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 2016. 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	$4,869	Benefit to cost ratio	$2.70
Participants	$13,779	Benefits minus costs	$9,352
Others	($530)	Chance the program will produce	
Indirect	($3,276)	benefits greater than the costs	85 %
Total benefits	$14,843		
Net program cost	($5,491)		
Benefits minus cost	$9,352		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Crime	$0	$11	$24	$5	$41
Labor market earnings associated with employment	$12,968	$5,889	$0	$0	$18,857
Public assistance	$390	($918)	$0	($463)	($991)
Health care associated with educational attainment	($139)	$506	($554)	$253	$66
Food assistance	$560	($619)	$0	($312)	($372)
Adjustment for deadweight cost of program	$0	$0	$0	($2,759)	($2,759)
Totals	$13,779	$4,869	($530)	($3,276)	$14,843

[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.

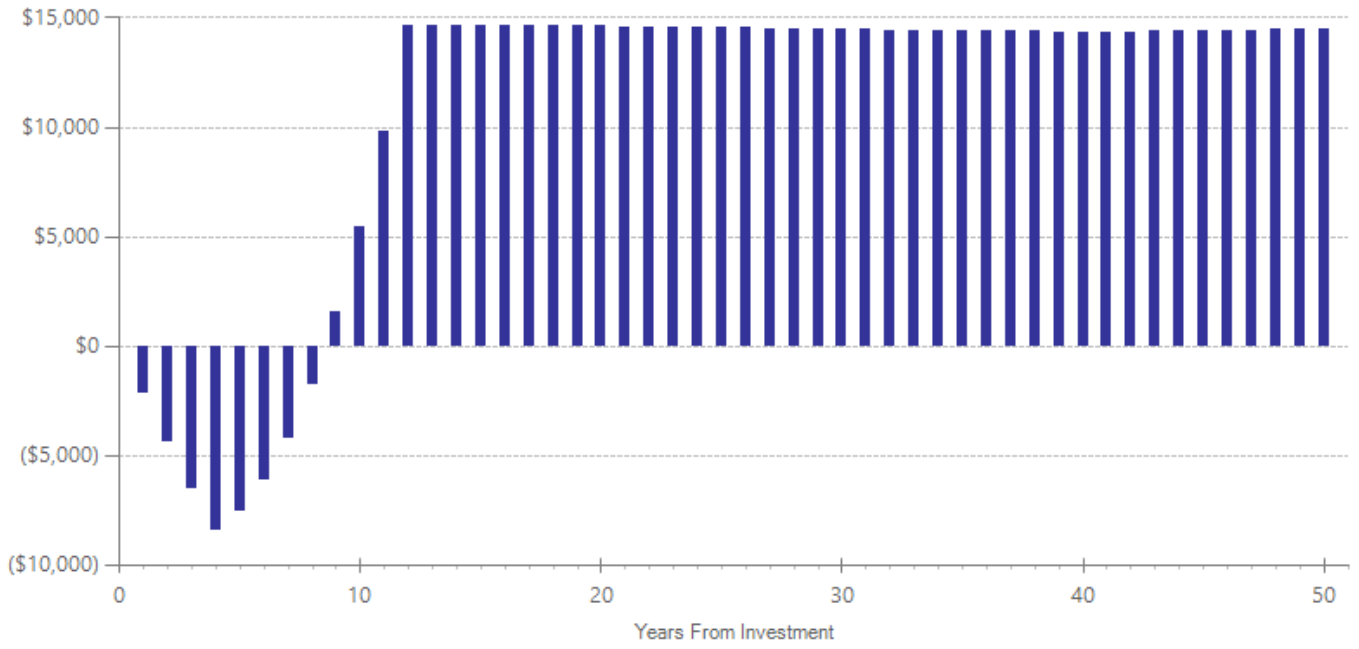
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$1,441	2014	Present value of net program costs (in 2015 dollars)	($5,491)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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	3	1129	0.057	0.053	18	0.057	0.053	18	0.057	0.285
Test scores	3	585	0.051	0.048	17	0.051	0.048	17	0.051	0.288
Public assistance	1	799	0.072	0.070	22	0.000	0.000	24	0.072	0.303
Hours worked	1	770	0.056	0.054	26	0.000	0.000	28	0.056	0.293
Earnings*	1	770	0.106	0.041	26	0.000	0.000	27	0.106	0.010
Food assistance	1	799	0.081	0.070	22	0.000	0.000	24	0.081	0.250
Graduate with 2-year degree	1	782	0.040	0.099	26	0.040	0.099	26	0.040	0.685
Graduate with 4-year degree	1	782	-0.082	0.086	26	-0.082	0.086	26	-0.082	0.339

* 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.

Citations Used in the Meta-Analysis

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Case management for unemployment insurance claimants

Workforce Development

Benefit-cost estimates updated December 2016. 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	$1,154	Benefit to cost ratio	$19.84
Participants	$2,542	Benefits minus costs	$3,424
Others	$0	Chance the program will produce benefits greater than the costs	69 %
Indirect	($91)		
Total benefits	$3,606		
Net program cost	($182)		
Benefits minus cost	$3,424		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$2,542	$1,154	$0	$0	$3,697
Adjustment for deadweight cost of program	$0	$0	$0	($91)	($91)
Totals	$2,542	$1,154	$0	($91)	$3,606

[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.

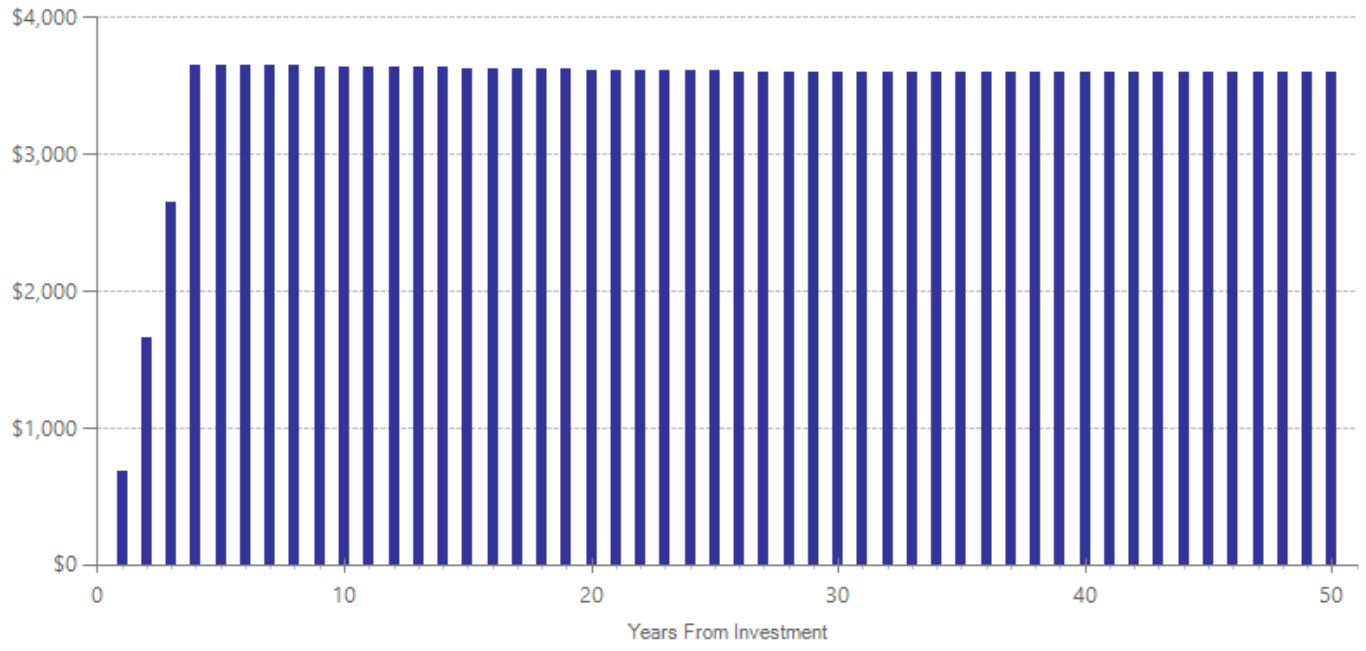
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$180	2014	Present value of net program costs (in 2015 dollars)	($182)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	11	102201	0.036	0.015	42	0.000	0.014	43	0.036	0.019
Employment	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.

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 2016. 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	$3,781	Benefit to cost ratio	$1.67
Participants	$4,558	Benefits minus costs	$2,770
Others	$0	Chance the program will produce benefits greater than the costs	78 %
Indirect	($1,411)		
Total benefits	$6,928		
Net program cost	($4,158)		
Benefits minus cost	$2,770		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$5,353	$2,431	$0	$0	$7,783
Public assistance	($378)	$889	$0	$447	$958
Food assistance	($417)	$461	$0	$232	$276
Adjustment for deadweight cost of program	$0	$0	$0	($2,089)	($2,089)
Totals	$4,558	$3,781	$0	($1,411)	$6,928

[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.

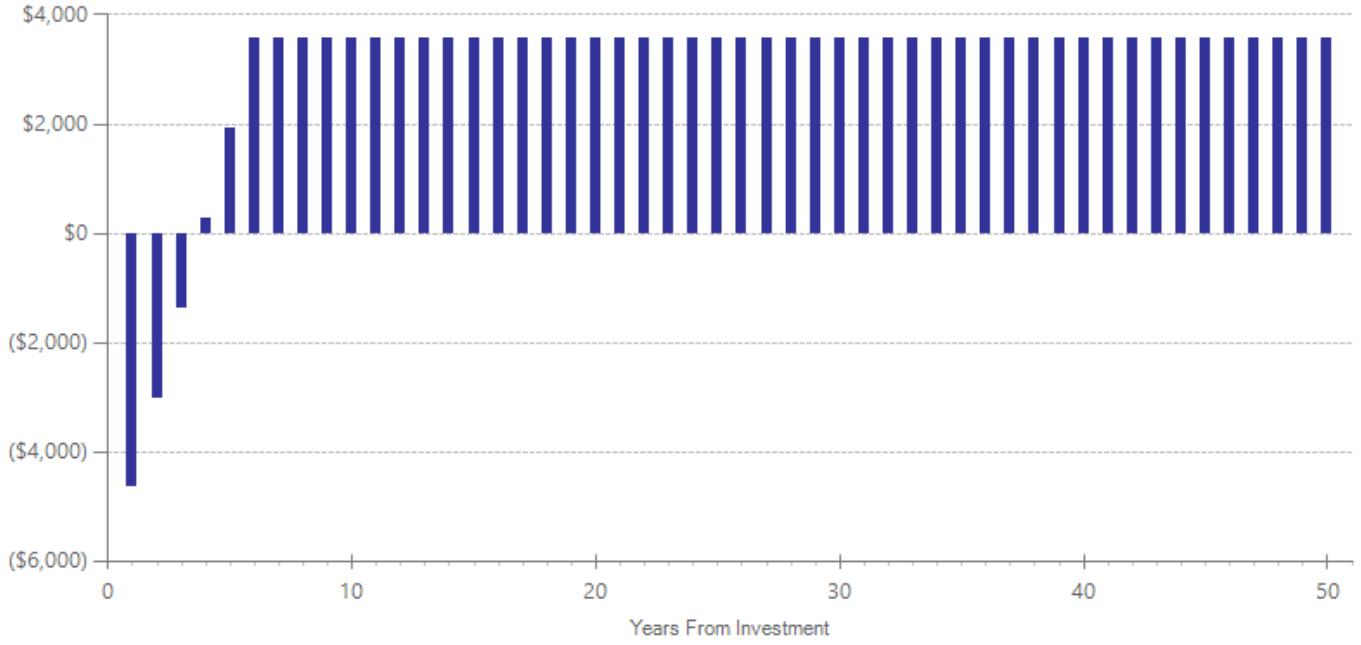
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$4,154	2014	Present value of net program costs (in 2015 dollars)	($4,158)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the “break-even” point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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	95653	0.146	0.026	39	0.000	0.018	40	0.149	0.001
Employment	32	95650	0.091	0.014	39	0.000	0.018	40	0.094	0.001
Food assistance	19	42878	-0.055	0.010	39	0.000	0.018	40	-0.058	0.001
Public assistance	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.

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Job search and placement

Workforce Development

Benefit-cost estimates updated December 2016. 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	$1,491	Benefit to cost ratio	$4.54
Participants	$604	Benefits minus costs	$1,829
Others	$0	Chance the program will produce benefits greater than the costs	67 %
Indirect	$250		
Total benefits	$2,345		
Net program cost	($517)		
Benefits minus cost	$1,829		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$1,037	$471	$0	$0	$1,509
Public assistance	($433)	$1,020	$0	$508	$1,095
Adjustment for deadweight cost of program	$0	$0	$0	($258)	($258)
Totals	$604	$1,491	$0	$250	$2,345

[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.

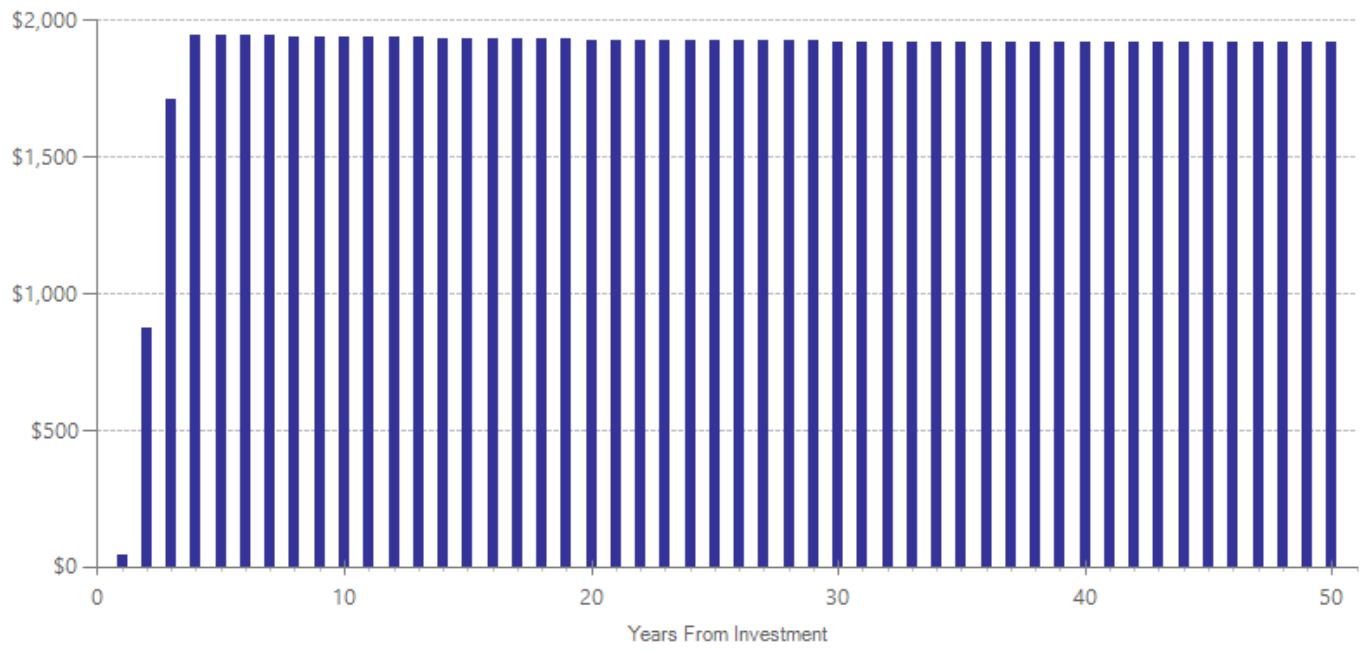
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$515	2014	Present value of net program costs (in 2015 dollars)	($517)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	8	13539	0.038	0.024	38	0.000	0.017	40	0.038	0.103
Employment	9	14174	0.081	0.037	38	0.000	0.017	40	0.081	0.030
Public assistance	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.

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.

Citations Used in the Meta-Analysis

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Work experience

Workforce Development

Benefit-cost estimates updated December 2016. 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	$2,570	Benefit to cost ratio	$1.87
Participants	$1,547	Benefits minus costs	$1,780
Others	$0	Chance the program will produce benefits greater than the costs	81 %
Indirect	($283)		
Total benefits	$3,834		
Net program cost	($2,053)		
Benefits minus cost	$1,780		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$2,378	$1,080	$0	$0	$3,457
Public assistance	($458)	$1,078	$0	$540	$1,160
Food assistance	($372)	$412	$0	$207	$247
Adjustment for deadweight cost of program	$0	$0	$0	($1,030)	($1,030)
Totals	$1,547	$2,570	$0	($283)	$3,834

[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.

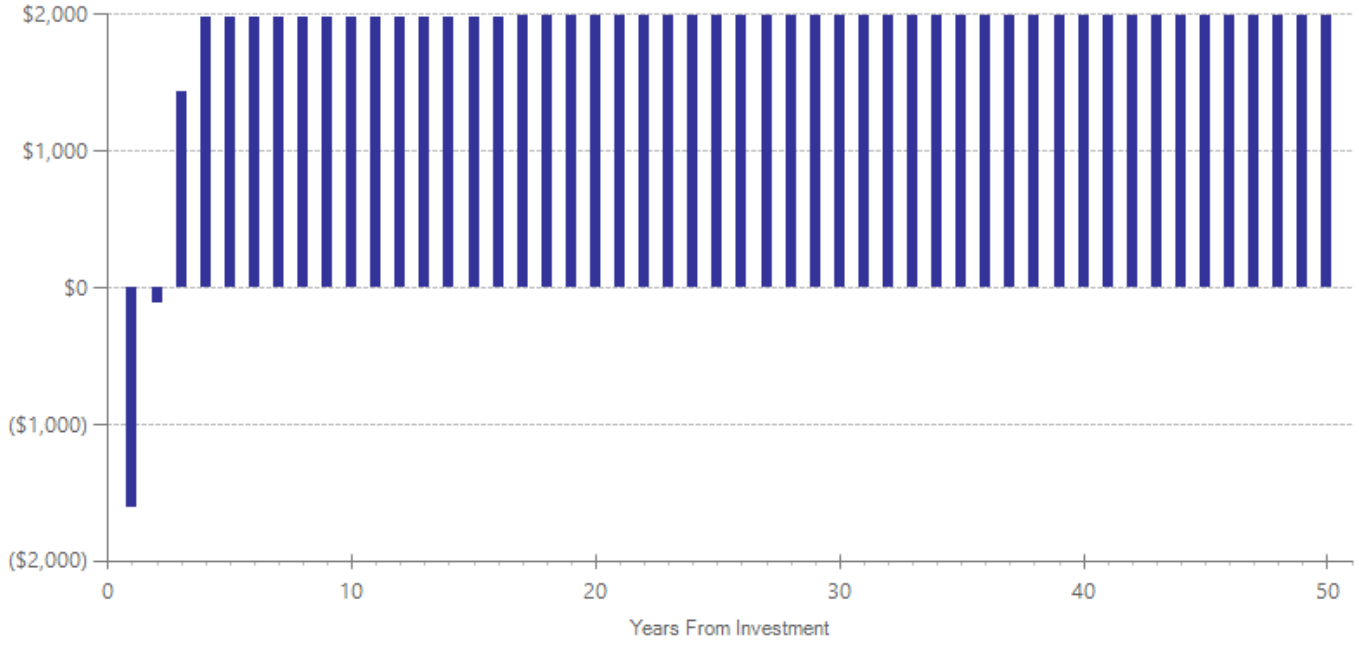
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,052	2014	Present value of net program costs (in 2015 dollars)	($2,053)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	15	15792	0.091	0.026	35	0.000	0.001	37	0.091	0.001
Employment	14	14699	0.092	0.025	35	0.000	0.001	37	0.092	0.001
Food assistance	3	2222	-0.046	0.061	35	0.000	0.001	37	-0.046	0.446
Public assistance	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.

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 2016. 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	$2,315	Benefit to cost ratio	$1.24
Participants	$4,842	Benefits minus costs	$989
Others	$0	Chance the program will produce benefits greater than the costs	54 %
Indirect	($2,030)		
Total benefits	$5,127		
Net program cost	($4,138)		
Benefits minus cost	$989		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$4,860	$2,207	$0	$0	$7,068
Public assistance	($71)	$166	$0	$85	$181
Food assistance	$52	($58)	$0	($28)	($34)
Adjustment for deadweight cost of program	$0	$0	$0	($2,087)	($2,087)
Totals	$4,842	$2,315	$0	($2,030)	$5,127

[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.

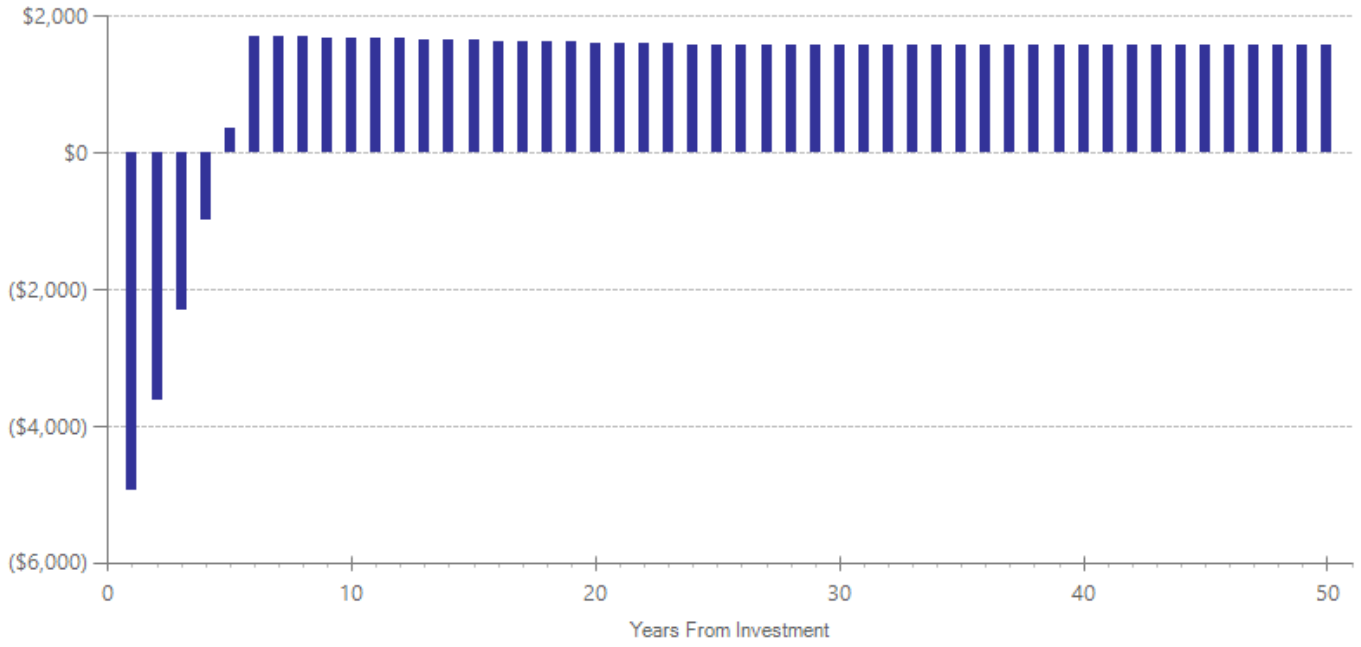
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$4,102	2014	Present value of net program costs (in 2015 dollars)	($4,138)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	17	59470	0.045	0.021	47	0.000	0.018	48	0.048	0.031
Employment	15	48173	0.079	0.066	47	0.000	0.018	48	0.082	0.239
Food assistance	6	14460	0.007	0.030	47	0.000	0.018	48	0.007	0.827
Public assistance	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.

Citations Used in the Meta-Analysis

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Case management for former welfare recipients

Workforce Development

Benefit-cost estimates updated December 2016. 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	$391	Benefit to cost ratio	($0.32)
Participants	($24)	Benefits minus costs	($3,870)
Others	$0	Chance the program will produce benefits greater than the costs	19 %
Indirect	($1,301)		
Total benefits	($934)		
Net program cost	($2,936)		
Benefits minus cost	($3,870)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$160	$73	$0	$0	$233
Public assistance	($92)	$215	$0	$108	$232
Food assistance	($93)	$103	$0	$52	$62
Adjustment for deadweight cost of program	$0	$0	$0	($1,461)	($1,461)
Totals	($24)	$391	$0	($1,301)	($934)

[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.

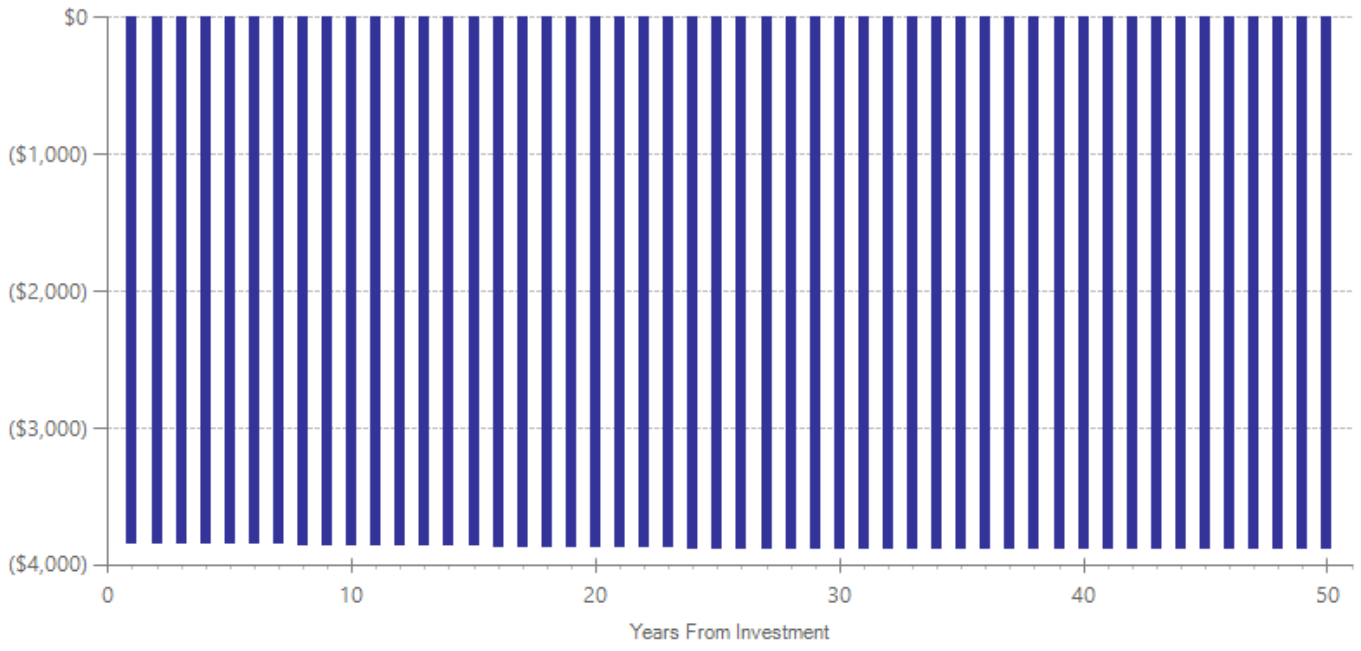
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,911	2014	Present value of net program costs (in 2015 dollars)	($2,936)
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.

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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	7	3393	0.025	0.024	32	0.000	0.014	33	0.025	0.309
Employment	7	3377	0.019	0.030	32	0.000	0.014	33	0.019	0.517
Food assistance	7	4396	-0.012	0.021	32	0.000	0.103	33	-0.012	0.578
Public assistance	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.

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.

Citations Used in the Meta-Analysis

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Case management for welfare recipients or low-income individuals

Workforce Development

Benefit-cost estimates updated December 2016. 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	$246	Benefit to cost ratio	($0.33)
Participants	$167	Benefits minus costs	($3,885)
Others	$0	Chance the program will produce benefits greater than the costs	17 %
Indirect	($1,378)		
Total benefits	($965)		
Net program cost	($2,919)		
Benefits minus cost	($3,885)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$203	$92	$0	$0	$295
Public assistance	($91)	$213	$0	$106	$229
Food assistance	$54	($60)	$0	($30)	($36)
Adjustment for deadweight cost of program	$0	$0	$0	($1,454)	($1,454)
Totals	$167	$246	$0	($1,378)	($965)

[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.

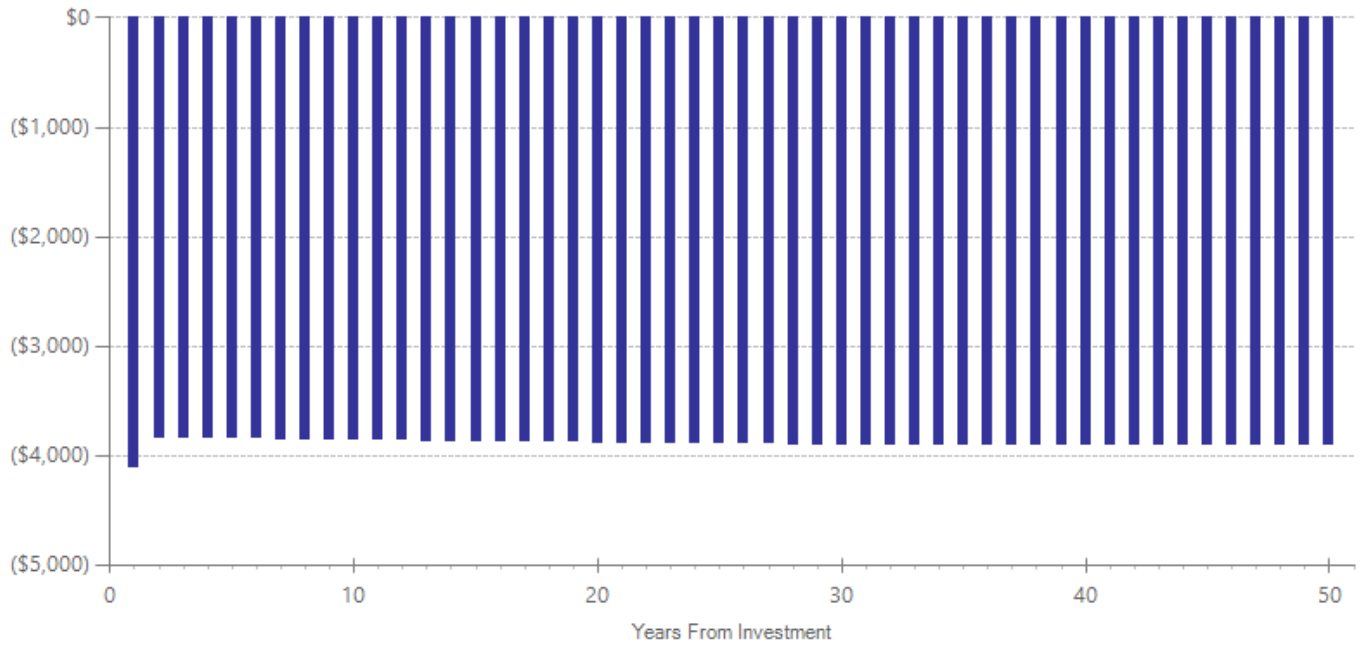
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,911	2014	Present value of net program costs (in 2015 dollars)	($2,919)
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.

Detailed Annual Cost Estimates Per Participant



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 non-discounted dollars to simplify the "break-even" point from a budgeting perspective. 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.

Meta-Analysis of Program Effects

Outcomes measured	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*	16	30680	0.015	0.009	35	0.000	0.014	36	0.015	0.096
Employment	15	26520	0.032	0.018	35	0.000	0.014	36	0.032	0.085
Food assistance	10	22854	0.007	0.016	35	0.000	0.014	36	0.007	0.688
Public assistance	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.

Citations Used in the Meta-Analysis

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Training, no work experience

Workforce Development

Benefit-cost estimates updated December 2016. 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	$2,308	Benefit to cost ratio	$0.44
Participants	$5,602	Benefits minus costs	($4,661)
Others	$0	Chance the program will produce benefits greater than the costs	38 %
Indirect	($4,274)		
Total benefits	$3,636		
Net program cost	($8,297)		
Benefits minus cost	($4,661)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Labor market earnings associated with employment	$5,481	$2,489	$0	$0	$7,970
Public assistance	$38	($90)	$0	($46)	($97)
Food assistance	$82	($91)	$0	($46)	($55)
Adjustment for deadweight cost of program	$0	$0	$0	($4,182)	($4,182)
Totals	$5,602	$2,308	$0	($4,274)	$3,636

[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.

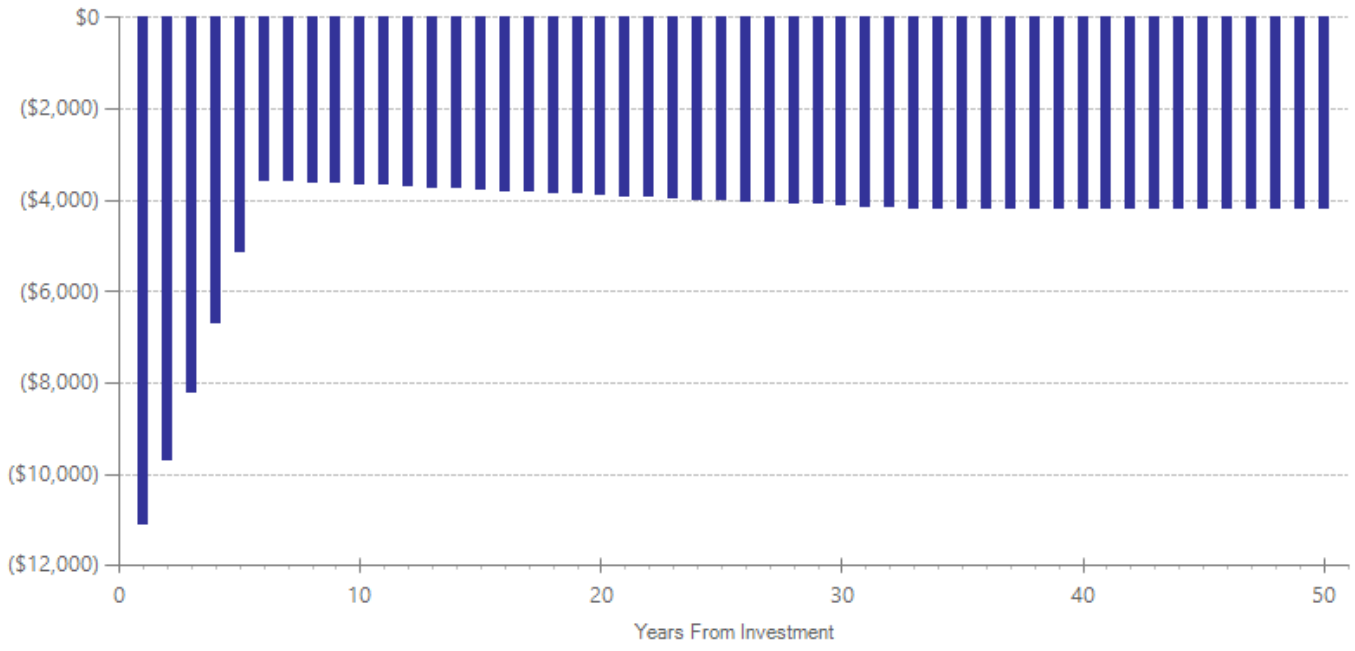
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$8,284	2014	Present value of net program costs (in 2015 dollars)	($8,297)
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.

Detailed Annual Cost Estimates Per Participant



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Meta-Analysis of Program Effects

Outcomes measured	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*	41	289201	0.062	0.013	37	0.000	0.032	38	0.062	0.001
Employment	41	289201	0.085	0.024	37	0.000	0.032	38	0.085	0.001
Food assistance	25	171188	0.011	0.008	37	0.000	0.032	38	0.011	0.163
Public assistance	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.

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Citations Used in the Meta-Analysis

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Training with work experience for youth

Workforce Development

Benefit-cost estimates updated December 2016. 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	$675	Benefit to cost ratio	($0.34)
Participants	$15	Benefits minus costs	($9,856)
Others	$205	Chance the program will produce benefits greater than the costs	32 %
Indirect	($3,389)		
Total benefits	($2,494)		
Net program cost	($7,362)		
Benefits minus cost	($9,856)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). 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.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Crime	$0	$86	$205	$43	$335
Labor market earnings associated with employment	$163	$74	$0	$0	$238
Public assistance	($281)	$661	$0	$332	$712
Food assistance	$132	($146)	$0	($73)	($87)
Adjustment for deadweight cost of program	$0	$0	$0	($3,692)	($3,692)
Totals	$15	$675	$205	($3,389)	($2,494)

[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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Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$7,356	2014	Present value of net program costs (in 2015 dollars)	($7,362)
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.

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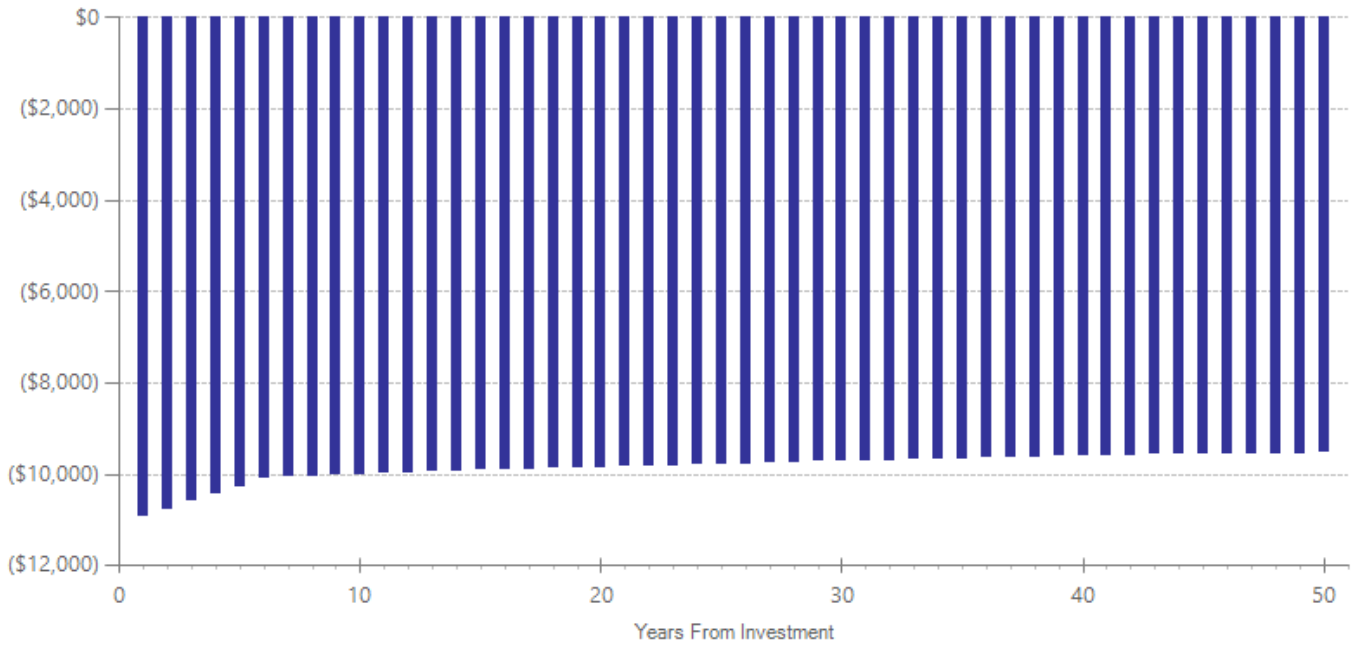
Detailed Annual Cost Estimates Per Participant



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Meta-Analysis of Program Effects

Outcomes measured	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	5	5479	-0.030	0.030	25	-0.030	0.030	35	-0.049	0.097
Earnings*	9	11129	0.001	0.025	25	0.000	0.018	26	0.004	0.882
Employment	6	7923	0.006	0.053	25	0.000	0.018	26	0.012	0.840
Food assistance	7	6474	0.018	0.022	25	0.000	0.018	26	0.016	0.455
Public assistance	8	7887	-0.048	0.022	25	0.000	0.018	26	-0.063	0.003

* 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.

Citations Used in the Meta-Analysis

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