

Positive Family Support/Family Check-Up Public Health & Prevention: Home- or Family-based

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

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

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

Program Description: Positive Family Support/Family Check-Up (formerly Adolescent Transitions Program) is a three-tiered general prevention program implemented in middle schools. The first level is a universal school component that establishes a family resource center available to students and families. A six-week prevention curriculum delivered to students introduces them to this resource. The second and third tiers provide more intensive services targeted to students with behavioral or emotional problems. The central component of these targeted services is the Family Check-Up, which includes a family assessment and motivational interviewing. Parents may also receive referrals to community services.

Because the intervention is tailored to the needs and risks of participants, participating families may receive varying amounts of services. On average, families receiving the Family Check-Up received between 6 and 12 hours of intervention services. This analysis includes evaluations of the entire three-tier Positive Family Support model and not solely the Family Check-Up component. The program can be delivered by a variety of school staff, including school counselors, school psychologists, school social workers, administrators, teachers, etc.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

| | | | |
|----------------------------|----------------|---------------------------------|----------|
| Taxpayers | \$2,840 | Benefit to cost ratio | \$197.66 |
| Participants | \$5,283 | Benefits minus costs | \$9,018 |
| Others | \$432 | Chance the program will produce | |
| Indirect | \$508 | benefits greater than the costs | 70 % |
| Total benefits | \$9,064 | | |
| Net program cost | (\$46) | | |
| Benefits minus cost | \$9,018 | | |

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

Meta-Analysis of Program Effects

| Outcomes measured | Treatment age | No. of effect sizes | Treatment N | Adjusted effect sizes and standard errors used in the benefit-cost analysis | | | | | | Unadjusted effect size (random effects model) | |
|--|---------------|---------------------|-------------|---|-------|-----|-----------------------------|-------|-----|---|---------|
| | | | | First time ES is estimated | | | Second time ES is estimated | | | ES | p-value |
| | | | | ES | SE | Age | ES | SE | Age | | |
| Crime | 12 | 3 | 362 | -0.005 | 0.166 | 16 | -0.005 | 0.166 | 26 | -0.013 | 0.936 |
| Alcohol use disorder | 12 | 1 | 488 | -0.187 | 0.154 | 22 | -0.187 | 0.154 | 32 | -0.491 | 0.002 |
| Alcohol use before end of middle school | 12 | 1 | 386 | -0.129 | 0.208 | 13 | -0.129 | 0.208 | 13 | -0.341 | 0.101 |
| Cannabis use before end of middle school | 12 | 1 | 386 | -0.112 | 0.208 | 13 | -0.112 | 0.208 | 13 | -0.294 | 0.157 |
| Smoking before end of middle school | 12 | 1 | 386 | -0.193 | 0.208 | 13 | -0.193 | 0.208 | 13 | -0.507 | 0.015 |
| Regular smoking | 12 | 1 | 488 | -0.168 | 0.154 | 21 | -0.168 | 0.154 | 31 | -0.442 | 0.004 |
| Alcohol use before end of high school | 12 | 1 | 500 | -0.019 | 0.152 | 16 | -0.019 | 0.152 | 18 | -0.050 | 0.743 |
| Smoking before end of high school | 12 | 1 | 500 | -0.052 | 0.152 | 16 | -0.052 | 0.152 | 18 | -0.138 | 0.367 |
| Cannabis use before end of high school | 12 | 1 | 500 | -0.046 | 0.152 | 16 | -0.046 | 0.152 | 18 | -0.120 | 0.431 |
| Major depressive disorder | 12 | 2 | 438 | -0.081 | 0.190 | 14 | 0.000 | 0.310 | 16 | -0.111 | 0.558 |
| Externalizing behavior symptoms | 12 | 2 | 6957 | -0.009 | 0.017 | 13 | -0.005 | 0.011 | 16 | -0.010 | 0.584 |
| Cannabis use disorder | 12 | 1 | 488 | -0.091 | 0.154 | 22 | -0.091 | 0.154 | 32 | -0.238 | 0.123 |
| Test scores | 12 | 1 | 6457 | -0.008 | 0.018 | 13 | -0.006 | 0.019 | 17 | -0.008 | 0.668 |
| Alcohol use [^] | 12 | 1 | 488 | -0.075 | 0.154 | 21 | n/a | n/a | n/a | -0.197 | 0.201 |
| Cannabis use [^] | 12 | 1 | 488 | -0.047 | 0.154 | 21 | n/a | n/a | n/a | -0.125 | 0.418 |
| Grade point average [^] | 12 | 1 | 500 | -0.023 | 0.152 | 16 | n/a | n/a | n/a | -0.062 | 0.685 |
| School attendance [^] | 12 | 2 | 6957 | 0.001 | 0.017 | 13 | n/a | n/a | n/a | 0.001 | 0.949 |
| Substance use [^] | 12 | 1 | 6457 | 0.005 | 0.018 | 13 | n/a | n/a | n/a | 0.005 | 0.789 |

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

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 | \$37 | \$0 | \$91 | \$18 | \$146 |
| Test scores | Labor market earnings associated with test scores | (\$259) | (\$607) | (\$320) | \$0 | (\$1,186) |
| Major depressive disorder | K-12 grade repetition | \$0 | \$0 | \$0 | \$0 | \$0 |
| Externalizing behavior symptoms | K-12 special education | \$6 | \$0 | \$0 | \$3 | \$8 |
| Regular smoking | Health care associated with smoking | \$627 | \$177 | \$647 | \$314 | \$1,766 |
| Alcohol use disorder | Labor market earnings associated with alcohol abuse or dependence | \$2,424 | \$5,694 | \$0 | \$0 | \$8,119 |
| Alcohol use disorder | Property loss associated with alcohol abuse or dependence | \$0 | \$8 | \$15 | \$0 | \$23 |
| Regular smoking | Mortality associated with smoking | \$5 | \$11 | \$0 | \$197 | \$212 |
| Program cost | Adjustment for deadweight cost of program | \$0 | \$0 | \$0 | (\$23) | (\$23) |
| Totals | | \$2,840 | \$5,283 | \$432 | \$508 | \$9,064 |

¹In 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

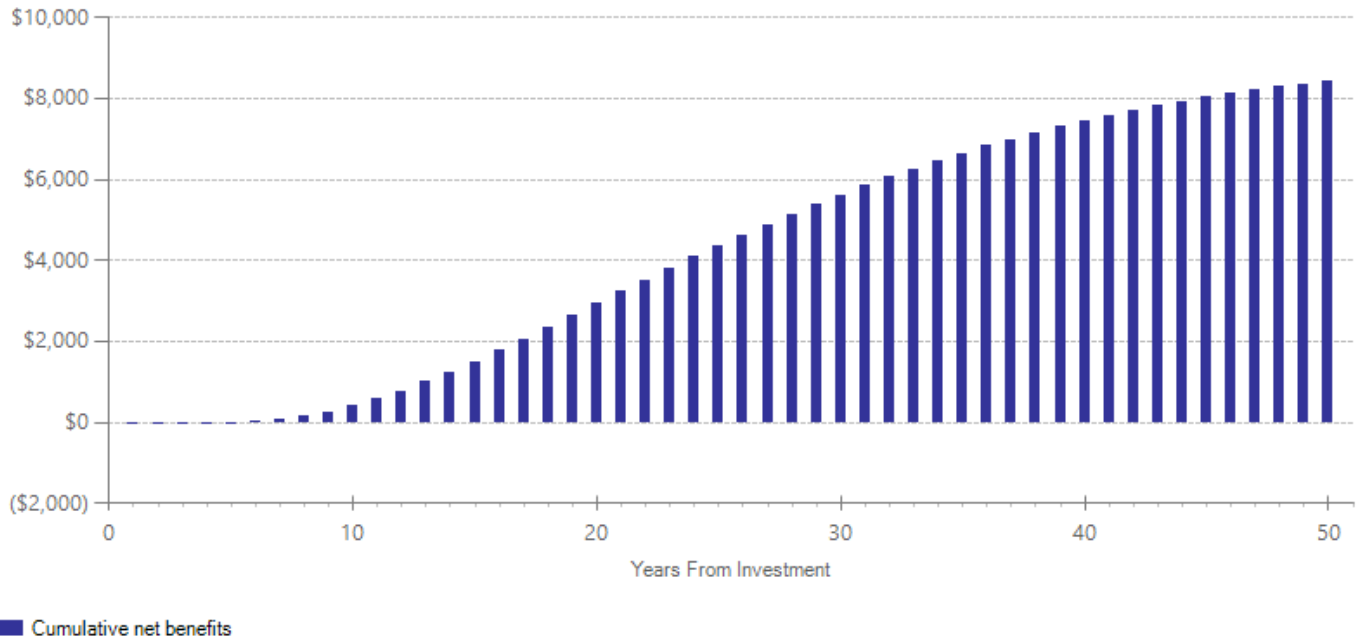
| | Annual cost | Year dollars | Summary |
|------------------|-------------|--------------|---|
| Program costs | \$23 | 2018 | Present value of net program costs (in 2018 dollars) (\$46) |
| Comparison costs | \$0 | 2018 | Cost range (+ or -) 30 % |

The average per-family cost includes the cost of providing training and materials to teachers, and the cost of program-related teacher and staff time that occurs outside of regular school hours. We estimate the average total hours of services provided to each family who received Family Check-Up, as reported in the included studies. We assume that one eighth of the total hours per family were provided outside of the normal school day. We apply the mean hourly wage for relevant providers to this portion of the total. The provider wage is an average of several types of school staff personnel (including administrators, teachers, counselors, social workers, psychologists, and aides) expected to deliver the intervention, weighted by their average FTE in Washington State. Their wages were calculated from Washington State compensation costs (including benefits) for the 2017-18 school year as reported by the Office of the Superintendent of Public Instruction (<https://www.k12.wa.us/sites/default/files/public/safs/pub/per/1718/all.pdf>).

We also include the cost of training, materials, and setup (including a family resource center). We assume the program is delivered over a two-year period. We divide the total cost by the total number of participants served by Positive Family Support. Information on training, materials, setup costs, and providers was obtained from Blueprints for Healthy Youth Development (<https://www.blueprintsprograms.org/program-costs/positive-family-support>) and from communication with Marianne Fillhouer of Positive Family Support on April 25, 2019.

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)

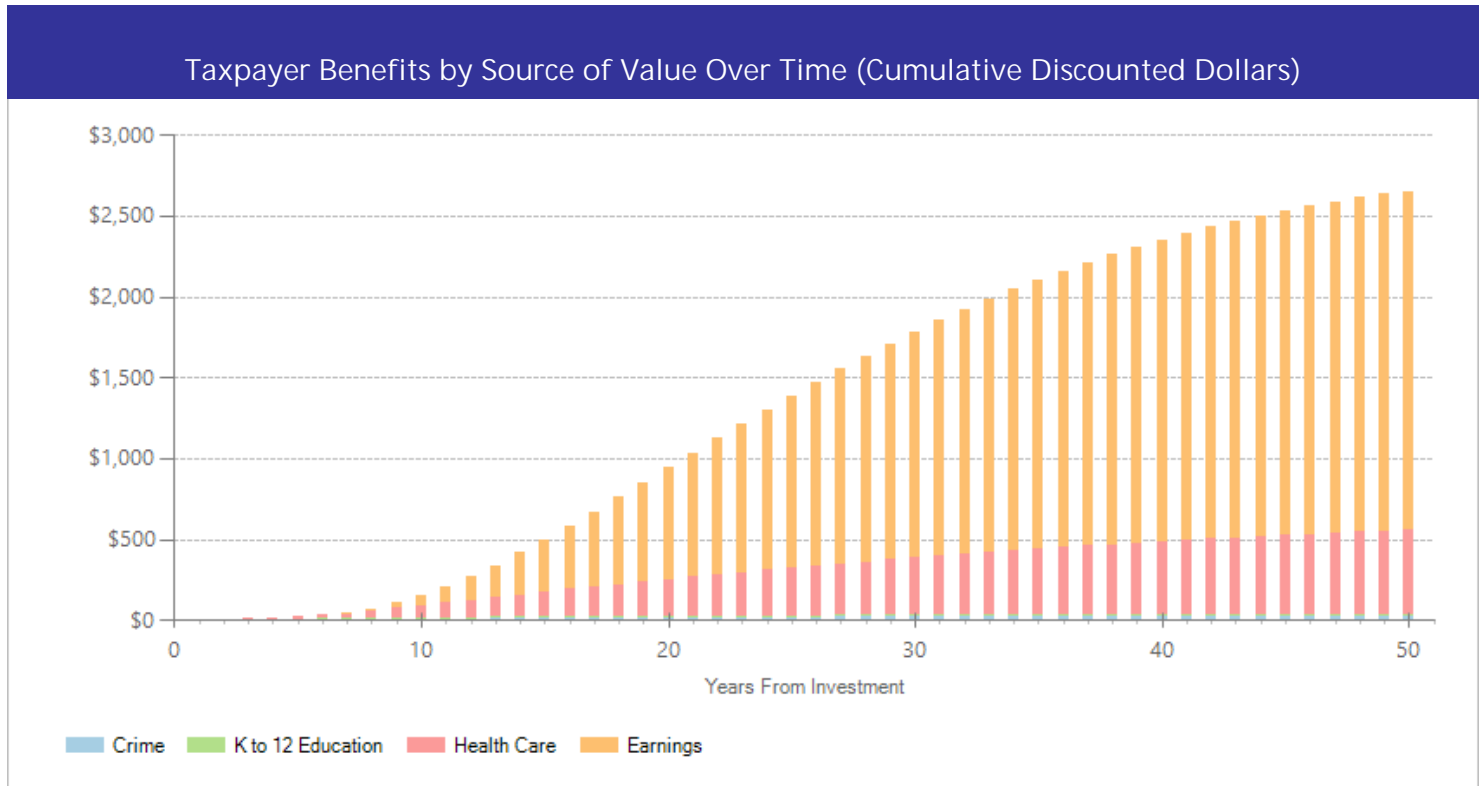


The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below \$0 line), the cumulative benefits do not outweigh the cost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

- Connell, A.M., & Dishion, T.J. (2008). Reducing depression among at-risk early adolescents: three-year effects of a family-centered intervention embedded within schools. *Journal of Family Psychology (division 43)*, 22(4), 574-85.
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