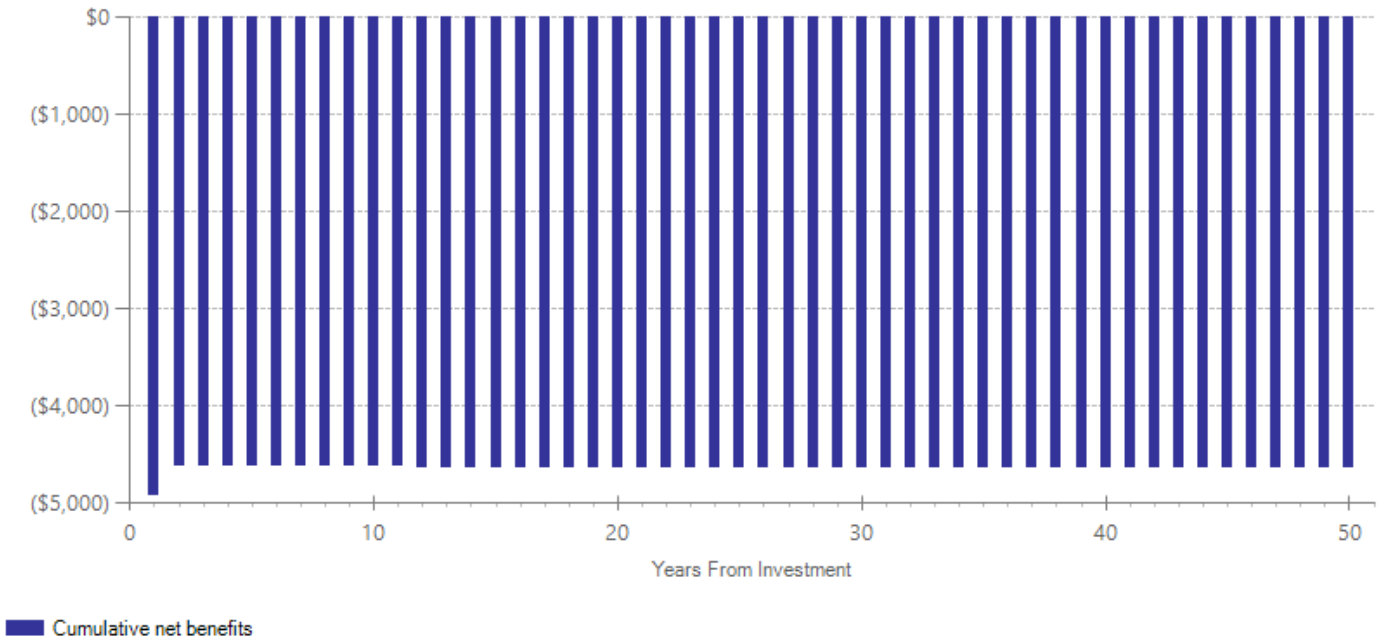
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,911	2014	Present value of net program costs (in 2022 dollars)	($3,476)
Comparison costs	$0	2014	Cost range (+ or -)	99%

On average, case management services last about a year, but can range from one month to two years. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Hamilton et al., 1996; Kemple et al., 1995; Kornfeld & Rupp, 2000; Miller et al., 2008; Roder & Scrivner, 2005). Costs vary by study but may include central administration, staff salaries, staff benefits, recruitment, assessment services, job placement and retention services, short-term training provided by staff, transportation, and medical treatments.

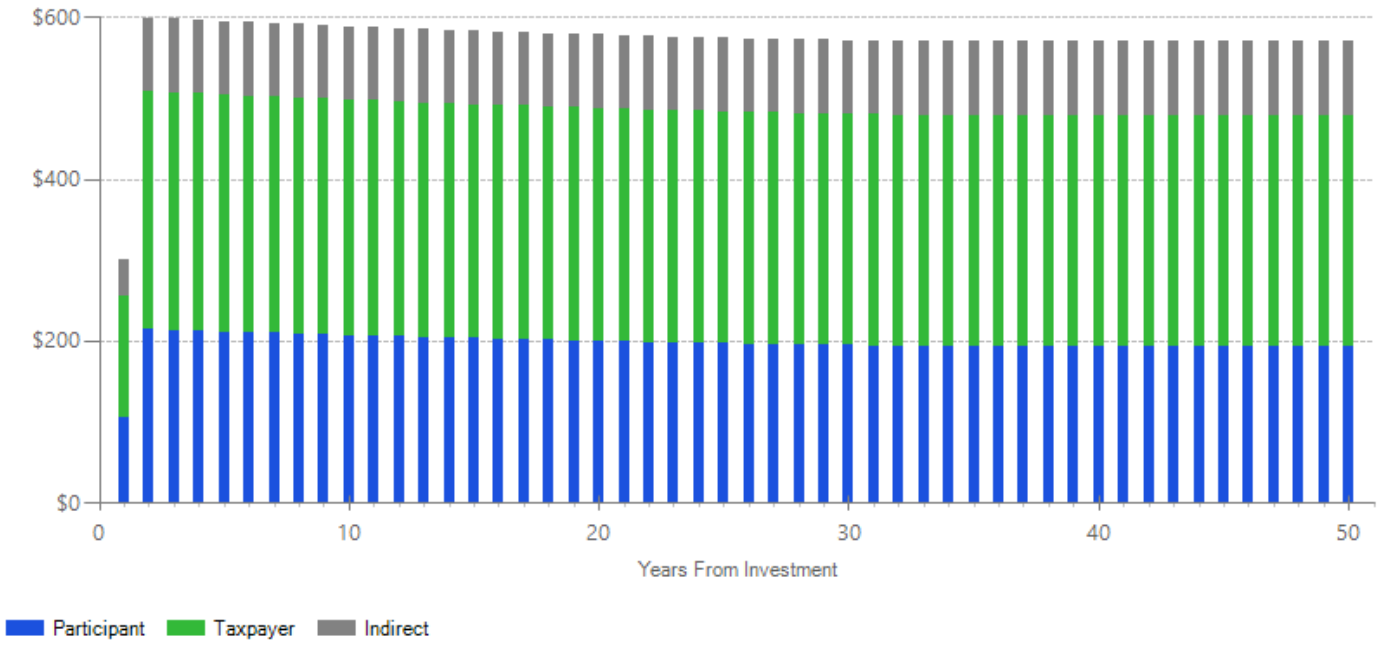
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty 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)



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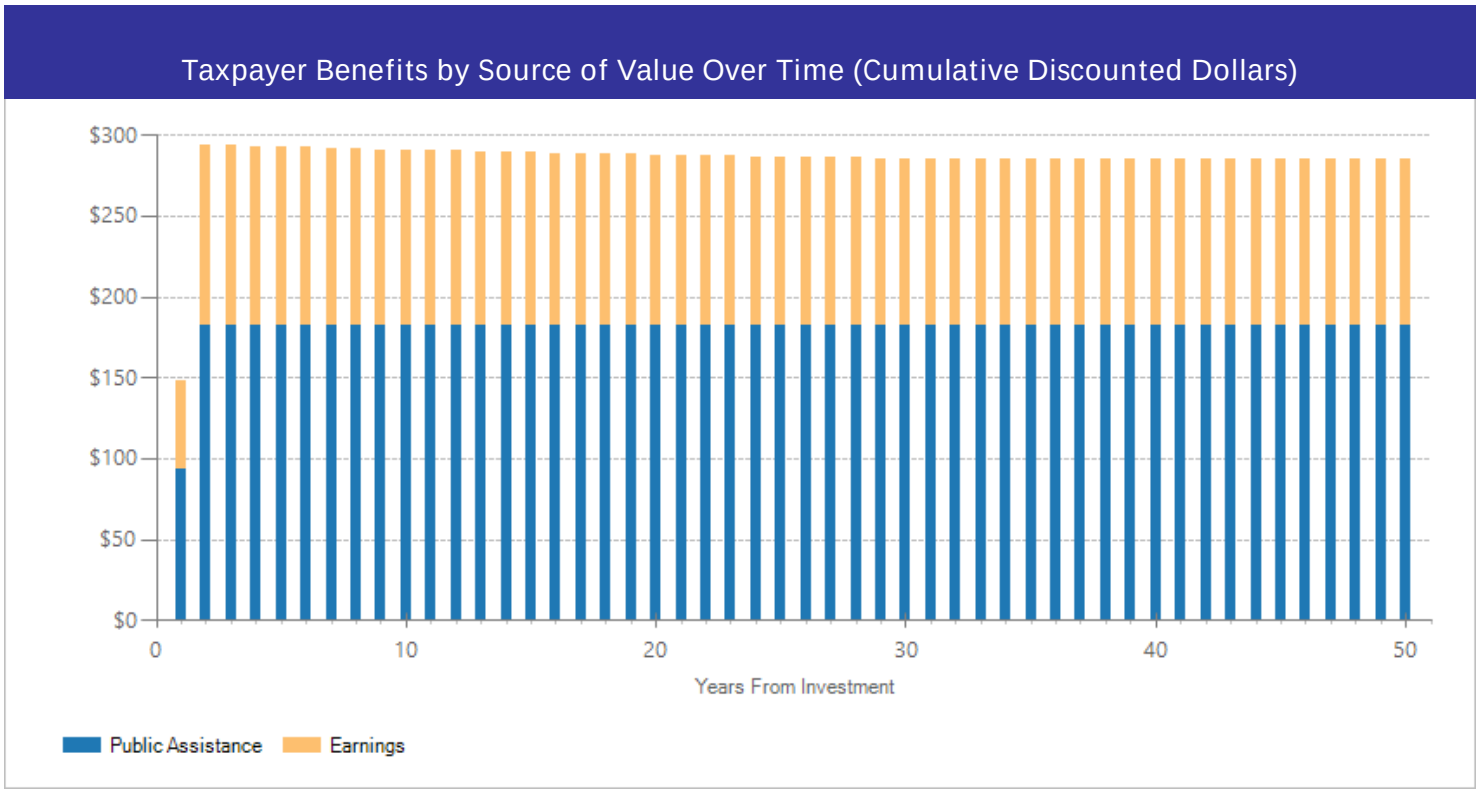

The graph above focuses on the subset of estimated cumulative benefits that accrue to taxpayers. The cash flows are divided into the source of the value.

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Anderson, J., Freedman, S., & Hamilton, G. (2009). *Results from the Los Angeles Reach for Success Program*. New York, NY: Manpower Demonstration Research Corporation.

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Case management for former welfare recipients

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Case managers work with former TANF/AFDC recipients, often in low-wage jobs, in individual or group sessions to provide counseling, job search assistance or job retention services through orientations, assessments, interviews, or telephone calls. Case managers often provide referrals to child care subsidies, transportation assistance, and other support services. They may also refer clients to education and training, particularly if job searches are unsuccessful. Welfare agencies and state employment departments provide program services for approximately one year.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$378
Participants	$69
Others	$0
Indirect	($1,594)
Total benefits	($1,147)
Net program cost	($3,476)
Benefits minus cost	($4,624)

Benefit to cost ratio	($0.33)
Benefits minus costs	($4,624)
Chance the program will produce benefits greater than the costs	20%

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	32	7	3393	0.025	0.024	32	0.000	0.014	33	0.025	0.309
Employment	32	7	3377	0.019	0.030	32	0.000	0.014	33	0.019	0.517
Food assistance	32	7	4396	-0.012	0.021	32	0.000	0.103	33	-0.012	0.578
Public assistance	32	7	4396	-0.015	0.021	32	0.000	0.014	33	-0.015	0.482

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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.

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Detailed Monetary Benefit Estimates Per Participant

Affected outcome:	Resulting benefits:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$89	$209	$0	$0	$297
Public assistance	Public assistance	$223	($82)	$0	$112	$254
Food assistance	Food assistance	$66	($58)	$0	$33	$40
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($1,738)	($1,738)
Totals		$378	$69	$0	($1,594)	($1,147)

[1]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.

[2]"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.

[3]"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	$2,911	2014	Present value of net program costs (in 2022 dollars)	($3,476)
Comparison costs	$0	2014	Cost range (+ or -)	99%

Case management services typically last about one year. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Hamilton et al., 1996; Kemple et al., 1995; Kornfeld & Rupp, 2000; Miller et al., 2008; Roder & Scrivner, 2005). Costs vary by study but may include central administration, staff salaries, staff benefits, recruitment, assessment services, job placement and retention services, short-term training provided by staff, transportation, and medical treatments.

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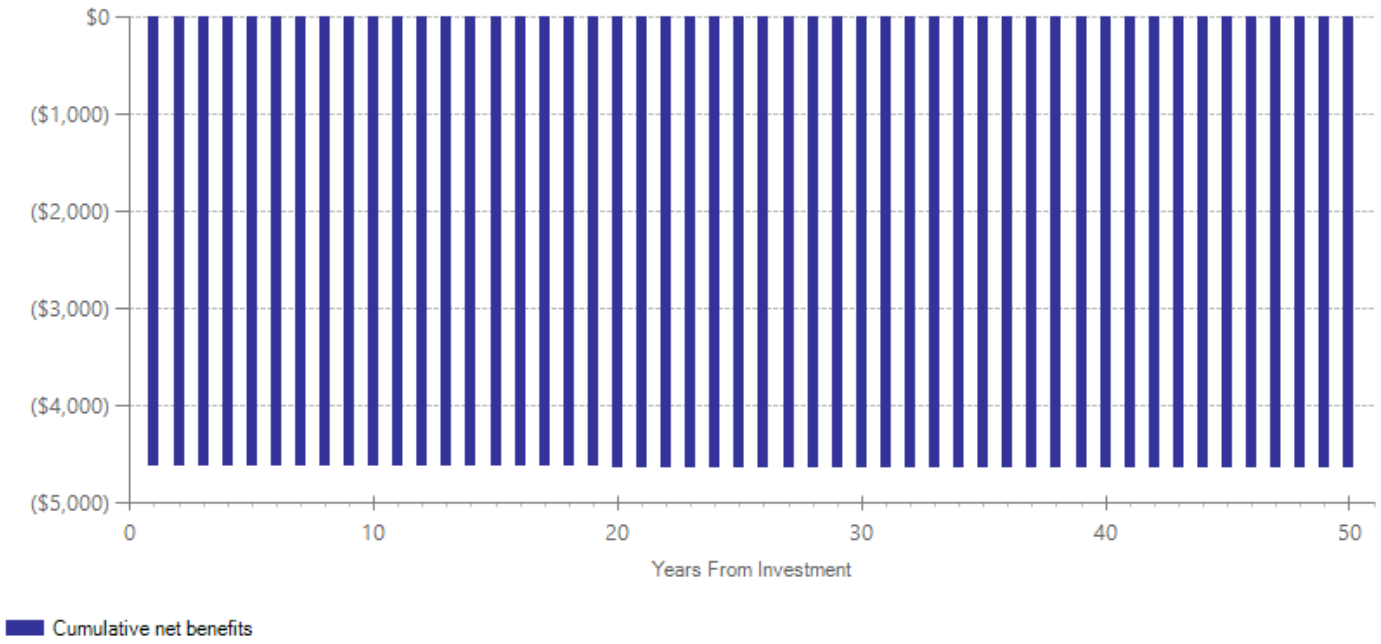
Benefits Minus Costs Over Time (Cumulative Discounted Dollars)



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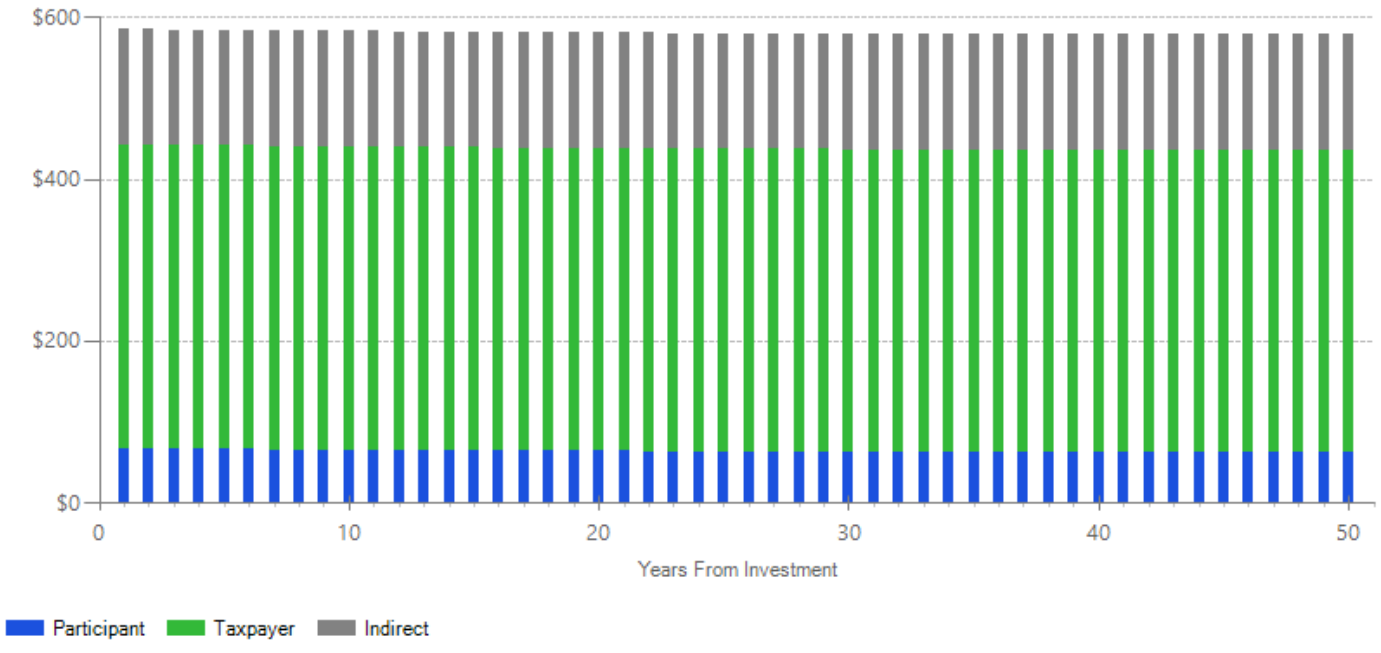
Benefits by Perspective Over Time (Cumulative Discounted Dollars)



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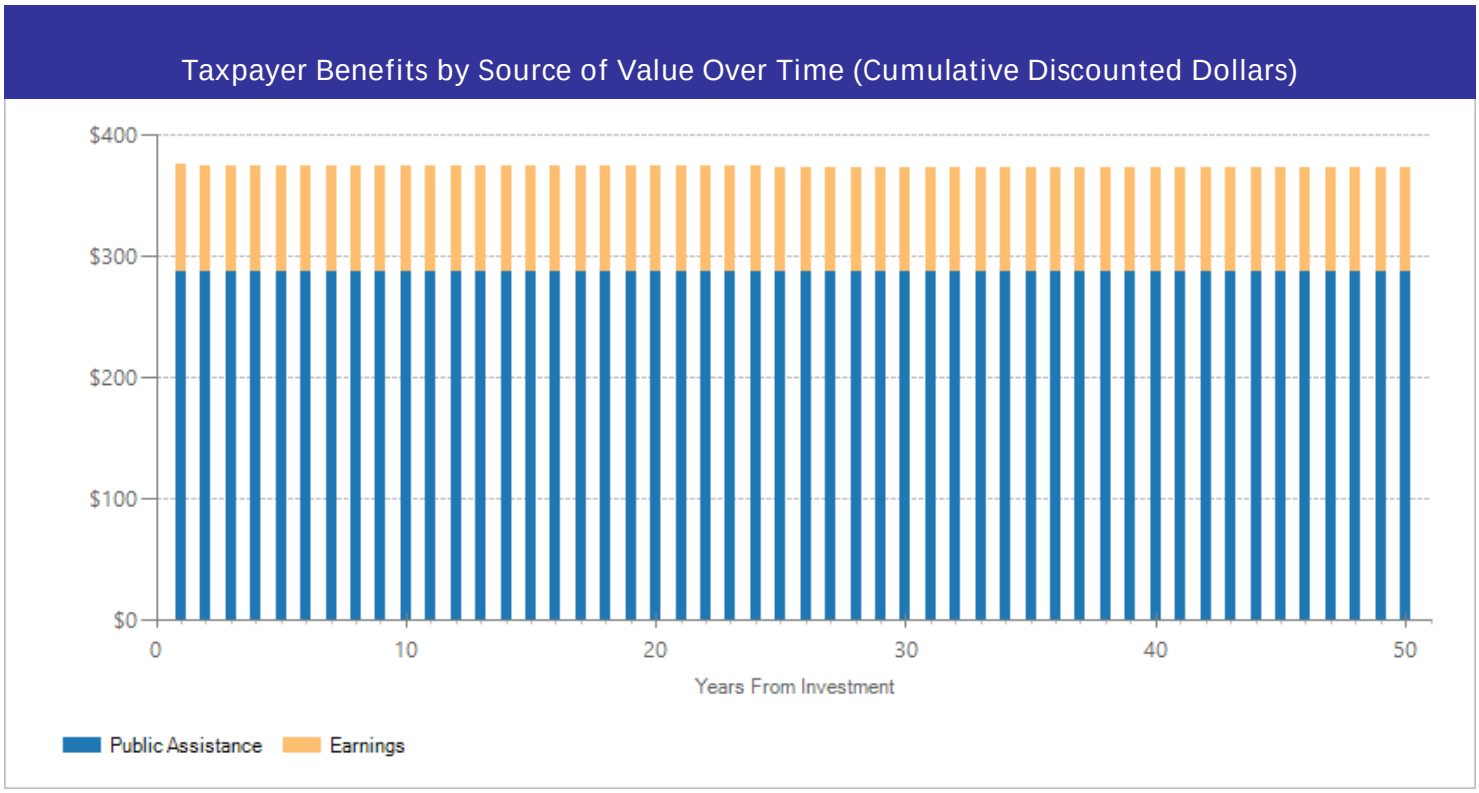

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Training, no work experience

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Participants receive job search and placement assistance, adult basic education, ESL and GED preparation, vocational training, or support services such as child care and housing support. Training targets occupations as diverse as electromechanics, nursing, and construction, among many others. Some of these programs take place at community colleges, targeting adults who failed to graduate high school, while others occur at proprietary trade schools and colleges. Community-based organizations and welfare agencies may also provide these program services. They typically target TANF/AFDC recipients, dislocated workers, or low-income* individuals, lasting anywhere from one month to two years.

*The low-income population may be defined in a variety of ways, including all workers in the 25th percentile of hourly wages, individuals at or below 130% of the federal poverty line, individuals at or below 200% of the federal poverty line, or an income that meets eligibility requirements for welfare or food stamps.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$2,113	Benefit to cost ratio	$0.25
Participants	$5,403	Benefits minus costs	($7,396)
Others	$0	Chance the program will produce benefits greater than the costs	29%
Indirect	($5,019)		
Total benefits	$2,497		
Net program cost	($9,893)		
Benefits minus cost	($7,396)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Earnings*	32	41	289201	0.062	0.013	37	0.000	0.032	38	0.062	0.001
Employment	32	41	289201	0.085	0.024	37	0.000	0.032	38	0.085	0.001
Food assistance	32	25	171188	0.011	0.008	37	0.000	0.032	38	0.011	0.163
Public assistance	32	25	169101	0.006	0.008	37	0.000	0.032	38	0.006	0.446

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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.

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Detailed Monetary Benefit Estimates Per Participant

Affected outcome:	Resulting benefits:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Earnings	Labor market earnings	$2,258	$5,320	$0	$0	$7,579
Public assistance	Public assistance	($89)	$33	$0	($45)	($101)
Food assistance	Food assistance	($56)	$50	$0	($28)	($35)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($4,946)	($4,946)
Totals		$2,113	$5,403	$0	($5,019)	$2,497

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

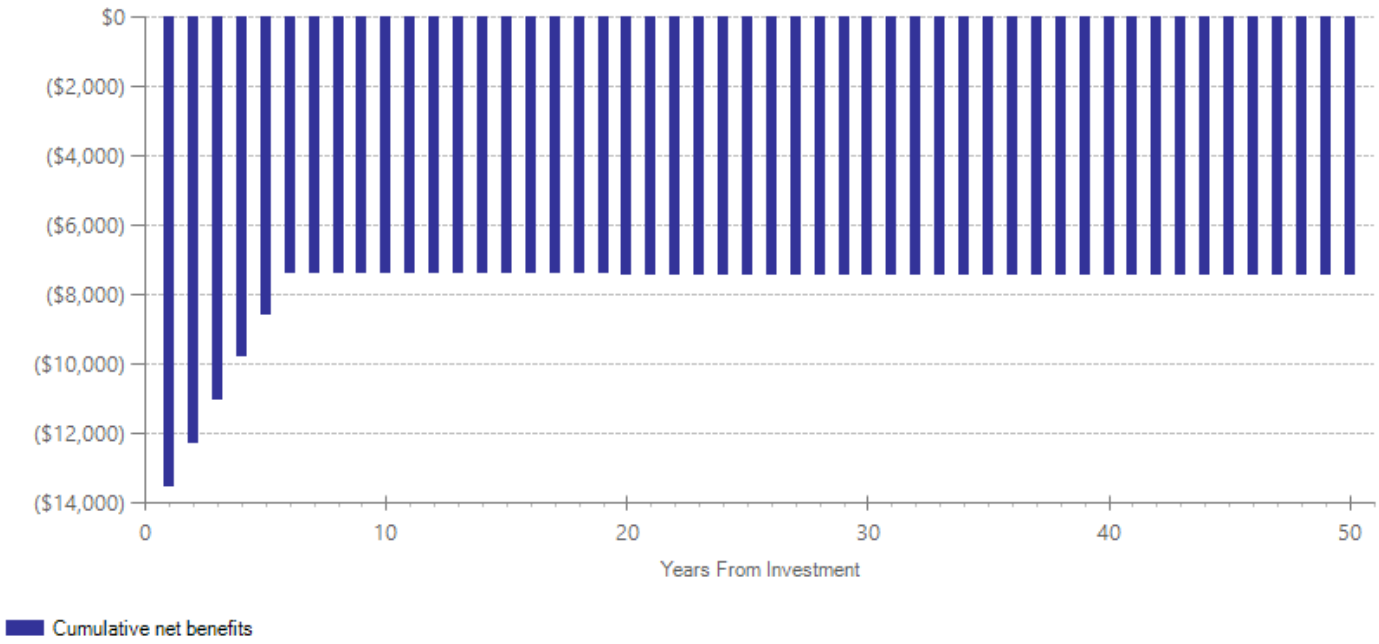
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$8,284	2014	Present value of net program costs (in 2022 dollars)	($9,893)
Comparison costs	$0	2014	Cost range (+ or -)	31%

These programs typically last anywhere from one month to two years. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Bloom et al., 2002; Burghardt et al., 1992; Cave et al., 1993; Hollenbeck & Huang, 2014; Hollenbeck & Huang, 2006; Hollenbeck & Huang, 2003). Costs vary by study but may include foregone earnings, foregone tax receipts, tuition payments if any, support services such as transportation and child care, medical/dental services, and safety net services.

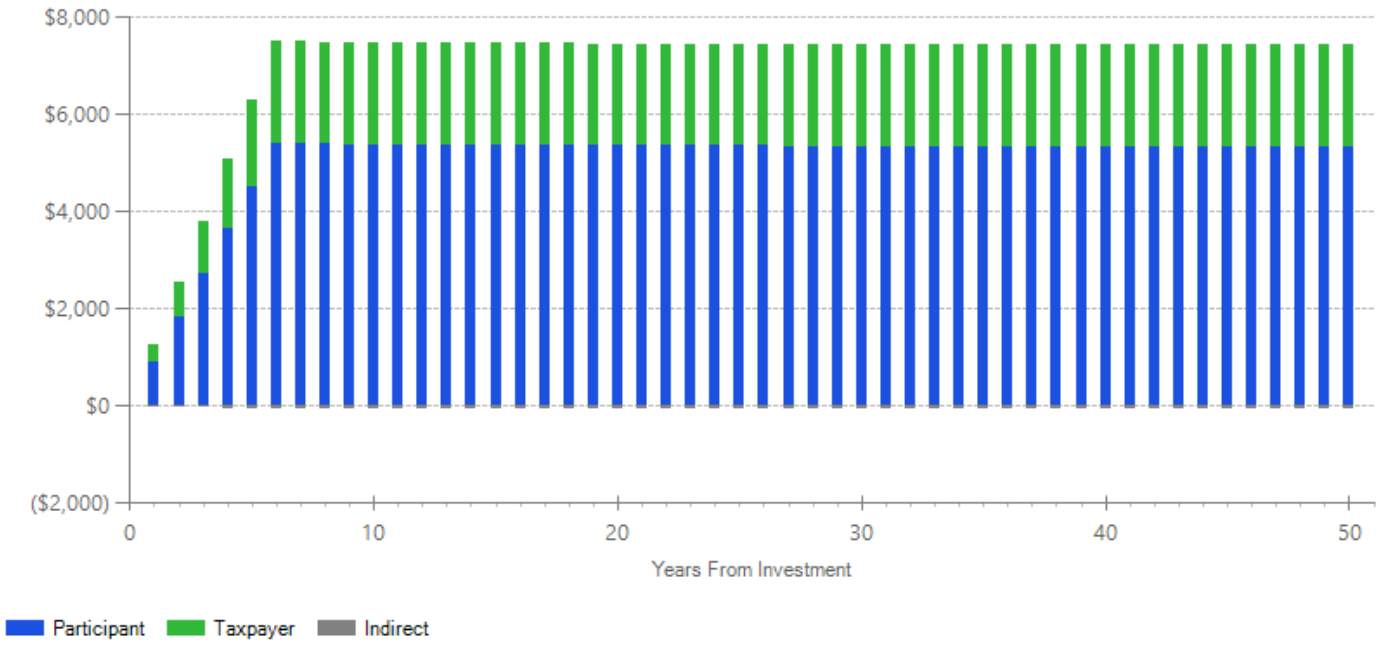
The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty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

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)

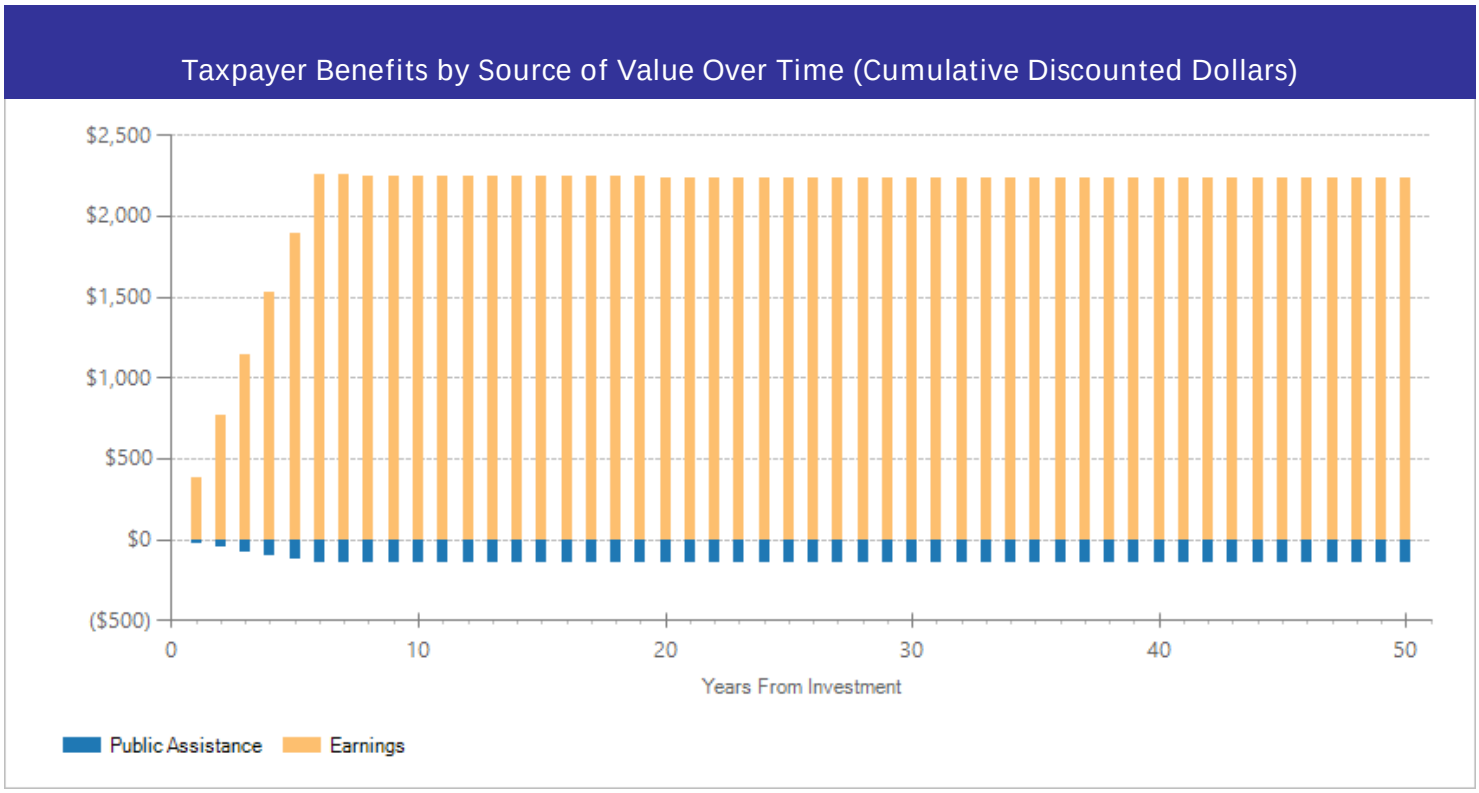


The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost 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.



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.

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Training with work experience for youth

Workforce Development

Benefit-cost estimates updated December 2023. Literature review updated November 2015.

Program Description: Youth ages 16-24 may receive job search and placement assistance, adult basic education, ESL and GED preparation, vocational training, or support services such as child care and housing support. All participants in these programs also receive some type of work experience, paid or unpaid. Treatment may be sequential, where participants first undergo training and then receive work experience, or follow individualized employment plans for each participant. Community organizations, welfare agencies, and federally or state-funded programs administered by state, county, or local government agencies typically provide these services to low-income youth.* We do not include programs that target youth still attending high school, so these participants are often high school dropouts. Programs may last anywhere from two to ten months.
*The low-income population may be defined in a variety of ways, including all workers in the 25th percentile of hourly wages, individuals at or below 130% of the federal poverty line, individuals at or below 200% of the federal poverty line, or an income that meets eligibility requirements for welfare or food stamps

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$696	Benefit to cost ratio	($0.39)
Participants	$31	Benefits minus costs	($12,219)
Others	($72)	Chance the program will produce	
Indirect	($4,090)	benefits greater than the costs	32%
Total benefits	($3,435)		
Net program cost	($8,783)		
Benefits minus cost	($12,219)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). 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	SE	Age	ES	SE	Age	ES	p-value
Crime	20	3	2304	0.006	0.067	25	0.006	0.067	35	0.006	0.924
Earnings*	20	8	10851	0.002	0.027	25	0.000	0.018	26	0.006	0.846
Employment	20	6	7923	0.006	0.053	25	0.000	0.018	26	0.012	0.840
Food assistance	20	6	6343	0.016	0.022	25	0.000	0.018	26	0.014	0.517
Public assistance	20	7	7752	-0.050	0.022	25	0.000	0.018	26	-0.066	0.002

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

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:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Crime	Criminal justice system	($29)	$0	($72)	($14)	($116)
Earnings	Labor market earnings	$93	$219	$0	$0	$312
Public assistance	Public assistance	$714	($260)	$0	$357	$810
Food assistance	Food assistance	($82)	$72	$0	($41)	($50)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($4,392)	($4,392)
Totals		$696	$31	($72)	($4,090)	($3,435)

[1]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.

[2]"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.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

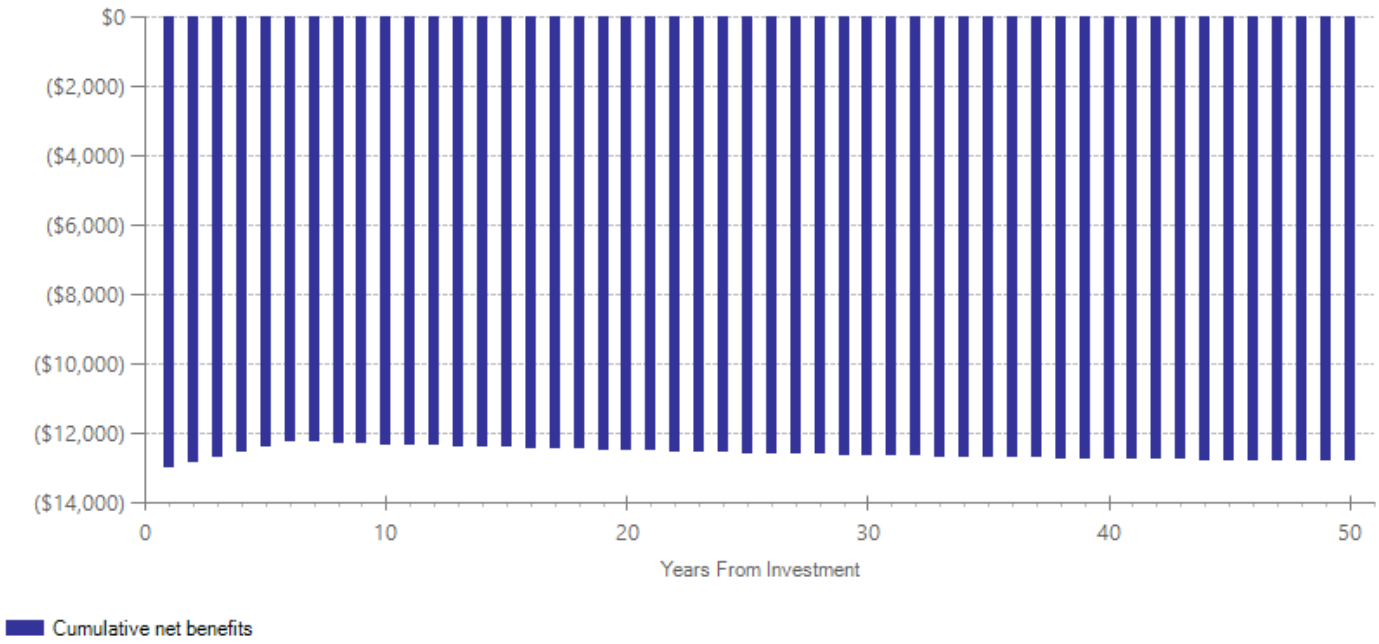
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$7,356	2014	Present value of net program costs (in 2022 dollars)	($8,783)
Comparison costs	$0	2014	Cost range (+ or -)	48%

These programs typically last between two and ten months. We estimated the average annual cost of treatment per participant using data from studies in our meta-analysis that report cost estimates (Hollenbeck & Huang, 2003; Kerachsky et al., 1985; Orr et al., 1996; Quint et al., 1997). Costs vary by study but may include administrative costs, employment services, case management, eligibility-related services, foregone earnings, tuition payments, allowances, support services such as transportation assistance and child care costs, and wage subsidies.

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)



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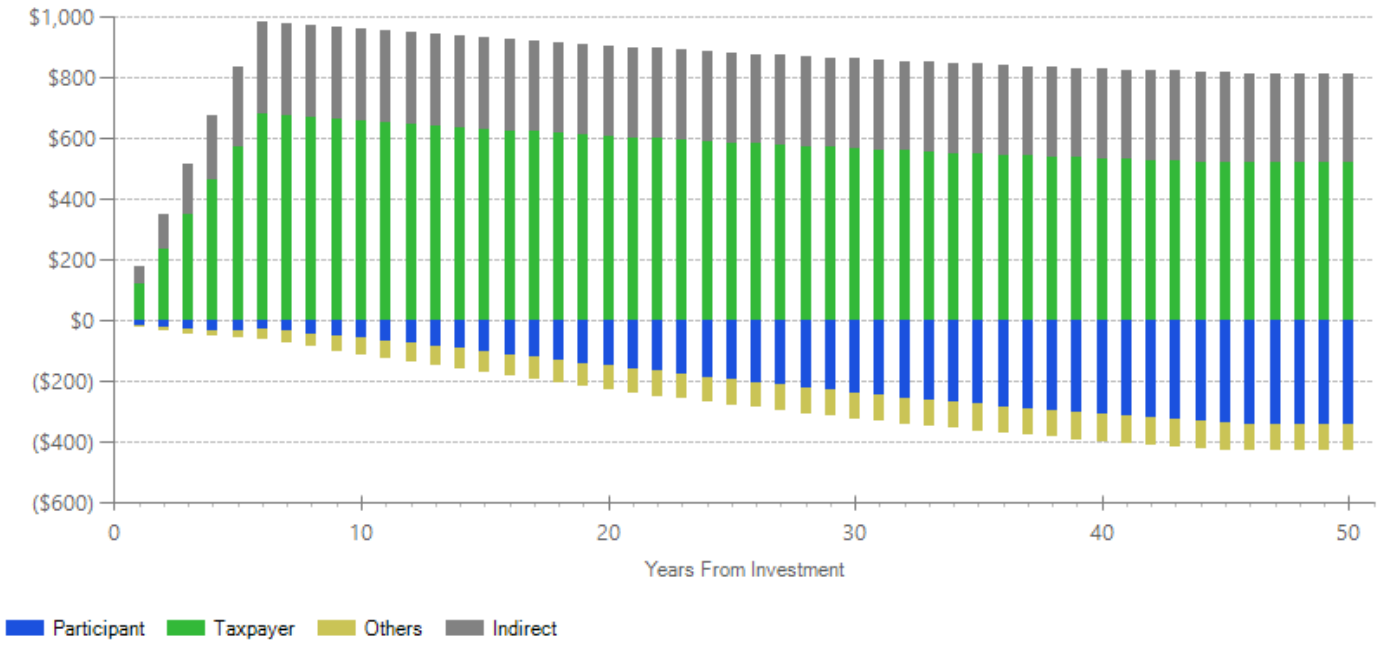
Benefits by Perspective Over Time (Cumulative Discounted Dollars)



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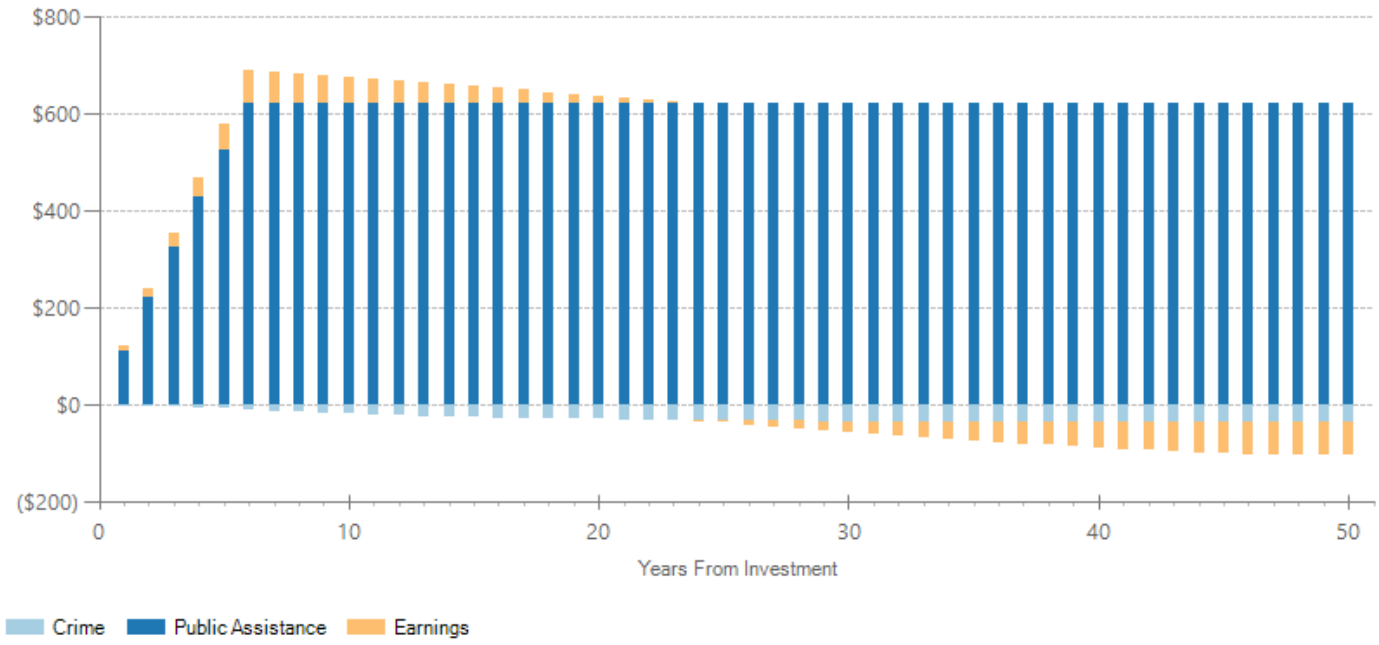
Taxpayer Benefits by Source of Value Over Time (Cumulative Discounted Dollars)



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