October 2006

EVIDENCE-BASED PUBLIC POLICY OPTIONS TO REDUCE
FUTURE PRISON CONSTRUCTION, CRIMINAL JUSTICE COSTS, AND CRIME RATES[‡]

Current long-term forecasts indicate that Washington will need two new prisons by 2020 and possibly another prison by 2030. Since a typical new prison costs about $250 million to build and $45 million a year to operate, the Washington State Legislature expressed an interest in identifying alternative "evidence-based" options that can: (a) reduce the future need for prison beds, (b) save money for state and local taxpayers, and (c) contribute to lower crime rates.

The 2005 Legislature directed the Washington State Institute for Public Policy (Institute) to report, by October 2006, whether evidence-based and cost-beneficial policy options exist.

If economically sound options are available, then the Legislature directed the Institute to project the total impact of alternative implementation scenarios.[1]

This report describes our results to date. We begin by providing background information on historic and projected incarceration rates in Washington, as well as a history of crime rates and fiscal costs of the criminal justice system. We then describe the process we use to determine if evidence-based and economically sound options exist, and we present our findings. We examine adult corrections, juvenile corrections, and prevention programs. This is followed by our projections of the impact of alternative implementation scenarios. We conclude by discussing some implications of the findings and next steps. For technical readers, appendices begin on page 19 and describe our research methods and results in greater detail.

Summary

Under current long-term forecasts, Washington State faces the need to construct several new prisons in the next two decades. Since new prisons are costly, the 2005 Washington Legislature directed the Washington State Institute for Public Policy to project whether there are "evidence-based" options that can:

✓ **reduce the future need for prison beds,**
✓ **save money for state and local taxpayers,**
✓ **contribute to lower crime rates.**

We conducted a systematic review of all research evidence we could locate to identify what works, if anything, to reduce crime. We found and analyzed 571 rigorous comparison-group evaluations of adult corrections, juvenile corrections, and prevention programs, most of which were conducted in the United States. We then estimated the benefits and costs of many of these evidence-based options. Finally, we projected the degree to which alternative "portfolios" of these programs could affect future prison construction needs, criminal justice costs, and crime rates in Washington.

We find that some evidence-based programs can reduce crime, but others cannot. Per dollar of spending, several of the successful programs produce favorable returns on investment. Public policies incorporating these options can yield positive outcomes for Washington.

We project the long-run effects of three example portfolios of evidence-based options: a "current level" option as well as "moderate" and "aggressive" implementation portfolios.

We find that if Washington successfully implements a moderate-to-aggressive portfolio of evidence-based options, a significant level of future prison construction can be avoided, taxpayers can save about two billion dollars, and crime rates can be reduced.

Legislative Direction for the Study

The legislative language directing the Institute's study is shown verbatim in the accompanying sidebar. In brief, the legislation requires the Institute to study the net short-run and long-run fiscal savings to state and local governments if evidence-based intervention, prevention, and sentencing alternatives are implemented in Washington State.

The Institute is directed to examine three broad types of public policy options the legislature could consider.

1. **Intervention programs.** For people already in Washington's juvenile and adult correctional systems, the language directs the Institute to estimate whether investments in evidence-based programs could cost-effectively lower recidivism rates and, as a result, the need for additional prison beds.

2. **Prevention programs.** The legislative language also instructs the Institute to estimate whether investments in evidence-based and cost-beneficial prevention programs could help reduce the need for future prison beds. Since most prevention programs are for young children, effective evidence-based prevention resources can be expected to affect adult prison use in the longer run. Prevention programs hold the potential, of course, to offer other near-term and long-term advantages, such as improved educational outcomes. In this report, we include some representative prevention programs but, in order to complete this report on budget, we were not able to update our earlier study of prevention programs.[2] Subsequent versions can include additional prevention programs.

3. **Sentencing options.** The legislation directs the Institute to examine possible changes that could be made to Washington's sentencing laws, including sentencing alternatives and the use of risk factors in sentencing. These options are to be analyzed in conjunction with the Washington State Sentencing Guidelines Commission.

After analyzing the economics of each of these policy options, the task for the study is to project the total fiscal and prison bed impacts of alternative implementation scenarios. The goal of these policy choices is to allow the legislature to consider different combinations of options that have the ability to keep crime rates under control while also lowering the long-run fiscal costs of Washington's state and local criminal justice system. In financial terms, this means identifying "portfolios" of policy choices that

replace lower rate-of-return investments with strategies that produce higher rates of return on the taxpayer's dollar.

Background: Trends in Historic and Forecasted Prison Populations in Washington

To provide context for this study, it is helpful to review a few basic facts on prison populations in Washington. Criminologists measure the size of prison populations over time with a statistic called an "incarceration rate." This straightforward indicator simply divides the total number of people in prison at any point in time by the total number of adults in a relevant age group. Exhibit 1 displays a long-term history—from 1930 to the present—of prison incarceration rates for Washington along with comparable figures for the United States.[3] The Exhibit also shows the current forecasted incarceration rate for Washington.

✓ **Prison incarceration rates have roughly tripled in Washington since the mid-1970s.** The use of prison in Washington was quite stable from 1930 to 1980. On any given day during this 50-year period, roughly two persons, between the ages of 18 and 49, were incarcerated in a state prison out of every 1,000 people in Washington.[4] Washington's incarceration rate then began to grow in the late 1970s and 1980s, and accelerated further during the 1990s. Today, Washington's prison incarceration rate stands at about six adults incarcerated per 1,000.[5]

✓ **Washington's growth rate in prison populations has been considerably less than the national rate.** Exhibit 1 also plots the national prison incarceration rate. For several decades— from 1930 until the mid-1970s—Washington's incarceration rate was quite similar to the average rate across the United States. Washington's rate began to diverge slightly from the national trend in the late 1970s, but then went on a distinctively different path after Washington enacted sentencing reform legislation in the early 1980s. Today Washington's incarceration rate is about 56 percent of the national rate.

✓ **Washington's incarceration rate is expected to increase another 23 percent by 2019.** Exhibit 1 also contains one other piece of information particularly relevant for this study. The Exhibit includes the latest official forecast of Washington's prison incarceration rate to the year 2019. In the mid-1990s, the legislature established the Washington State Caseload Forecast Council (CFC) to project key caseloads that affect the state budget.[6] The latest CFC prison forecast (June 2006) indicates continued increases in adult incarceration rates. The CFC forecast is based on current sentencing laws, including those passed by the 2006 Legislature, as well as estimates of other criminal justice and demographic trends in Washington. The CFC forecast does not attempt to anticipate any changes future legislatures might make to existing laws or the passage of new laws.

Exhibit 1
Adult Prison Incarceration Rates
In Washington and the United States: 1930 to 2006
(and the current forecast for Washington: 2007 to 2019)
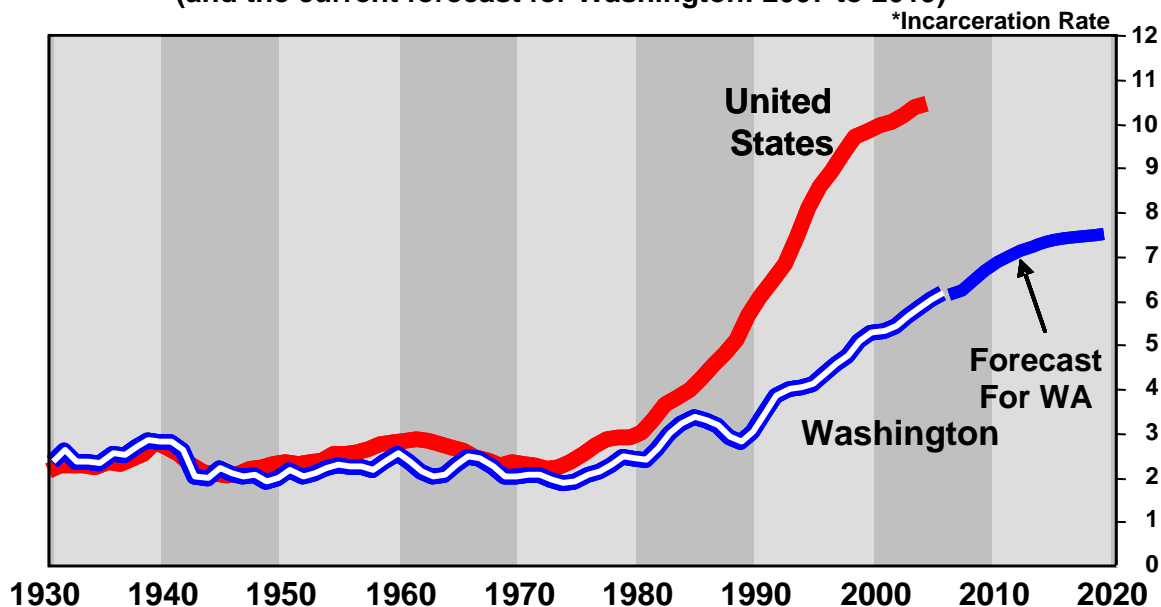
*The incarceration rate is defined as the number of inmates in state prisons per 1,000 18- to 49-year-olds in Washington or the United States. The forecast is from the Washington Caseload Forecast Council (CFC).

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Background: Supply and Demand—
The Forecasted Need for Prison Beds in Washington, 2008 to 2030

The current Caseload Forecast Council projection implies the need for an increase in new prison beds. Exhibit 2 displays the key budget-driving statistics.

Existing Supply.   The shaded areas on the chart depict the current supply of prison beds in Washington, about 18,000 beds. This figure includes already-funded expansions to the Coyote Ridge facility, scheduled to be completed in 2008. The forecast of bed supply also shows that over the forecast period an average of about 1,800 additional beds are anticipated to be rented from local county jails; these beds are used to house offenders who have violated the terms of their community supervision and are returned to custody.[7] Currently, Washington also rents some prison beds out of state (about 960 beds as of mid-2006); these out-of-state beds are not shown in Exhibit 2.[8]

Forecasted Demand.   The anticipated demand for prison beds is also shown in Exhibit 2. The forecast to the year 2019 is the aforementioned June 2006 forecast of the Caseload Forecast Council. The extension to the year 2030 is made by the Institute for use in this study of long-term options. The state Office of Financial Management currently forecasts state population to the year 2030, and we use this information to make projections.[9] The growth in prison bed demand stems from two factors: the forecasted growth in incarceration rates as the cumulative effects of current laws are implemented, and the expected increase in Washington's population.

The Gap Between Supply and Demand.   Absent any new policy changes from the legislature, the CFC's forecast implies the need for about 4,500 new prison beds by about 2020. Projecting this to 2030, the supply-demand gap widens further to about a 7,000 bed shortfall.

Recently constructed prisons in Washington have been designed to house about 2,000 offenders. Thus, by 2020 there is an anticipated shortage of a little more than two new prisons, and this grows to about three and a half new prisons by 2030.

The capital cost of a typical new 2000-bed prison is about $250 million, and it costs about $45 million per year to operate a typical new facility. This means it costs taxpayers about $9,000 per year per bed to amortize capital costs and $22,600 per year per bed to staff and operate a new prison. Combined, the total fiscal cost per typical new bed is thus about $31,600 per prisoner per year.[10]

The purpose of this study is to estimate whether some of these costs (as well as other state and local government costs) can be avoided if a portfolio of evidence-based policy options is implemented successfully.

Exhibit 2
Adult Prison Supply and Demand in Washington: 2008 to 2030
(for use in this study of long-term evidence-based options)
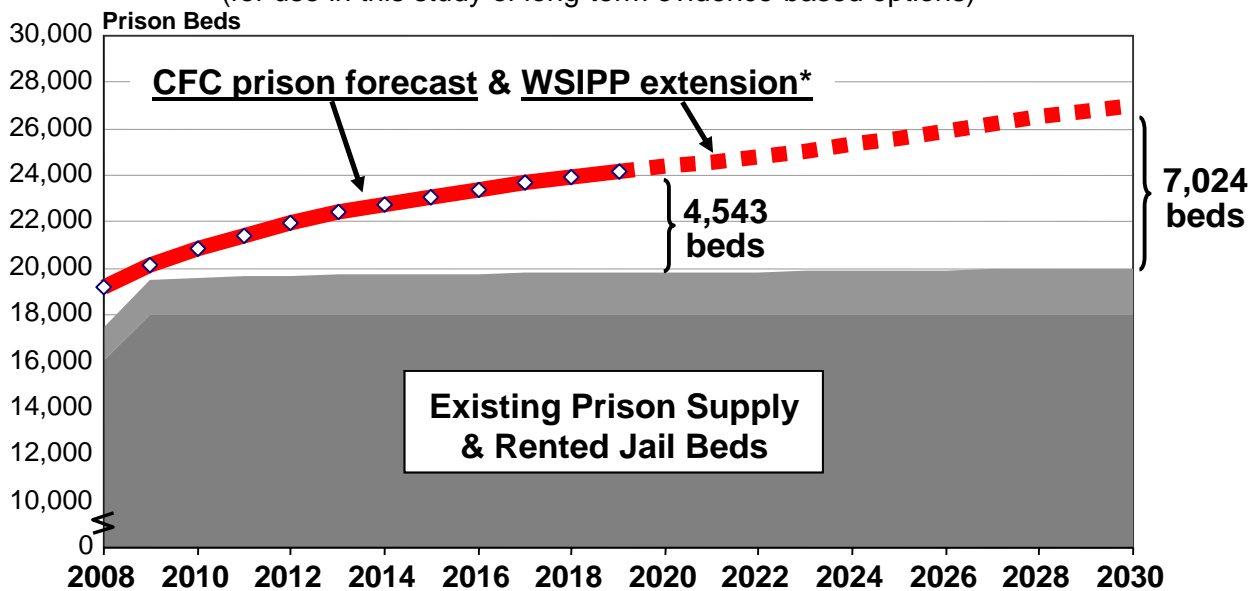
* The forecast to the year 2019 is by the Washington Caseload Forecast Council (CFC). The extension to the year 2030 is by the Washington State Institute for Public Policy (WSIPP).

***Background:* Crime in Washington and Taxpayer Costs of the Criminal Justice System**

Two other contextual factors relevant to this study include crime rates and the total cost of the taxpayer-financed criminal justice system.

Exhibit 3 provides two "big picture" indicators of these long-term trends. First, the chart shows that felony crime rates (that is, crimes as reported to police) were 26 percent lower in 2005 than they were in 1980. This means that the odds of being a victim of a serious violent or property crime have been reduced significantly over the last 25 years.[11]

Exhibit 3 also shows that the fiscal cost of the state and local criminal justice system in Washington has increased substantially over the same period. The inflation-adjusted cost of the taxpayer-financed criminal justice system increased 92 percent since 1980. Today, the average household in Washington spends about $1,130 in taxes per year to fund the criminal justice system. In 1980 the typical household spent $590 (in 2006 dollars).[12]

Why have expenditures increased? Three factors stand out. First, local taxpayers funded a slight increase in the number of commissioned police officers; since 1980, the number of commissioned police officers per capita increased about five percent. Second, and much more significantly, Washington increased its prison incarceration rate as indicated in Exhibit 1; since 1980, the prison

incarceration rate increased 165 percent. Finally, at the local level of government, county jail incarceration rates increased about 185 percent over these same years.

There is empirical evidence that part of the reason crime rates have declined is directly related to the increased spending Washington has devoted to the criminal justice system. On average, increasing police per capita and increasing incarceration rates work to decrease the crime rate, particularly for certain types of crime. For example, our analysis of Washington's experience, as well as other national analyses, provides an indication that increasing the prison incarceration rate by 10 percent reduces crime rates by 2 to 4 percent (see sidebar on page 10). Diminishing returns, however, begin to erode the crime reduction effect as incarceration rates are increased, and the effects vary significantly by the type of offenders incarcerated (violent, property, or drug offenders).[13]

The question the Legislature directed the Institute to study for this project is this: Looking into the future, are there portfolios of evidence-based resources that can help the state keep crime rates down, but do so at a reduced cost to taxpayers? That is, what policy choices are available to affect the path of the two trends shown in Exhibit 3 over the next two decades?

Exhibit 3
The Change in Washington's Crime Rate and Taxpayer Costs of the Criminal Justice System: 1980 to 2005

Percent Change Since 1980

Taxpayer Costs* Are Up
(Inflation-Adjusted Criminal Justice Dollars Per Household)

Crime Rates* Are Down
(Violent and Property Crimes Reported to Police, Per 1,000 People)

In 1980, taxpayers spent $590 per household on the criminal justice system. Today they spend $1,130: a 92% increase.

In 2005, crime rates were 26% lower than they were in 1980.
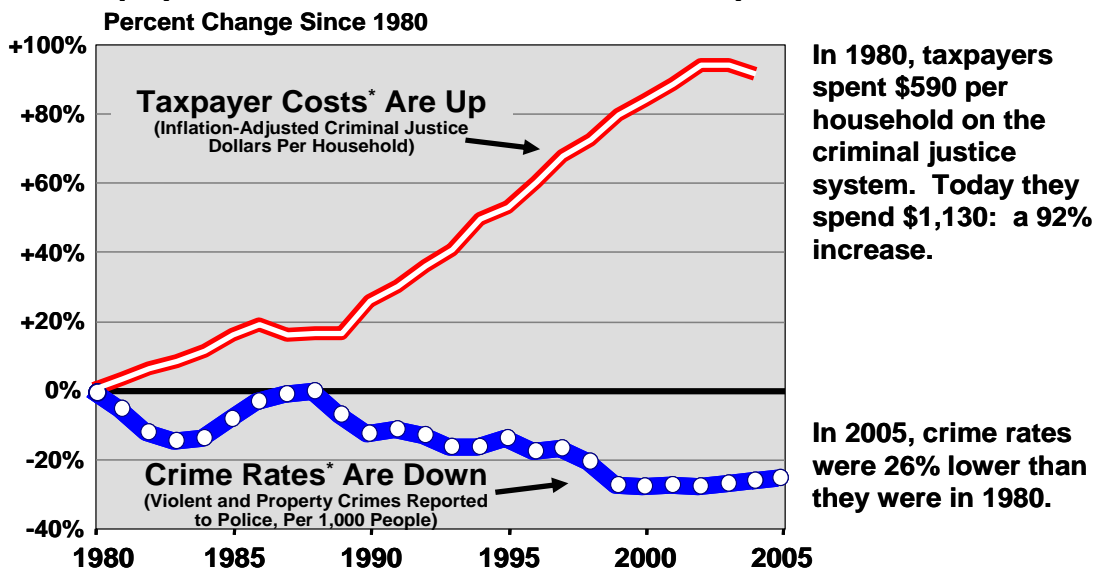
* Taxpayer costs include all costs related to the criminal justice system: police, courts, prosecutors, public defenders, and local and state juvenile and adult corrections. Crime rates measure serious felony crimes reported to police.

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Research Questions and Methods for This Study

The research approach we employ for this assignment is designed to answer three distinct and sequential questions. First, we review the empirical evidence to identify whether there are any "evidence-based" public criminal justice and prevention policies and programs that have a proven ability to affect crime rates. Second, we determine whether each option has favorable economics—that is, do long-term benefits outweigh costs for each option. In the third step, we project how statewide implementation of alternative portfolios of evidence-based options would influence the long-run need for prison beds, state and local fiscal costs, and crime rates.

In this section, we describe briefly these three research steps; technical readers can find a detailed description of our methods in the appendices, beginning on page 19.

Research Question 1: What works to reduce crime?

In recent years, public policy decision-makers throughout the United States have expressed interest in adopting "evidence-based" criminal justice programs. Similar to the pursuit of evidence-based medicine, the goal is to improve the criminal justice system by implementing programs and policies that have been shown to work. Just as important, research findings can be used to eliminate programs that have failed to produce desired outcomes. Whether for medicine, criminal justice, or other areas, the watchwords of the evidence-based approach to public policy include: outcome-based performance, rigorous evaluation, and a positive return on taxpayer investment.

The goal of the first research step is to answer a simple question: What works, if anything, to lower measured crime outcomes? Specifically, does rigorous evaluation evidence indicate that particular adult corrections programs, juvenile corrections programs, or prevention programs lower crime rates? Additionally, in order to estimate benefits and costs, we seek to estimate the magnitude of the crime reduction effect of each possible option.

To answer these fundamental questions, we conducted a comprehensive statistical review of all program evaluations conducted over the last 40 years in the United States and other English-writing countries. As we describe, we located 571 evaluations of individual programs with sufficiently rigorous research to be included in our analysis. These evaluations were of adult corrections programs, juvenile offender programs, and preventions programs.

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It is important to note that only a few of these 571 studies were evaluations of policies or programs in Washington State; rather, almost all of the evaluations in our review were of programs conducted in other locations. A primary purpose of our study is to take advantage of all these rigorous evaluations and, thereby, learn whether there are options that can allow policymakers in Washington to improve this state's criminal justice system.

The research approach we employ in this first step is called a "systematic" review of the evidence. In a systematic review, the results of *all* rigorous evaluation studies are analyzed to determine if, on average, it can be stated scientifically that a program achieves an outcome. A systematic review can be contrasted with a so-called "narrative" review of the literature where a writer selectively cites studies to tell a story about a topic, such as crime prevention. Both types of reviews have their place, but systematic reviews are generally regarded as more rigorous and, because they assess all available studies and employ statistical hypotheses tests, they have less potential for drawing biased or inaccurate conclusions. Systematic reviews are being used with increased frequency in medicine, education, criminal justice, and many other policy areas.[14]

In our review of the evidence, we only include "rigorous" evaluation studies. The key criterion for a study to be included is that the evaluation must have a non-treatment or treatment-as-usual comparison group that is well matched to the program group. The accompanying sidebar "What Does 'Evidence-Based' Mean?" briefly describes the factors we consider in determining the applicability of a particular study for our systematic review.

Researchers have developed a set of statistical tools to facilitate systematic reviews of the evidence. The set of procedures is called "meta-analysis," and we employ that methodology in the first step of this study.[15] In the Technical Appendix to this report (beginning on page 19) we list the specific coding rules and statistical formulas we use to conduct the analysis—technical readers can find a full description of our methods and results.

Research Question 2: What are the benefits and costs of each option?

While the purpose of Step 1 is to determine if anything works to lower crime outcomes, in Step 2 we ask a follow-up question: per dollar spent on a program, do the benefits of the program's crime reduction exceed its costs? Since all programs cost money, this additional economic test seeks to determine whether the amount of crime

reduction justifies the program's expenditures. A program may have demonstrated an ability to reduce crime but, if the program costs too much, it may not be a good investment, especially when compared to alternatives.

To estimate the value of avoiding crime to people in Washington, the Institute developed an economic model to predict how much money is spent or saved when crime goes up or down. As described more fully in Appendix B, we estimate how police costs change when arrests go up or down; how court costs change when criminal filings and convictions change; and how jail and prison costs change when sentences to incarceration result from convictions. This model accounts for the probability that a crime will lead to an arrest, that an arrest will lead to a conviction, and that a conviction will lead to a sentence of confinement. In the modeling approach, each of these events is a function of actual historic practice in Washington and, for sentencing outcomes, reflects how offenders are currently sentenced under Washington's presumptive sentencing laws.

In addition to taxpayer costs, we also place a monetary value on the costs that crime victims incur when crime happens and, conversely, the victimization costs that can be avoided if a program reduces crime.[16]

The results of research questions 1 and 2 are combined to produce return-on-investment statistics for a wide array of evidence-based options available to the legislature.

Research Question 3: How would alternative portfolios of evidence-based and economically sound options affect future prison construction, criminal justice costs, and crime rates? Using the information from the first two research steps, combined with additional program and demographic information, we then project the total impact on Washington of alternative implementation scenarios. We use official statewide population forecasts, along with information on program eligibility and the percentage of eligible populations already being served by evidence-based programs.

We create three example portfolios. The first is a "current level" option that simply continues current evidence-based programs. We then project the effects of "moderate" and "aggressive" portfolios. For each portfolio, we forecast the annual fiscal costs of implementation as well as the expected effects on future prison construction, criminal justice system costs, and crime rates.

What Does "Evidence-Based" Mean?

At the direction of the Washington legislature, the Institute has conducted a number of systematic reviews of evaluation research to determine what public policies and programs work, and which ones do not work. These evidence-based reviews include the policy areas of adult and juvenile corrections, child welfare, mental health, substance abuse, prevention, K-12 education, and pre-K education.

The phrase "evidence-based" is sometimes used loosely in policy discussions. When the Institute is asked to conduct an evidence-based review, we follow a number of steps to ensure a rigorous definition. These criteria include:

1. We consider all available studies we can locate on a topic rather than selecting only a few studies; that is, we do not "cherry pick" the studies to include in our reviews. We then use formal statistical hypothesis testing procedures—meta-analysis—to determine whether the weight of the evidence indicates outcomes are, on average, achieved.

2. To be included in our reviews, we require that an evaluation's research design include control or comparison groups. Random assignment studies are preferred, but we allow quasi-experimental studies when the comparison group is well-matched to the treatment group. We then discount the findings of less-than-randomized comparison-group trials by a uniform percentage. We also require that the groups be "intent-to-treat" groups to help guard against selection bias.

3. We prefer evaluation studies that use "real world" samples from actual programs in the field. Evaluations of so-called "model" or "efficacy" programs are included in our reviews, but we discount the effects from these types of studies by a fixed percentage.

4. If the researcher of an evaluation is also the developer of the program, we discount the results from the study to account for potential conflict of interests, or the inability to replicate the efforts of exceptionally motivated program originators in real world field implementation.

Our additional criteria are listed in Appendix A.

Findings

The findings from this study center on three questions: what works to reduce crime; what are the economics of each option; and how would alternative portfolios of these options affect Washington's prison construction needs, state and local criminal justice costs, and crime rates?

What Works to Reduce Crime?

Exhibit 4 summarizes the findings from our current systematic review of the evaluation research literature. We update these findings as new information becomes available. Technical readers can find greater detail in Appendix A.

Overall, we reviewed and meta-analyzed the findings of 571 comparison-group evaluations of adult corrections, juvenile corrections, and prevention programs. Each of these evaluations included at least one relevant crime outcome that we were able to analyze. It is important to note that evaluations of prevention programs typically measure several other outcomes in addition to crime. For example, outcomes of prevention programs often include measures of education, substance abuse, and child abuse outcomes. In Exhibit 4, however, we only show the results of crime effects for studies that measured crime outcomes. In an earlier Institute report, we analyzed the degree to which a wide array of evidence-based prevention programs affects non-crime outcomes.[17]

To make this information useful for policy making in Washington, we categorized each of these 571 evaluations into relevant subject areas.[18] For example, we found 57 evaluations of adult drug courts, and we analyzed these studies as a group for that type of program.

This categorization process illustrates a key characteristic of our study. For each category of programs we analyze, our results reflect the evidence-based effect we expect for the "average" program. For example, our results indicate that the average adult drug court reduces the recidivism rate of participants by 8.0 percent. Some drug courts, of course, achieve better results than this, some worse. On average, however, we find that the typical drug court can be expected to achieve this result.

At the bottom of Exhibit 4, we also list a number of programs for which the research evidence, in our judgment, is inconclusive at this time. Some of these programs have only one or two rigorous (often small sample) evaluations that do not allow us to draw general conclusions. Other programs have more

evaluations but the program category is too diverse or too general to allow meaningful conclusions to be made at this time. Subsequent research on these types of programs is warranted.

In column (1) of Exhibit 4, we show the expected percentage change in crime outcomes for the program categories we review. This figure indicates the average amount of change in crime outcomes—compared to no treatment or treatment as usual—that can be achieved by a typical program in each category of programs. A negative value indicates the magnitude of a statistically significant reduction in crime. A zero percent change means that, based on our review of the evidence, a typical program does not achieve a statistically significant change in crime outcomes. A few well-researched programs even have a positive sign indicating that crime is increased with the program, not decreased. In addition to reporting the effect of the programs on crime outcomes, column (1) also reports the number of studies on which the estimate is based.

As Exhibit 4 reveals, we find a number of programs demonstrate statistically significant reductions in crime outcomes. We also find other approaches do not achieve a statistically significant reduction in recidivism. Thus, the first lesson from our evidence-based review is that some programs work and some do not. A direct implication from these mixed findings is that public policies that reduce crime will be ones that focus resources on effective evidence-based programming while avoiding ineffective approaches.

As an example of the information provided in Exhibit 4, we analyzed the findings from 25 well-researched studies of cognitive-behavioral programs for adult offenders in prison and community settings. We find that, on average, these programs can be expected to reduce recidivism rates by 6.3 percent. To put this in perspective, our analysis indicates that, without a cognitive-behavioral program, about 63 percent of offenders will recidivate with a new felony or misdemeanor conviction after a 13-year follow-up. If these same offenders had participated in the evidence-based cognitive-behavioral treatment program, then we expect their recidivism probability would drop four points to 59 percent—a 6.3 percent reduction in recidivism rates.

As noted, most of the categories we report in Exhibit 4 are for general types of programming, such as drug treatment in prison or adult basic education in prison. We also categorize and report, however, the results of several very specific programs, such as a program for juvenile offenders named "Functional Family Therapy."

Exhibit 4
Reducing Crime With Evidence-Based Options: What Works, and Benefits & Costs

Washington State Institute for Public Policy Estimates as of October, 2006 Notes: "n/e" means not estimated at this time. Prevention program costs are partial program costs, pro-rated to match crime outcomes.	Effect on Crime Outcomes Percent change in crime outcomes, & the number of evidence-based studies on which the estimate is based (in parentheses) (1)	Benefits and Costs (Per Participant, Net Present Value, 2006 Dollars)		
		Benefits to Crime Victims (of the reduction in crime) (2)	Benefits to Taxpayers (of the reduction in crime) (3)	Costs (marginal program cost, compared to the cost of alternative) (4)	Benefits (total) Minus Costs (per participant) (5)
Programs for People in the Adult Offender System					
Vocational education in prison	-9.0% (4)	$8,114	$6,806	$1,182	**$13,738**
Intensive supervision: treatment-oriented programs	-16.7% (11)	$9,318	$9,369	$7,124	**$11,563**
General education in prison (basic education or post-secondary)	-7.0% (17)	$6,325	$5,306	$962	**$10,669**
Cognitive-behavioral therapy in prison or community	-6.3% (25)	$5,658	$4,746	$105	**$10,299**
Drug treatment in community	-9.3% (6)	$5,133	$5,495	$574	**$10,054**
Correctional industries in prison	-5.9% (4)	$5,360	$4,496	$417	**$9,439**
Drug treatment in prison (therapeutic communities or outpatient)	-5.7% (20)	$5,133	$4,306	$1,604	**$7,835**
Adult drug courts	-8.0% (57)	$4,395	$4,705	$4,333	**$4,767**
Employment and job training in the community	-4.3% (16)	$2,373	$2,386	$400	**$4,359**
Electronic monitoring to offset jail time	0% (9)	$0	$0	-$870	**$870**
Sex offender treatment in prison with aftercare	-7.0% (6)	$6,442	$2,885	$12,585	**-$3,258**
Intensive supervision: surveillance-oriented programs	0% (23)	$0	$0	$3,747	**-$3,747**
Washington's Dangerously Mentally Ill Offender program	-20.0% (1)	$18,020	$15,116	n/e	n/e
Drug treatment in jail	-4.5% (9)	$2,481	$2,656	n/e	n/e
Adult boot camps	0% (22)	$0	$0	n/e	n/e
Domestic violence education/cognitive-behavioral treatment	0% (9)	$0	$0	n/e	n/e
Jail diversion for mentally ill offenders	0% (11)	$0	$0	n/e	n/e
Life Skills education programs for adults	0% (4)	$0	$0	n/e	n/e
Programs for Youth in the Juvenile Offender System					
Multidimensional Treatment Foster Care (v. regular group care)	-22.0% (3)	$51,828	$32,915	$6,945	**$77,798**
Adolescent Diversion Project (for lower risk offenders)	-19.9% (6)	$24,328	$18,208	$1,913	**$40,623**
Family Integrated Transitions	-13.0% (1)	$30,708	$19,502	$9,665	**$40,545**
Functional Family Therapy on probation	-15.9% (7)	$19,529	$14,617	$2,325	**$31,821**
Multisystemic Therapy	-10.5% (10)	$12,855	$9,622	$4,264	**$18,213**
Aggression Replacement Training	-7.3% (4)	$8,897	$6,659	$897	**$14,660**
Teen courts	-11.1% (5)	$5,907	$4,238	$936	**$9,208**
Juvenile boot camp to offset institution time	0% (14)	$0	$0	-$8,077	**$8,077**
Juvenile sex offender treatment	-10.2% (5)	$32,515	$8,377	$33,064	**$7,829**
Restorative justice for low-risk offenders	-8.7% (21)	$4,628	$3,320	$880	**$7,067**
Interagency coordination programs	-2.5% (15)	$3,084	$2,308	$205	**$5,186**
Juvenile drug courts	-3.5% (15)	$4,232	$3,167	$2,777	**$4,622**
Regular surveillance-oriented parole (v. no parole supervision)	0% (2)	$0	$0	$1,201	**-$1,201**
Juvenile intensive probation supervision programs	0% (3)	$0	$0	$1,598	**-$1,598**
Juvenile wilderness challenge	0% (9)	$0	$0	$3,085	**-$3,085**
Juvenile intensive parole supervision	0% (10)	$0	$0	$6,460	**-$6,460**
Scared Straight	+6.8% (10)	-$8,355	-$6,253	$58	**-$14,667**
Counseling/psychotherapy for juvenile offenders	-18.9% (6)	$23,126	$17,309	n/e	n/e
Juvenile education programs	-17.5% (3)	$41,181	$26,153	n/e	n/e
Other family-based therapy programs	-12.2% (12)	$15,006	$11,231	n/e	n/e
Team Child	-10.9% (2)	$5,759	$4,131	n/e	n/e
Juvenile behavior modification	-8.2% (4)	$19,271	$12,238	n/e	n/e
Life skills education programs for juvenile offenders	-2.7% (3)	$6,441	$4,091	n/e	n/e
Diversion progs. with services (v. regular juvenile court)	-2.7% (20)	$1,441	$1,034	n/e	n/e
Juvenile cognitive-behavioral treatment	-2.5% (8)	$3,123	$2,337	n/e	n/e
Court supervision vs. simple release without services	0% (8)	$0	$0	n/e	n/e
Diversion programs with services (v. simple release)	0% (7)	$0	$0	n/e	n/e
Juvenile intensive probation (as alternative to incarceration)	0% (5)	$0	$0	n/e	n/e
Guided Group Interaction	0% (4)	$0	$0	n/e	n/e
Prevention Programs (crime reduction effects only)					
Nurse Family Partnership-Mothers	-56.2% (1)	$11,531	$8,161	$5,409	**$14,283**
Nurse Family Partnership-Children	-16.4% (1)	$8,632	$4,922	$733	**$12,822**
Pre-K education for low income 3 & 4 year olds	-14.2% (8)	$8,145	$4,644	$593	**$12,196**
Seattle Social Development Project	-18.6% (1)	$1,605	$4,341	n/e	n/e
High school graduation	-10.4% (1)	$1,738	$2,851	n/e	n/e
Guiding Good Choices	-9.1% (1)	$570	$2,092	n/e	n/e
Parent-Child Interaction Therapy	-3.7% (1)	$268	$784	n/e	n/e

Program types in need of additional research & development before we can conclude they do or do not reduce crime outcomes:		
Programs needing more research for people in the adult offender system		**Comment**
Case management in the community for drug offenders	0% (13)	Findings are mixed for this broad grouping of programs.
COSA (Faith-based supervision of sex offenders)	-22.3% (1)	Too few evaluations to date.
Day fines (compared to standard probation)	0% (1)	Too few evaluations to date.
Domestic violence courts	0% (2)	Too few evaluations to date.
Faith-based programs	0% (5)	Too few evaluations to date.
Intensive supervision of sex offenders in the community	0% (4)	Findings are mixed for this broad grouping of programs.
Medical treatment of sex offenders	-21.4% (1)	Too few evaluations to date.
Mixed treatment of sex offenders in the community	0% (2)	Too few evaluations to date.
Regular parole supervision vs. no parole supervision	0% (1)	Too few evaluations to date.
Restorative justice programs for lower risk adult offenders	0% (6)	Findings are mixed for this broad grouping of programs.
Therapeutic community programs for mentally ill offenders	-20.8% (2)	Too few evaluations to date.
Work release programs (from prison)	-4.3% (4)	Too few recent evaluations.
Programs needing more research for youth in the juvenile offender system		
Dialectical Behavior Therapy	0% (1)	Too few evaluations to date.
Increased drug testing (on parole) vs. minimal drug testing	0% (1)	Too few evaluations to date.
Juvenile curfews	0% (1)	Too few evaluations to date.
Juvenile day reporting	0% (2)	Too few evaluations to date.
Juvenile jobs programs	0% (3)	Too few recent evaluations.
Juvenile therapeutic communities	0% (1)	Too few evaluations to date.
Mentoring in juvenile justice	0% (1)	Too few evaluations to date.

The Functional Family Therapy (FFT) program follows a specific training manual and approach. These types of programs are more capable of being reproduced in the field when appropriate quality control is assured. Several of these programs have been listed as "Blueprint" programs by the Center for the Study and Prevention of Violence at the University of Colorado.[19]

The FFT program, which has been implemented in Washington, involves an FFT-trained therapist working for about three months with a youth in the juvenile justice system and his or her family. The goal is to increase the likelihood that the youth will stay out of future trouble. We located and meta-analyzed seven rigorous evaluations of this program—one conducted in Washington—and find that the average FFT program with quality control can be expected to reduce a juvenile's recidivism rates by 15.9 percent. Our analysis indicates that, without the program, a youth has a 70 percent chance of recidivating for another felony or misdemeanor conviction after a 13-year follow-up. If the youth participates in FFT, then we would expect the recidivism rate to drop to 59 percent—a 15.9 percent reduction.

A third example is a prevention program called Nurse Family Partnership (NFP), a program that has also been implemented in Washington. This program provides intensive visitation by nurses to low-income, at-risk women bearing their first child; the nurses continue to visit the home for two years after birth. Thus far, there is evidence that NFP reduces the crime outcomes of the mothers and, many years later, the children born to the mothers. Both of these effects are included in our analysis of the program. Our analysis of the NFP studies indicates that the program has a large effect on the future criminality of the mothers who participate in the program, reducing crime outcomes by 56 percent. NFP also reduces the future crime levels of the youth by 16 percent compared to similar youth who did not participate in the NFP program.

What Are the Benefits and Costs of Each Option?

While our first research question deals with what works, our second question concerns economics. Exhibit 4 also contains our estimates of the benefits and costs of many of the program categories we analyze. Within three broad groupings—programs for adult offenders, programs for juvenile offenders, and prevention programs—we rank many of the options by our assessment of each program's "bottom line" economics for reducing crime.

Prisons, Police, and Programs

Broadly speaking, there are three types of public policies that focus directly on reducing crime: the level of imprisonment of different types of offenders, the level and type of policing, and a wide array of rehabilitative and preventive programs. There are, of course, many private factors that influence crime rates, but most well-researched public policies can be grouped into one of these three categories.

For this study of "what works" to reduce crime, we analyze two of these three types of public policies: prison and programs. We do not include research on evidence-based policing strategies, since it is beyond the scope of the project directed by the 2005 Washington Legislature. We do recommend that evidence-based policing strategies be included in a subsequent version of this study.

Exhibit 4 in this document lists our findings to date for evidence-based rehabilitative and prevention programs. In this study, we also estimate the effect that prison incarceration rates have on crime rates and criminal justice system costs. These estimates are needed to forecast the long-run effect that different combinations of incarceration rates and effective programs can have on the future need for prison construction, criminal justice system costs, and crime rates.

To gauge the effect prison has on crime rates, we updated our econometric study on how state incarceration rates affect county crime rates in Washington.[a] We estimated a fixed-effects model with county-level panel data from 1982 to 2004 (N=897, 39 counties for 23 years), controlling for changes in police levels, local jail rates, the economy, age and ethnic demographics, population density, crime reporting rates, and county fixed effects. We found that a 10 percent increase (or decrease) in the incarceration rate leads to a statistically significant 3.3 percent decrease (or increase) in crime rates. The crime-prison relationship is best estimated with a log-log functional form implying diminishing returns as the incarceration rate is increased. Our estimated elasticity is consistent with other well-researched studies.[b]

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[a] Steve Aos. (2003). *The Criminal Justice System in Washington State: Incarceration Rates, Taxpayer Costs, Crime Rates, and Prison Economics.* Olympia: Washington State Institute for Public Policy. Our estimate includes an approximate adjustment to correct for the simultaneity bias encountered in estimates of the effect of incarceration on crime.

[b] William Spelman, (2002). What Recent Studies Do (and Don't) Tell Us about Imprisonment and Crime, in *Crime and Justice: A Review of Research*, Volume 27, ed. Michael Tonry, Chicago: University of Chicago Press, p. 422.

For programs that have an evidence-based ability to affect crime, we estimate benefits from two perspectives: taxpayers' and crime victims'. For example, if a program is able to achieve statistically significant reductions in recidivism rates, then taxpayers will spend less money on the criminal justice system. Similarly, if a program produces less crime, then there will be fewer crime victims. The estimates shown in columns (2) and (3) of Exhibit 4 display our estimates of victim and taxpayer benefits, respectively. Of course, a program category that does not achieve a statistically significant reduction in crime outcomes will not produce any benefits associated with reduced crime. In Appendix B, we provide technical detail on how we calculate the value of avoided crime to taxpayers and crime victims.

In column (4) we show our cost estimates of many programs. At this time, we have not estimated the costs for every program category listed on Exhibit 4; thus we do not produce full cost-benefit results for all programs in the Exhibit.

Finally, in column (5) of Exhibit 4, we show our "bottom line" estimate of the net gain (or loss). These figures are the net present values of the long-run benefits of crime reduction minus the net up-front costs of the program. This provides our best overall measure each type of program can be expected to achieve per program participant.

An examination of column (5) provides an important finding from our analysis. While there are many adult corrections programs that provide a favorable return to taxpayers, there are some programs for juvenile offenders that produce especially attractive long-run economic returns. This finding, coupled with the fact that 73 percent of adult offenders in prison in Washington have previously been in Washington's juvenile justice system,[20] demonstrates the attractiveness of juvenile justice options as a means to affect the long-run need for prison construction in Washington.

To continue the three examples already discussed, we find that the average cognitive-behavioral program costs about $105 per offender to administer. These programs are typically run in groups of 10 to 15 offenders and involve 40 to 60 hours of therapeutic time. We estimate that the 6.3 percent reduction in recidivism rates generates about $10,404 in life-cycle benefits (a present-valued sum) associated with the crime reduction. Thus, the net value of the average evidence-based cognitive-behavioral program for adult offenders is $10,299 per offender.

For the Functional Family Therapy example, we find that the program costs, on average, $2,325 per

juvenile participant. The costs are higher because it is a one-on-one program between a FFT therapist and the youth and his or her family. The 15.9 percent reduction in recidivism rates that we expect FFT to achieve generates about $34,146 in life-cycle benefits, measured in terms of the taxpayer and crime victim costs that are avoided because of the reduced long-run level of criminal activity of the youth. Thus, the net present value of this juvenile justice program is expected to be $31,821 per youth.

For the Nurse Family Partnership program, we find that the crime reduction associated with the mothers produces $19,692 in benefits while the crime reduction linked to the children produces $13,554 in benefits. Together, the benefits total $33,247 per participant in NFP. We estimate the total cost of the NFP program to be $6,142 per family (2006 dollars) for crime related outcomes. For our current study of crime outcomes, we pro-rated the NFP total program cost per participant ($9,827) by the ratio of crime benefits to total benefits estimated from our earlier study of prevention programs (in addition to crime outcomes, the NFP program has been shown to reduce child abuse and neglect and increase educational test scores).[21]

As mentioned, we find that some programs show no evidence that they reduce crime outcomes. This does not mean, however, that these programs are not economically viable options.

An example of this type of program is electronic monitoring for adult offenders. As indicated in Exhibit 4, we located nine studies of electronic monitoring and find that the average electronic monitoring program does not have a statistically significant effect on recidivism rates. As future evaluations are completed, this result may change; but, currently, we report no crime reduction benefits in columns (2) and (3). We do expect, however, that the average electronic monitoring program is typically used to offset the costs of more expensive resources to process the sanctions of the current offense. That is, we find that an average electronic monitoring program costs about $1,236 per offender. The alternative to electronic monitoring, however, is most often increased use of jail time, and we estimate this to cost $2,107 per offender. The cost shown on column (4) is our estimate of the difference in these up-front costs. The bottom line is reported in column (5) and provides evidence that electronic monitoring can be a cost-beneficial resource. Thus, although there is no current evidence that electronic monitoring reduces recidivism rates, it can be a cost-effective resource when it is used to offset the costs of a more expensive criminal justice system resource such as jail time.

Projections: The Effects of Alternative Evidence-Based Implementation Portfolios

The primary purpose of this study is to estimate whether alternative portfolios of "evidence-based" options can: (a) reduce the future need for prison beds, (b) save money for state and local taxpayers, and (c) contribute to lower crime rates.

To do this, we combine the findings shown in Exhibit 4 with information on the number of people in Washington who could realistically benefit from the programs. We then forecast the effect alternative combinations of these evidence-based options could have on the outcomes of interest. We built a forecasting model for this study to make the projections.[22] For this report, we estimate the benefits and costs of three example implementation scenarios:

✓ A **Current Level Portfolio,** where we assume that existing evidence-based programs in Washington continue to be funded at current levels in the years ahead. Under this scenario, we assume that current evidence-based programs are not expanded to increase market penetration rates, nor do we assume that any new evidence-based programs are put in place. We estimate that the first year cost of this package of current programs amounts to about $41 million, or $83 million for a biennial budget.

✓ A **Moderate Implementation Portfolio,** where we assume that existing evidence-based programs are expanded to reach more people than are currently being served. Under this scenario, we assume that each current evidence-based program is expanded to serve 20 percent of the remaining eligible population. We estimate that the first year cost of this package of current programs and their moderate expansion would be about $63 million, or $127 million for a biennial budget.

For example, Washington currently funds about 659 juvenile offenders per year to participate in Functional Family Therapy in the state's juvenile courts. We estimate, however, that 5,358 youths per year in juvenile courts could benefit from FFT. In the moderate portfolio, we assume that funding for FFT would be expanded to include 20 percent of those eligible youth not currently in the program (5,358 - 659 times 20 percent = 940 additional youths per year). This expansion of FFT would cost about $2.2 million per year. We do similar calculations for each evidence-based option we analyze in the portfolio.

✓ An **Aggressive Implementation Portfolio,** where we assume that the current levels of existing programs are significantly expanded to serve a substantially larger number of people who could benefit from the programs. Under this scenario, we assume that current evidence-based programs are expanded to serve 40 percent of the remaining eligible populations. We estimate that the first year cost of this aggressive package of current and expanded programs would be about $85 million, or $171 million for a biennial budget.

These three portfolios are intended to be representative of the types of evidence-based investment opportunities available to Washington policymakers in this area. The forecasting tool we built for this project can be used to examine quickly other combinations of evidence-based programs. The menu of available options for these three example portfolios includes the following evidence-based programs.

Programs for Adult Offenders
– Drug treatment in prison and community corrections
– Cognitive-behavioral treatment in prison and community corrections
– Education in prison (basic education or post-secondary)
– Vocational education in prison
– Correctional industries programs in prison
– Sex offender cognitive-behavioral treatment in prison and community corrections
– Employment and job training programs in community corrections
– Adult drug courts
– Electronic monitoring in lieu of jail time

Programs for Juvenile Offenders
– Functional Family Therapy® in juvenile courts and in the state Juvenile Rehabilitation Administration (JRA)
– Aggression Replacement Training® in juvenile courts and in the state JRA
– Multi-systemic Therapy® in juvenile courts
– Multidimensional Treatment Foster Care® in the state JRA
– Interagency coordination programs in juvenile courts
– Family Integrated Transitions® in the state JRA
– Juvenile drug courts
– Restorative justice programs in juvenile courts

Representative Prevention Programs
– Nurse Family Partnership® in community settings
– Pre-K education for low income 3- and 4-year-olds

Estimated Effect of the Alternative Portfolios on the Need for Future Prison Construction. One of the main outcomes of legislative interest for this study concerns the effects that evidence-based programs could have on the future need for prison construction in Washington.

Exhibit 5 shows the current level of prison resources in Washington along with the latest official state forecast of prison beds; this is the same information presented earlier in Exhibit 2. Exhibit 5 also shows the expected effect on the demand for prison beds under the three example portfolios of evidence-based options. The Exhibit provides a visual indication that, if successfully implemented, the moderate-to-aggressive portfolios are capable of avoiding a substantial level of new prison construction.

In Exhibit 6, we present these results in a table highlighting two years in the future: 2020 and 2030. After subtracting the existing supply of prison beds, Washington's current forecast of prison demand from the Caseload Forecast Council implies the need for 4,543 new beds by 2020 and 7,024 new beds by 2030. Since the typical new prison in Washington houses about 2,000 offenders, this means that current forecasts anticipate the need for slightly more than two new prisons by 2020 and a third prison by 2030.

✓ With the Current Level Portfolio, we estimate the need for prisons will drop to 3,821 beds and 5,955 beds in the 2020 and 2030, respectively. Note that this current level portfolio is slightly less than the current Caseload Council Forecast

because we estimate that the full impact of some recent correctional programs has not yet been incorporated in the Council's forecast.

✓ With the Moderate Implementation Portfolio, we estimate the need for new prison beds will drop further to 1,988 in 2020 and 3,331 in 2030.

✓ With the Aggressive Implementation Portfolio, we estimate the need for new prison beds drops to 208 in 2020 and 806 in 2030.

Thus, by successfully implementing a moderate-to-aggressive portfolio, Washington could exert a considerable cumulative impact on the future need for prison construction in Washington.

Estimated Effect of the Alternative Portfolios on Incarceration Rates. Another way to express the results of the alternative scenarios is in terms of incarceration rates rather than prison beds. As noted earlier, incarceration rates are simply the number of people in prison divided by a relevant statewide population. In 1980, the prison incarceration rate in Washington was 2.3 prisoners per 1,000 people in the state between the ages of 18 and 49. By 2006, the rate was 6.1 per thousand, a 165 percent increase. The current Caseload Council Forecast sees the incarceration rate increasing to about 7.5 per thousand by 2020.

Exhibit 6 shows the long-run effect of the three portfolios on the prison incarceration rate in Washington. By 2020, the Aggressive

Exhibit 5
Adult Prison Supply and Demand in Washington: 2008 to 2030, Current Forecast and the Effect of Alternative Evidence-Based Portfolios
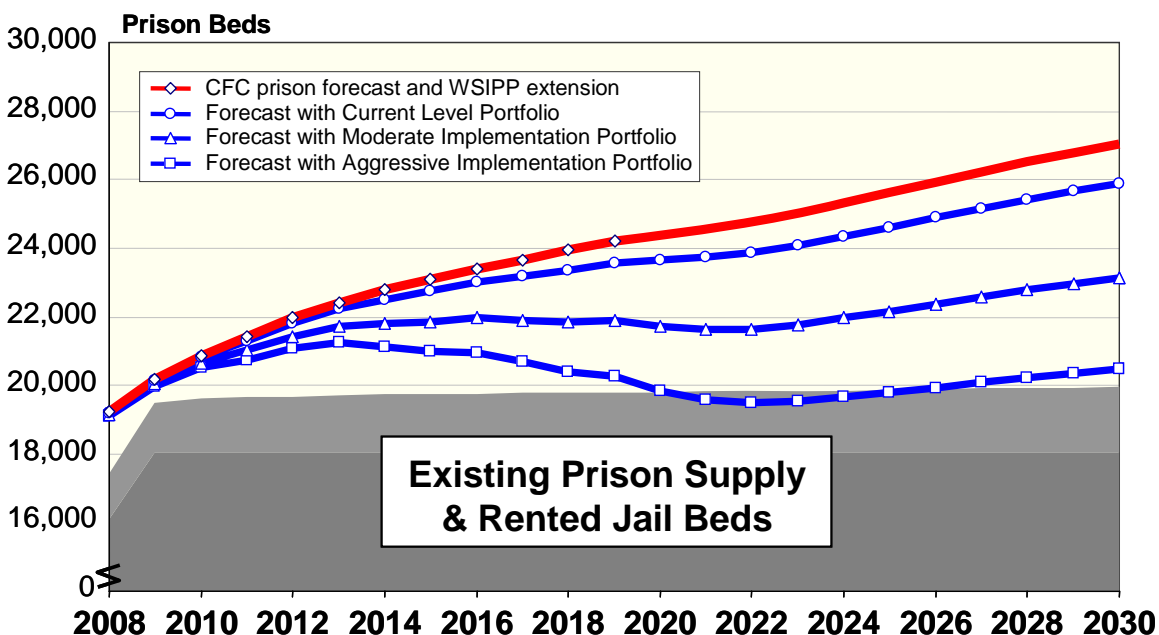

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Exhibit 6

Exhibit 6
Estimated Effects of Three Portfolios of Evidence-Based Options
On Prison Construction, State and Local Criminal Justice Costs, and Crime Rates

All Estimates by the Washington State Institute for Public Policy October, 2006	Current Forecast (see Exhibit 2)	Three Example Implementation Scenarios		
		Current Level Portfolio	Moderate Implementation Portfolio	Aggressive Implementation Portfolio
	(1)	(2)	(3)	(4)
Effects on the Prison Supply-Demand Gap (forecasted shortfall in the number of beds)				
Forecasted bed shortfall in 2020	4,543	3,821	1,988	208
Forecasted bed shortfall in 2030	7,024	5,955	3,331	806
Effects on Prison Incarceration Rate (prisoners per 1,000 18- to 49-year-olds)				
Historic rate: 1980	2.3	2.3	2.3	2.3
Historic rate: 1990	3.1	3.1	3.1	3.1
Historic rate: 2000	5.2	5.2	5.2	5.2
Historic rate: 2006	6.1	6.1	6.1	6.1
Forecasted rate: 2020	7.5	7.3	6.7	6.1
Forecasted rate: 2030	7.7	7.3	6.6	5.8
Key Financial Outcomes for the Three Portfolios				
Benefits Minus Costs to Taxpayers (millions)		$1,096	$1,741	$2,367
Return on Investment to Taxpayers		24%	27%	28%
Benefit-to-Cost Ratio to Taxpayers		$2.45	$2.55	$2.60
First year cost of portfolio (millions)		$41	$63	$85
First biennial budget cost of portfolio (millions)		$83	$127	$171
Effect on Crime Rates in Washington (felony crimes per 1,000 Washington population)				
Historic Crime Rate: 1980		71	71	71
Historic Crime Rate: 1990		62	62	62
Historic Crime Rate: 2000		51	51	51
Historic Crime Rate: 2005		52	52	52
Forecasted Crime Rate: 2020		48	48	49
Forecasted Crime Rate: 2030		46	47	48

Implementation portfolio would leave Washington with an incarceration rate roughly equal to today's level. None of the cases considered drops the incarceration rate below current levels by 2020. Rather, they work to lower the rates of increases in incarceration rates anticipated in the current Caseload Forecast Council projections.

Estimated Effect of the Alternative Portfolios on State and Local Fiscal Costs. Another outcome of legislative interest for this study concerns state and local government expenditures. That is, the legislature wanted to know if evidence-based options could lower taxpayer costs of the criminal justice system in Washington.

Exhibit 6 displays these results. From the perspective of state and local taxpayers we find that, between 2008 and 2030, taxpayers could save from $1.9 to $2.6 billion with the moderate to aggressive portfolios, respectively. These estimates mean that,

after paying the annual costs of the evidence-based options, taxpayers could save over a billion dollars through avoided prison costs and other state and local criminal justice system costs.

Technically, these sums are "net present values" computed by estimating the annual cash flows associated with the increases in spending for the programs and the annual savings from the reduced crime—all discounted back to present value. Exhibit 7 displays the annual cash flows for the moderate implementation portfolio. The annual inflation-adjusted costs of the evidence-based options are shown (about $63 million in the first year) along with the annual benefits linked to crime reduction. The net present value of these cash flows, discounted at 3 percent per year, is $1,903 million.

Two other popular ways to express these financial taxpayer sums are as returns on investment and benefit-to-cost ratios. Exhibit 6 shows that the internal rate of return on investment for these

Exhibit 7

Annual Taxpayer Costs & Benefits: Forecasted Cash Flows, Moderate Portfolio (Millions of 2006 Dollars)
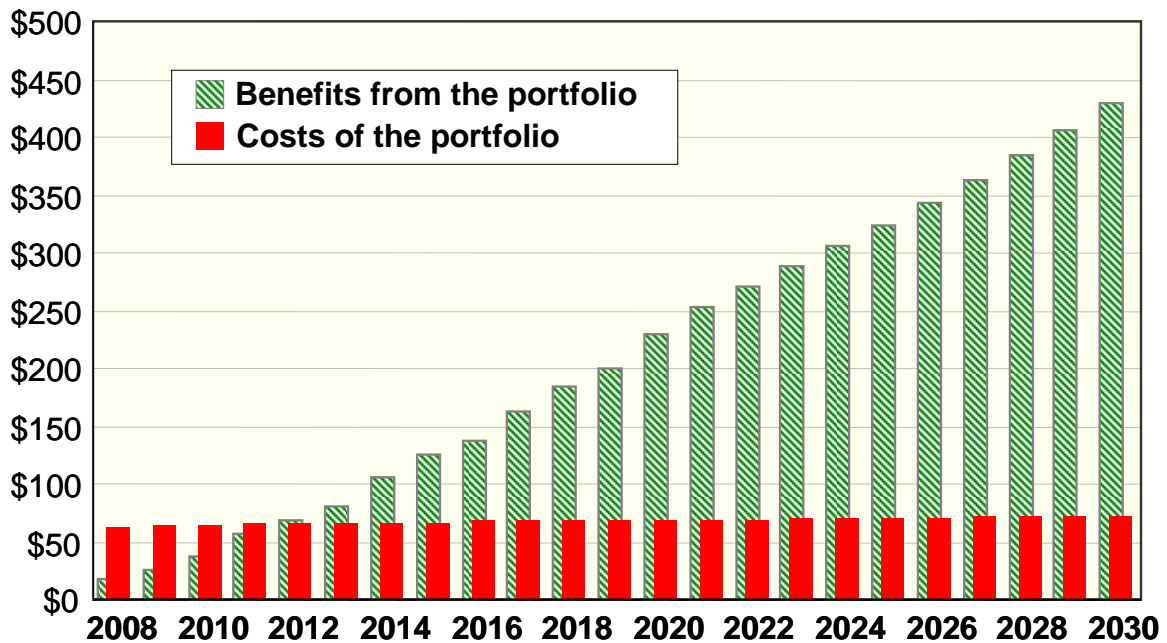
portfolios of evidence-based options ranges from 27 to 31 percent. Expressed as a ratio, the portfolios generate from $2.59 to $2.75 of taxpayer benefits per dollar of cost.

Estimated Effect of the Alternative Portfolios on Crime Rates in Washington. The final outcome shown in Exhibit 6 is the level of crime that can be expected in Washington under the three portfolios. Holding other factors constant, we forecast the net effect that the three portfolios of evidence-based resources can be expected to have on future crime rates in Washington.

It is important to note that prison is included as one of these evidence-based resources (see sidebar on page 10). As noted, under the current forecast from the Caseload Forecast Council, the rate of incarceration is expected to increase in the years ahead as the effect of Washington's existing sentencing laws adds to the number of people in prison at a rate faster than the growth of the general adult population. Other things being equal, this anticipated increase in the incarceration rate can be expected to reduce further Washington's crime rate.

The three alternative evidence-based portfolios, on the other hand, reduce these future incarceration rates (as indicated in Exhibit 5). Our estimates of the effects of the portfolios on crime rates take both of these factors into account. That is, as the

portfolios reduce the need for incarceration, the crime rate can be expected to increase. The effect of the evidence-based resources, however, counters this with reductions in future crime that the resources can be expected to produce. Our forecast of crime rates includes both of these countervailing factors.

The net result is indicated in Exhibit 6. The reported crime rate in Washington in 1980 was 71 serious crimes per 1,000 people in the state. By 2005, the latest year available, the reported crime rate was 52 crimes per 1,000—a 26 percent reduction.

The net effect of each of the three portfolios is to lower the crime rate further. By 2020, the net effects of the current level, moderate, and aggressive portfolios all lower the expected crime rates to about 48 crimes per 1,000 people.

Discussion of Findings and Next Steps

Main Finding. The purpose of this legislatively directed study is to test whether evidence-based public policy options could: (a) lower the anticipated need to build new prisons, (b) reduce state and local fiscal costs of the criminal justice system, and (c) contribute to reduced crime rates.

We find that there are economically attractive evidence-based options in three areas: adult corrections programs, juvenile corrections programs, and prevention. Per dollar of spending, several of the successful programs produce favorable returns on investment. Public policies incorporating these options can yield positive outcomes for Washington.

We find that if Washington can successfully implement a moderate-to-aggressive portfolio of evidence-based options, then a significant level of future prison construction can be avoided, state and local taxpayers can save about two billion dollars, and net crime rates can be lowered slightly.

Cautions and Limitations. These positive findings need to be tempered. Our analysis is based on an extensive and comprehensive review of what works to reduce crime, as well as an economic analysis of the benefits and costs of alternative implementation scenarios. The results indicate that Washington can obtain favorable outcomes if it can substantially and successfully increase its use of evidence-based options.

It is one thing to model these results carefully on a computer, it is quite another to find a way to make them actually happen in the real world. We constructed our estimates cautiously to reflect the difficulty that is often encountered when taking programs to a larger scale. Nonetheless, the moderate-to-aggressive portfolios described here would require Washington's state and local governments to expand significantly current evidence-based programs. Incumbent to such an effort would be the policy review and management supervision necessary to hold the evidence-based programs accountable for the anticipated savings in crime rates and costs.

In particular, to help assure the "quality control" necessary to achieve these savings, the legislature may want to establish an on-going oversight process if it decides to pursue a significant expansion of these evidence-based options. Ensuring competent delivery of programs while maintaining fidelity to the program model appears to be essential. For example, some of the interventions in our portfolio are standardized treatment protocols that have been shown to reduce crime. We learned from Washington's experience with one of these programs, the Functional Family Therapy juvenile justice program (see sidebar on this page), that when the program was not implemented competently, then it did not reduce crime at all. On the other hand, when it was delivered as designed, the program produced outstanding returns on investment. Thus, safeguarding the state's investment in evidence-based programs requires ongoing efforts to assess program delivery and, when necessary, taking the required steps to make corrective changes.

Maintaining Program Fidelity: Washington's Experience With Functional Family Therapy

In the late 1990s, Functional Family Therapy (FFT) was implemented in the juvenile courts across Washington. In an evaluation five years later, the Institute found that when FFT was delivered by competent therapists, the program reduced recidivism by as much as 30 percent. However, 47 percent of therapists were rated less than competent, and these therapists had no effect on the recidivism rates of their clients. The state has since implemented a quality assurance process to ensure that FFT is delivered only by competent FFT therapists. The lesson is clear: as in every successful enterprise, quality control matters. For more information, see: R. Barnoski. (2002). *Washington State's Implementation of Functional Family Therapy for Juvenile Offenders: Preliminary Findings,* Olympia: Washington State Institute for Public Policy.

Next Research Steps. In completing this report, we were able to make substantial analytical progress in providing Washington with a tool to forecast the long-run impacts of evidence-based resources that reduce crime. There are, however, a number of additional steps that could be taken to enhance these efforts.

1. **Sentencing Alternatives.** The legislation directing this study required the Institute to analyze "sentencing options that will be developed by Sentencing Guidelines Commission." The Sentencing Guidelines Commission (SGC) has not completed its work on this topic and, when it does, we will incorporate the Commission's work into the analytical framework presented here. We did not include in our analysis any existing sentencing alternatives (for example, expansion of the existing

juvenile and adult sex offender sentencing alternatives) pending completion of the SGC's recommendations.

2. **Prevention Programs.** Due to time constraints for this project, we were not able to update our previously published work on evidence-based prevention programs.[23] We include a few important and representative prevention programs in this study, but a fuller research investigation would likely yield additional investments in early childhood programs that could produce cost-beneficial outcomes for Washington taxpayers.

In particular, since we have previously found that child abuse can have long-term adverse consequences for criminality, then prevention and intervention programs that limit child abuse have the potential to make long-term contributions to reductions in crime, prison construction, and criminal justice costs.[24] Additionally, we have found that long-term crime rates can be lowered by successful evidence-based early childhood and K-12 educational programs that foster academic achievement and increased high school graduation rates.[25] We also did not include some Washington prevention programs such as the Becca truancy laws, since we did not have time to conduct a full cost analysis of this effective statute.[26] For this report, we did include two representative evidence-based prevention options that achieve these outcomes: the Nurse Family Partnership program and pre-K education for low income 3- and 4-year-olds. A more comprehensive inquiry, however, into all prevention programs is an important next analytical step.

3. **Evaluations of Washington's Programs.** In this study, we relied on the outcomes of 571 rigorous evaluations of adult and juvenile corrections programs and prevention programs. Unfortunately, only a few of these evaluations were of programs in Washington State. We recommend that the legislature initiate an effort to evaluate the outcomes of key programs in Washington. If the evaluations are conducted with rigorous and independent research designs, then policymakers in Washington will be able to ascertain whether taxpayers are receiving positive rates of return on their dollars.

4. **Extensions of the Institute's Research.** In order to complete this project on budget, we had to defer several analytical steps that subsequent research could address. In addition to updating and extending our earlier study of prevention, these additional steps include performing a formal risk analysis to test the degree to which the model's findings are sensitive to key data inputs.[27]

Additional research could also be undertaken to test how the effects of individual evidence-based programs may diminish as they are implemented at increasingly higher penetration rates; we only approximate this in the current report. It would also be possible to enhance the model by developing "phase-in" procedures to estimate better estimate the first few years of portfolio implementation.

Finally, there is a need to monitor the latest evaluation research findings on effective ways to reduce crime and achieve improvements in other outcomes of policy interest. In this report, we included studies we were able to locate and analyze in time for this publication. As new research becomes available, our results should be updated. We suggest the legislature establish an on-going independent review process so that information on the latest developments in evidence-based programs can be made readily available for policymakers in Washington.

Endnotes

[1] ESSB 6094, Section 708, Chapter 488, Laws of 2005.

[2] S. Aos, R. Lieb, J. Mayfield, M. Miller, A. Pennucci. (2004). *Benefits and costs of prevention and early intervention programs for youth.* Olympia: Washington State Institute for Public Policy, Document No. 04-07-3901.

[3] The national data are from the United States Bureau of Justice Statistics (http://www.ojp.usdoj.gov/bjs/abstract/p04.htm). Because of limitations in how the federal government reports national prison rates, the national series includes prisoners in federal prisons as well as inmates in state prisons. This does not materially affect the comparisons presented here.

[4] Other age groups could be used as denominators in calculating incarceration rates; the choice does not materially affect the results. We used the 18- to 49-year-old group because that age cohort encompasses the most crime-prone ages for adult offenders.

[5] None of the figures in this report includes local jail populations. Jails are run by counties in Washington. Jail incarceration rates have also increased over time. For more information on local jail rates, see: S. Aos. (2003). *The criminal justice system in Washington State: Incarceration rates, taxpayer costs, crime rates, and prison economics.* Olympia: Washington State Institute for Public Policy, Document No. 03-01-1202.

[6] Information about the Washington State Caseload Forecast Council is available at the Council's website: http://www.cfc.wa.gov/.

[7] Source: personal communication with the Washington State Department of Corrections, September 2006.

[8] Source: *Department of Corrections Statistical Brochure.* (August 2006). Olympia: Washington State Department of Corrections, see: http://www.doc.wa.gov/BudgetAndResearch/secstats.htm/

[9] The population information is available at the Washington State Office of Financial Management website: http://www.ofm.wa.gov/.

[10] The amortization of the capital costs assumes a 25-year bond term and a nominal 5.5 percent interest rate.

[11] Crime rates are calculated from Uniform Crime Reports data published by the Washington Association of Sheriffs and Police Chiefs. The Institute adjusted these data to account for jurisdictions that fail to report crime data; these adjustments are minor.

[12] The dollars are used to fund the four basic components of the criminal justice system in Washington: 1) police; 2) criminal courts, prosecutors, and defenders; 3) local government adult and juvenile sanctions including jail, juvenile detention, and local community supervision; and 4) state government adult and juvenile sanctions (Department of Corrections and Juvenile Rehabilitation Administration). For this analysis, we summed all taxpayer spending for these resources and, to make the dollar amounts meaningful over time, we removed the general rate of inflation. We also divided expenditures by the number of households in the state to make the numbers even more comparable over time. The data source for local government data is the Washington State Auditor's Local Government Finance Reporting System, available at: http://www.sao.wa.gov/applications/lgfrs/. State financial data were made available to the Institute by legislative fiscal staff.

[13] See: Aos. (2003). *The criminal justice system in Washington State*, Document No. 03-01-1202. Our estimate includes an approximate adjustment to correct for the simultaneity bias encountered in estimates of the effect of incarceration on crime. See also, W. Spelman. (2002). What recent studies do (and don't) tell us about imprisonment and crime, in *Crime and Justice: A Review of Research*, Vol. 27, ed. Michael Tonry. Chicago: University of Chicago Press, p. 422, the citations to studies.

[14] An international effort aimed at organizing systematic reviews is the Campbell Collaborative—a non-profit organization that supports systematic reviews in the social, behavioral, and educational arenas. See: http://www.campbellcollaboration.org.

[15] We follow the meta-analytic methods described in: M.W. Lipsey and D. Wilson. (2001). *Practical meta-analysis.* Thousand Oaks: Sage Publications.

[16] For average victimization cost estimates by type of crime, we use national estimates as published by the National Institute of Justice. T.R. Miller, M.A. Cohen, and B. Wiersema. (1996). *Victim costs and consequences: A new look, research report,* Washington DC: National Institute of Justice.

[17] See: Aos, et al. (2004). *Benefits and costs of prevention and early intervention programs for youth*, Document No. 04-07-3901.

[18] Additional information on the programs shown in Exhibit 4 can be obtained from the Institute.

[19] See the Center for the Study and Prevention of Violence at the University of Colorado at Boulder website: http://www.colorado.edu/cspv/blueprints/.

[20] In Fiscal Year 2006, there were 8,765 admissions to prison for a new sentence (excluding admissions to prison for a violation). Of the 8,765 admissions, 4,033 were age 30 or under at the date of their admission to DOC. We used this age group because data were not available in the juvenile court and JRA data systems prior to this time. This information was obtained using the Institute's criminal records database. Of the 4,033 offenders, 2,944 (73 percent) had prior involvement in a Washington juvenile court.

[21] See: Aos, et al. (2004). *Benefits and costs of prevention and early intervention programs for youth*, Document No. 04-07-3901.

[22] The model is developed in Microsoft Excel with Visual Basic for Applications®.

[23] See: Aos, et al. (2004). *Benefits and costs of prevention and early intervention programs for youth*, Document No. 04-07-3901.

[24] *Ibid.*

[25] *Ibid.* and L. Lochner and E. Moretti. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self-reports. *American Economic Review* 94(1): 155-189.

[26] S. Aos. (2002). *Keeping kids in school: The impact of the truancy provisions in Washington's 1995 "Becca Bill,"* Olympia: Washington State Institute for Public Policy, Document No. 02-10-2201.

[27] For a discussion of our approach to sensitivity analysis using Monte Carlo simulation, see: S. Aos, J. Mayfield, M. Miller, and W. Yen. (2006). *Evidence-based treatment of alcohol, drug, and mental health disorders: Potential benefits, costs, and fiscal impacts for Washington State.* Olympia: Washington State Institute for Public Policy, Document No. 06-06-3901.

Appendix A: Meta-Analytic Procedures

To estimate the benefits and costs of evidence-based programs (EBP) in reducing and preventing crime, we conducted separate analyses of a number of key statistical relationships. In Appendix A, we describe the procedures we employed and the results we obtained in estimating the causal linkage for the following three relationships:

- The effect of EBP for adult offenders on new crime

- The effect of EBP for juvenile offenders on new crime

- The effect of EBP prevention programs on later criminal behavior

To estimate these relationships, we conducted reviews of the relevant research literature. In recent years, researchers have developed a set of statistical tools to facilitate systematic reviews of evaluation evidence. The set of procedures is called "meta-analysis"; we employ this methodology in our study.[1] In Appendix A, we describe these general procedures, the unique adjustments we made to them, and the results of our meta-analyses.

A1. Study Selection and Coding Criteria
A meta-analysis is only as good as the selection and coding criteria used to conduct the study.[2] Following are the key choices we made and implemented.

Study Selection. We searched for all adult and juvenile corrections evaluation studies conducted since 1970. The studies had to be written in English. We used three primary means to identify and locate these studies: (a) we consulted the study lists of other systematic and narrative reviews of the adult and juvenile corrections research literature—there have been a number of recent reviews on particular topics; (b) we examined the citations in the individual studies; and (c) we conducted independent literature searches of research databases using search engines such as Google, Proquest, Ebsco, ERIC, and SAGE. As we describe, the most important inclusion criteria in our study was that an evaluation have a control or comparison group. Therefore, after first identifying all possible studies using these search methods, we attempted to determine whether the study was an outcome evaluation that had a comparison group. If a study met these criteria, we then secured a paper copy of the study for our review.

Peer-Reviewed and Other Studies. We examined all program evaluation studies we could locate with these search procedures. Many of these studies were published in peer-reviewed academic journals, while many others were from government reports obtained from the agencies themselves. It is important to include non-peer reviewed studies, because it

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[1] We follow the meta-analytic methods described in: M.W. Lipsey, and D. Wilson. (2001). *Practical meta-analysis.* Thousand Oaks: Sage Publications.

[2] All studies used in the meta-analysis are identified in the references in Exhibit A.4 of this report. Many other studies were reviewed but did not meet standards set for this analysis.

has been suggested that peer-reviewed publications may be biased to show positive program effects. Therefore, our meta-analysis includes all available studies we could locate regardless of published source.

Control and Comparison Group Studies. Our analysis only includes studies that had a control or comparison group. That is, we did not include studies with a single-group, pre-post research design. This choice was made because it is only through rigorous comparison group studies that average treatment effects can be reliably estimated. We do include quasi-experimental observational studies that are of sufficient statistical rigor.

Exclusion of Studies of Program Completers Only. We did not include a comparison study in our meta-analytic review if the treatment group was made up solely of program completers. We adopted this rule because there are too many significant unobserved self-selection factors that distinguish a program completer from a program dropout; these unobserved factors are likely to significantly bias estimated treatment effects. Some comparison group studies of program completers, however, also contain information on program dropouts in addition to a comparison group. In these situations, we included the study if sufficient information was provided to allow us to reconstruct an intent-to-treat group that included both completers and non-completers, or if the demonstrated rate of program non-completion was very small (e.g. under 10 percent). In these cases, the study still needed to meet the other inclusion requirements listed here.

Random Assignment and Quasi-Experiments. Random assignment studies were preferred for inclusion in our review, but we also included non-randomly assigned control groups. We only included quasi-experimental studies if sufficient information was provided to demonstrate comparability between the treatment and comparison groups on important pre-existing conditions such as age, gender, and prior criminal history. Of the 571 individual studies in our review, about 28 percent were effects estimated from well-implemented random assignment studies.

Enough Information to Calculate an Effect Size. Following the statistical procedures in Lipsey and Wilson (2001), a study had to provide the necessary information to calculate an effect size. If the necessary information was not provided, the study was not included in our review.

Mean-Difference Effect Sizes. For this study, we coded mean-difference effect sizes following the procedures in Lipsey and Wilson (2001). For dichotomous (yes/no) measures, we used the arcsine transformation to approximate the mean difference effect size, again following Lipsey and Wilson (2001). We chose to use the mean-difference effect size rather than the odds ratio effect size because we frequently coded both dichotomous and continuous outcomes (odds ratio effect sizes could also have been used with appropriate transformations).

Unit of Analysis. Our unit of analysis for this study was an independent test of a treatment at a particular site. Some studies reported outcomes for multiple sites; we included each site as an independent observation if a unique and independent comparison group was also used at each site.

Multivariate Results Preferred. Some studies presented two types of analyses: raw outcomes that were not adjusted for covariates such as age, gender, or criminal history; and those that had been adjusted with multivariate statistical methods. In these situations, we coded the multivariate outcomes.

Broadest Measure of Criminal Activity. Some studies presented several types of crime-related outcomes. For example, studies frequently measured one or more of the following outcomes: total arrests, total convictions, felony arrests, misdemeanor arrests, violent arrests, and so on. In these situations, we coded the broadest crime outcome measure. Thus, most of the crime outcome measures that we coded were total arrests and total convictions.

Averaging Effect Sizes for Arrests and Convictions. When a study reported both total arrests and total convictions, we calculated an effect size for each measure and then took a simple average of the two effect sizes.

Dichotomous Measures Preferred Over Continuous Measures. Some studies included two types of measures for the same outcome: a dichotomous outcome and a continuous (mean number) measure. In these situations, we coded an effect size for the dichotomous measure. Our rationale for this choice is that in small or relatively small sample studies, continuous measures of crime outcomes can be unduly influenced by a small number of outliers, while dichotomous measures can avoid this problem. Of course, if a study only presented a continuous measure, we coded the continuous measure.

Longest Follow-Up Periods. When a study presented outcomes with varying follow-up periods, we generally coded the effect size for the longest follow-up period. This allows us to gain the most insight into the long-run benefits and costs of various treatments. Occasionally, we did not use the longest follow-up period if it was clear that a longer reported follow-up period adversely affected the attrition rate of the treatment and comparison group samples.

Some Special Coding Rules for Effect Sizes. Most studies in our review had sufficient information to code exact mean-difference effect sizes. Some studies, however, reported some, but not all the information required. We followed the following rules for these situations:

- **Two-tail p-values.** Some studies only reported p-values for significance testing of program outcomes. When we had to rely on these results, if the study reported a one-tail p-value, we converted it to a two-tail test.

- **Declaration of significance by category.** Some studies reported results of statistical significance tests in terms of categories of p-values. Examples include: p<=.01, p<=.05, or non-significant at the p=.05 level. We calculated effect sizes for these categories by using the highest p-value in the category. Thus, if a study reported significance at p<=.05, we calculated the effect size at p=.05. This is the most conservative strategy. If the study simply stated a result was non-significant, we computed the effect size assuming a p-value of .50 (i.e. p=.50).

A2. Procedures for Calculating Effect Sizes

Effect sizes measure the degree to which a program has been shown to change an outcome for program participants relative to a comparison group. There are several methods used by meta-analysts to calculate effect sizes, as described in Lipsey and Wilson (2001). In this analysis, we used statistical procedures to calculate the *mean difference effect sizes* of programs. We did not use the odds-ratio effect size because many of the outcomes measured in this study are continuously measured. Thus, the mean difference effect size was a natural choice.

Many of the outcomes we record, however, are measured as dichotomies. For these yes/no outcomes, Lipsey and Wilson (2001) show that the mean difference effect size calculation can

be approximated using the arcsine transformation of the difference between proportions.[3]

$$A(1): \quad ES_{m(p)} = 2 \times \arcsin \sqrt{P_e} - 2 \times \arcsin \sqrt{P_c}$$

In this formula, $ES_{m(p)}$ is the estimated effect size for the difference between proportions from the research information; P_e is the percentage of the population that had an outcome such as re-arrest rates for the experimental or treatment group; and P_c is the percentage of the population that was re-arrested for the control or comparison group.

A second effect size calculation involves continuous data where the differences are in the means of an outcome. When an evaluation reports this type of information, we use the standard mean difference effect size statistic.[4]

$$A(2): \quad ES_m = \frac{M_e - M_c}{\sqrt{\dfrac{SD_e^2 + SD_c^2}{2}}}$$

In this formula, ES_m is the estimated effect size for the difference between means from the research information; M_e is the mean number of an outcome for the experimental group; M_c is the mean number of an outcome for the control group; SD_e is the standard deviation of the mean number for the experimental group; and SD_c is the standard deviation of the mean number for the control group.

Often, research studies report the mean values needed to compute ES_m in (A2), but they fail to report the standard deviations. Sometimes, however, the research will report information about statistical tests or confidence intervals that can then allow the pooled standard deviation to be estimated. These procedures are also described in Lipsey and Wilson (2001).

Adjusting Effect Sizes for Small Sample Sizes
Since some studies have very small sample sizes, we follow the recommendation of many meta-analysts and adjust for this. Small sample sizes have been shown to upwardly bias effect sizes, especially when samples are less than 20. Following Hedges,[5] Lipsey and Wilson[6] report the "Hedges correction factor," which we use to adjust all mean difference effect sizes (N is the total sample size of the combined treatment and comparison groups):

$$A(3): \quad ES_m' = \left[1 - \frac{3}{4N - 9} \right] \times \left[ES_m, or, ES_{m(p)} \right]$$

Computing Weighted Average Effect Sizes, Confidence Intervals, and Homogeneity Tests. Once effect sizes are calculated for each program effect, the individual measures are summed to produce a weighted average effect size for a program area. We calculate the inverse variance weight for each program effect and these weights are used to compute the average. These calculations involve three steps. First, the standard error, SE_m of each mean effect size is computed with:[7]

$$A(4): \quad SE_m = \sqrt{\frac{n_e + n_c}{n_e n_c} + \frac{(ES_m')^2}{2(n_e + n_c)}}$$

In equation (A4), n_e and n_c are the number of participants in the experimental and control groups and ES_m' is from equation (A3).

Next, the inverse variance weight w_m is computed for each mean effect size with:[8]

$$A(5): \quad w_m = \frac{1}{SE_m^2}$$

The weighted mean effect size for a group of studies in program area i is then computed with:[9]

$$A(6): \quad \overline{ES} = \frac{\sum (w_{m_i} ES_{m_i}')}{\sum w_{m_i}}$$

Confidence intervals around this mean are then computed by first calculating the standard error of the mean with:[10]

$$A(7): \quad SE_{\overline{ES}} = \sqrt{\frac{1}{\sum w_{m_i}}}$$

Next, the lower, ES_L, and upper limits, ES_U, of the confidence interval are computed with:[11]

$$A(8): \quad \overline{ES}_L = \overline{ES} - z_{(1-\alpha)}(SE_{\overline{ES}})$$

$$A(9): \quad \overline{ES}_U = \overline{ES} + z_{(1-\alpha)}(SE_{\overline{ES}})$$

In equations (A8) and (A9), $z_{(1-\alpha)}$ is the critical value for the z-distribution (1.96 for $\alpha = .05$).

The test for homogeneity, which provides a measure of the dispersion of the effect sizes around their mean, is given by:[12]

$$A(10): \quad Q_i = (\sum w_i ES_i^2) - \frac{(\sum w_i ES_i)^2}{\sum w_i}$$

The Q-test is distributed as a chi-square with k-1 degrees of freedom (where k is the number of effect sizes).

Computing Random Effects Weighted Average Effect Sizes and Confidence Intervals. When the p-value on the Q-test indicates significance at values of p less than or equal to .05, a random effects model is performed to calculate the weighted average effect size. This is accomplished by first calculating the random effects variance component, v.[13]

$$A(11): \quad v = \frac{Q_i - (k-1)}{\sum w_i - \left(\sum wsq_i / \sum w_i \right)}$$

[3] Lipsey and Wilson, *Practical meta-analysis*, 200, Table B10, equation 22.
[4] Ibid., 198, Table B10, equation 1.
[5] L.V. Hedges. (1981) Distribution theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics 6*: 107-128.
[6] Lipsey and Wilson, *Practical meta-analysis*, 49, equation 3.22.
[7] Ibid., 49, equation 3.23.
[8] Ibid., 49, equation 3.24.
[9] Ibid., 114.
[10] Ibid.
[11] Ibid.
[12] Ibid., 116.
[13] Ibid., 134.

This random variance factor is then added to the variance of each effect size and finally all inverse variance weights are recomputed, as are the other meta-analytic test statistics.

A3. Institute Adjustments to Effect Sizes for Methodological Quality, Outcome Measure Relevance, and Researcher Involvement

In Exhibit A.1 we show the results of our meta-analyses, for adult offender programs, calculated with the standard meta-analytic formulas described in Appendix A2. In the last columns in each exhibit, however, we list "Adjusted Effect Size" that we actually use in our benefit-cost analysis of each program or treatment. These adjusted effect sizes, which are derived from the unadjusted results, are always smaller than or equal to the unadjusted effect sizes we report in the same exhibit.

In Appendix A3, we describe our rationale for making these downward adjustments. In particular, we make three types of adjustments that are necessary to better estimate the results that we are more likely to achieve in real-world settings. We make adjustments for: (a) the methodological quality of each study we include in the meta-analyses; (b) the relevance or quality of the outcome measure that individual studies used; and (c) the degree to which the researcher(s) who conducted a study were invested in the program's design.

Methodological Quality. Not all research is of equal quality, and this greatly influences the confidence that can be placed in the results of a study. Some studies are well designed and implemented, and the results can be viewed as accurate representations of whether the program itself worked. Other studies are not designed as well, and less confidence can be placed in any reported differences. In particular, studies of inferior research design cannot completely control for sample selection bias or other unobserved threats to the validity of reported research results. This does not mean that results from these studies are of no value, but it does mean that less confidence can be placed in any cause-and-effect conclusions drawn from the results.

To account for the differences in the quality of research designs, we use a 5-point scale as a way to adjust the reported results. The scale is based closely on the 5-point scale developed by researchers at the University of Maryland.[14] On this 5-point scale, a rating of "5" reflects an evaluation in which the most confidence can be placed. As the evaluation ranking gets lower, less confidence can be placed in any reported differences (or lack of differences) between the program and comparison or control groups.

On the 5-point scale as interpreted by the Institute, each study is rated with the following numerical ratings.

- A **"5"** is assigned to an evaluation with well-implemented random assignment of subjects to a treatment group and a control group that does not receive the treatment/program. A good random assignment study should also indicate how well the random assignment actually occurred by reporting values for pre-existing characteristics for the treatment and control groups.

- A **"4"** is assigned to a study that employs a rigorous quasi-experimental research design with a program and matched comparison group, controlling with statistical methods for self-selection bias that might otherwise

influence outcomes. These quasi-experimental methods may include estimates made with a convincing instrumental variables modeling approach, or a Heckman approach to modeling self-selection.[15] A level 4 study may also be used to "downgrade" an experimental random assignment design that had problems in implementation, perhaps with significant attrition rates.

- A **"3"** indicates a non-experimental evaluation where the program and comparison groups were reasonably well matched on pre-existing differences in key variables. There must be evidence presented in the evaluation that indicates few, if any, significant differences were observed in these salient pre-existing variables. Alternatively, if an evaluation employs sound multivariate statistical techniques (e.g., logistic regression) to control for pre-existing differences, and if the analysis is successfully completed, then a study with some differences in pre-existing variables can qualify as a level 3.

- A **"2"** involves a study with a program and matched comparison group where the two groups lack comparability on pre-existing variables and no attempt was made to control for these differences in the study.

- A **"1"** involves a study where no comparison group is utilized. Instead, the relationship between a program and an outcome, i.e., drug use, is analyzed before and after the program.

We do not use the results from program evaluations rated as a "1" on this scale, because they do not include a comparison group and, thus, no context to judge program effectiveness. We also regard evaluations with a rating of "2" as highly problematic and, as a result, do not consider their findings in the calculations of effect. In this study, we only considered evaluations that rated at least a 3 on this 5-point scale.

An explicit adjustment factor is assigned to the results of individual effect sizes based on the Institute's judgment concerning research design quality. This adjustment is critical and the only practical way to combine the results of a high quality study (a level 5) with those of lesser design quality (level 4 and level 3 studies). The specific adjustments made for these studies are based on our knowledge of research in other topic areas. For example, in criminal justice program evaluations, there is strong evidence that random assignment studies (i.e., level 5 studies) have, on average, smaller absolute effect sizes than weaker-designed studies.[16] Thus, we use the following "default" adjustments to account for studies of different research design quality:

- A level 5 study carries a factor of 1.0 (that is, there is no discounting of the study's evaluation outcomes).

- A level 4 study carries a factor of .75 (effect sizes discounted by 25 percent).

- A level 3 study carries a factor of .50 (effect sizes discounted by 50 percent).

- We do not include level 2 and level 1 studies in our analyses.

[14] L. Sherman, D. Gottfredson, D. MacKenzie, J. Eck, P. Reuter, and S. Bushway. (1998). *Preventing crime: What works, what doesn't, what's promising.* Prepared for the National Institute of Justice. Department of Criminology and Criminal Justice, University of Maryland. Chapter 2.

[15] For a discussion of these methods, see W. Rhodes, B. Pelissier, G. Gaes, W. Saylor, S. Camp, and S. Wallace. (2001). Alternative solutions to the problem of selection bias in an analysis of federal residential drug treatment programs. *Evaluation Review 25*(3): 331-369.
[16] M.W. Lipsey. (2003). Those confounded moderators in meta-analysis: Good, bad, and ugly. *The Annals of the American Academy of Political and Social Science 587*(1): 69-81. Lipsey found that, for juvenile delinquency evaluations, random assignment studies produced effect sizes only 56 percent as large as nonrandom assignment studies.

These factors are subjective to a degree; they are based on the Institute's general impressions of the confidence that can be placed in the predictive power of evaluations of different quality.

The effect of the adjustment is to multiply the effect size for any study, ES'_m, in equation (A3) by the appropriate research design factor. For example, if a study has an effect size of -.20, and it is deemed a level 4 study, then the -.20 effect size would be multiplied by .75 to produce a -.15 adjusted effect size for use in the benefit-cost analysis.

Adjusting Effect Sizes of Studies With Short-Term Follow-Up Periods. To account for the likelihood that the effects of treatment do not persist indefinitely for all subjects, we provide the ability to discount effect sizes, ES_m, over time. The majority of studies coded report only short-term outcomes. Few of the studies provided outcomes beyond one- or two-year post-treatment. For many types of criminal justice populations this is not too much of a concern because recidivism events often happen in close proximity to one another. Nonetheless, to allow the modeling of effects that may decay over time, we built a "decay" parameter into the model. In Appendix B, we discuss the methods by which we decay these effects.

Adjusting Effect Sizes for Research Involvement in the Program's Design and Implementation. The purpose of the Institute's work is to identify and evaluate programs that can make cost-beneficial improvements to Washington's actual service delivery system. There is some evidence that programs closely controlled by researchers or program developers have better results than those that operate in "real world" administrative structures.[17] In our evaluation of a real-world implementation of a research-based juvenile justice program in Washington, we found that the actual results were considerably lower than the results obtained when the intervention was conducted by the originators of the program.[18] Therefore, we make an adjustment to effect sizes, ES_m, to reflect this distinction. As a parameter for all studies deemed not to be "real world" trials, the Institute discounts ES'_m by .5, although this can be modified on a study-by-study basis.

Estimating Effect Sizes for Crime from Child Abuse and Neglect Outcomes. Some of the prevention programs focus on reducing child abuse and neglect (CAN). The Institute previously analyzed the research studying the relationship between CAN in childhood and later criminality. For programs measuring CAN, we estimate ES_m for the effect of the program and we multiply the program's ES_m for CAN by the ES_m for the effect of CAN on crime.

A4. Meta-Analytic Results—Estimated Effect Sizes and Citations to Studies Used in the Analyses

Exhibits A.1, A.2, and A.3 provide technical meta-analytic results for the effect sizes computed for this analysis for adult offender, juvenile offender, and prevention programs, respectively. Each table provides the unadjusted and adjusted effect sizes for EBT in each of the three program areas, and lists all studies included in each analysis. Exhibit A.4 lists the citations for all studies used in the meta-analyses.

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[17] Ibid. Lipsey found that, for juvenile delinquency evaluations, programs in routine practice (i.e., "real world" programs) produced effect sizes only 61 percent as large as research/demonstration projects. See also: A. Petrosino, and H. Soydan. (2005). The impact of program developers as evaluators on criminal recidivism: Results from meta-analyses of experimental and quasi-experimental research. *Journal of Experimental Criminology 1*(4): 435-450.

[18] R. Barnoski. (2004). *Outcome evaluation of Washington State's research-based programs for juvenile offenders.* Olympia: Washington State Institute for Public Policy, available at <http://www.wsipp.wa.gov/rptfiles/04-01-1201.pdf>.

Exhibit A.1
Estimated Effect Sizes on Crime Outcomes - Programs for Adult Offenders
(A negative effect size indicates the program achieves less crime)

Program listed in italics require, in our judgment, additional research before it can be concluded that they do or do not reduce recidivism.	Number of Studies Included in the Review (in parentheses is the total number of subjects in the treatment groups)	Meta-Analytic Results Before Applying Institute Adjustments					Adjusted Effect Size Used in the Benefit-Cost Analysis (estimated effect after downward adjustments for the methodological quality of the evidence, outcome measurement relevance, and researcher involvement)
		Fixed Effects Model			Random Effects Model		
		Weighted Mean Effect Size		Homo-geneity Test	Weighted Mean Effect Size		
		ES	p-value	p-value	ES	p-value	ES
Adult Offenders							
Programs for Drug-Involved Offenders							
Adult Drug Courts	57 (19258)	-.160	.000	.000	-.182	.000	**-.093**
In-prison therapeutic communities with community aftercare	3 (803)	-.136	.018	.379	-.137	.019	**-.070**
In-prison therapeutic communities without community aftercare	9 (2399)	-.122	.000	.166	-.121	.002	**-.061**
Cognitive-behavioral drug treatment in prison	8 (3788)	-.130	.000	.905	-.131	.000	**-.077**
Case management in the community for drug offenders	13 (2897)	-.052	.060	.000	-.046	.371	**.000**
Drug treatment in the community	6 (54598)	-.137	.000	.000	-.218	.002	**-.108**
Drug treatment in jail	9 (1436)	-.110	.008	.025	-.106	.094	**-.053**
Programs for Mentally Ill and Co-Occurring Offenders							
Jail diversion (pre & post booking programs)	11 (1243)	.060	.141	.682	.060	.200	**.000**
"Therapeutic community" programs for mentally ill offenders	2 (145)	-.361	.004	.542	-.363	.023	**-.231**
Washington's Dangerously Mentally Ill Offender program	1 (100)	-.340	.004	na	-.340	.059	**-.255**
Treatment Programs for General Offenders							
General & specific cognitive-behavioral treatment programs, in prison	25 (6546)	-.147	.000	.000	-.164	.000	**-.081**
Faith-based programs	5 (630)	-.004	.937	.018	-.010	.908	**.000**
Life skills education programs	4 (389)	-.014	.834	.671	-.008	.935	**.000**
Programs for Domestic Violence Offenders							
Education/cognitive-behavioral treatment for domestic violence	9 (1254)	-.025	.523	.120	-.024	.627	**.000**
Domestic violence courts	2 (327)	-.086	.309	.009	-.013	.956	**.000**
Programs for Sex Offenders							
"Mixed" treatment of sex offenders in the community	2 (724)	-.176	.001	.015	-.184	.169	**.000**
Behavioral therapy for sex offenders.	2 (130)	-.190	.126	.635	-.173	.359	**.000**
Cognitive-behavioral sex offender treatment in prison	6 (1239)	-.100	.017	.131	-.125	.032	**-.060**
Cognitive-behavioral sex offender treatment in the community	6 (359)	-.391	.000	.438	-.391	.000	**-.196**
Cognitive-behavioral treatment in prison (sex offense outcomes)	5 (1137)	-.002	.965	.001	-.070	.469	**.000**
Cognitive-behavioral treatment in the community (sex off. outcomes)	5 (262)	-.357	.001	.846	-.353	.012	**-.179**
COSA (Faith-based supervision of sex offenders)	1 (60)	-.388	.035	na	-.388	.518	**-.194**
Intensive supervision of sex offenders in the community	4 (392)	.207	.003	.000	.202	.359	**.000**
Medical treatment of sex offenders	1 (99)	-.372	.060	na	-.372	.553	**-.186**
Psychotherapy for sex offenders	3 (313)	.134	.179	.038	.027	.892	**.000**
Intermediate Sanctions							
Adult boot camps	22 (5910)	-.030	.103	.000	-.017	.632	**.000**
Day fines (v.standard probation)	1 (191)	-.084	.411	na	-.084	.772	**.000**
Electronic monitoring	9 (2064)	.025	.416	.013	.012	.818	**.000**
Intensive supervision: surveillance-oriented programs	23 (2491)	-.020	.481	.247	-.017	.608	**.000**
Intensive supervision: treatment-oriented programs	11 (2364)	-.287	.000	.000	-.291	.027	**-.186**
Regular parole supervision vs. no parole supervision	1 (22016)	-.010	.591	na	-.010	.818	**.000**
Restorative justice programs for lower risk adult offenders	6 (783)	-.092	.070	.016	-.136	.125	**.000**
Work and Education Programs for General Offenders							
Education in prison (basic education or post-secondary)	17 (4022)	-.182	.000	.000	-.217	.000	**-.091**
Correctional industries programs in prison	4 (7178)	-.119	.000	.174	-.113	.000	**-.077**
Employment training and job assistance in the community	16 (9217)	-.047	.003	.017	-.061	.021	**-.047**
Vocational education in prison	4 (2145)	-.181	.000	.788	-.178	.000	**-.116**
Work release programs (from prison)	4 (621)	-.122	.045	.285	-.125	.070	**-.055**

Notes to the Table:
Criteria for inclusion in this review: 1) the study had to be published in English between 1970 and 2005; 2) the study could be published in any format—peer-reviewed journals, government reports, or other unpublished results; 3) the study had to have a randomly-assigned or demonstrably well-matched comparison group; 4) the study had to have intent-to-treat groups that included both completers and program dropouts, or sufficient information that the combined effects could be tallied; 5) the study had to provide sufficient information to code effect sizes; and 6) the study had to have at least a six-month follow-up period and include a measure of criminal recidivism as an outcome.

Estimated Effect Sizes on Crime Outcomes - Programs for Juvenile Offenders
(A negative effect size indicates the program achieves less crime)

Program listed in italics require, in our judgment, additional research before it can be concluded that they do or do not reduce recidivism.	Number of Studies Included in the Review (in parentheses is the total number of subjects in the treatment groups)	Meta-Analytic Results Before Applying Institute Adjustments					Adjusted Effect Size Used in the Benefit-Cost Analysis (estimated effect after downward adjustments for the methodological quality of the evidence, outcome measurement relevance, and researcher involvement)
		Fixed Effects Model			Random Effects Model		
		Weighted Mean Effect Size		Homo-geneity Test	Weighted Mean Effect Size		
		ES	p-value	p-value	ES	p-value	ES
Juvenile Offenders							
Specific Programs							
Adolescent Diversion Project (for lower risk offenders)	6 (418)	-.453	.000	.013	-.510	.001	**-.288**
Aggression Replacement Training	4 (616)	-.158	.003	.012	-.418	.029	**-.108**
Dialectical Behavior Therapy (in Washington)	1 (62)	-.118	.506	na	-.118	.541	**.000**
Family Integrated Transitions	1 (104)	-.288	.021	na	-.288	.426	**-.216**
Functional Family Therapy	7 (398)	-.397	.000	.086	-.493	.000	**-.233**
Multidimensional Treatment Foster Care (v. regular group care)	3 (90)	-.817	.000	.651	-.830	.000	**-.356**
Multi-Systemic Therapy	10 (693)	-.246	.000	.023	-.334	.000	**-.155**
Team Child	2 (98)	-.269	.046	.879	-.264	.207	**-.101**
General Program Types (expected effect of the average program)							
Juvenile Offender Interagency Coordination Programs	15 (2359)	-.069	.021	.139	-.081	.037	**-.038**
Juvenile Intensive Probation Supervision Programs	3 (1514)	-.033	.464	.434	-.035	.519	**.000**
Juvenile Intensive Probation (as alternative to incarceration)	5 (999)	.063	.165	.378	.061	.190	**.000**
Juvenile Intensive Parole Supervision	10 (1380)	.033	.421	.964	.021	.713	**.000**
Increased drug testing (on parole) v. minimal drug testing	1 (1429)	.066	.232	na	.066	.361	**.000**
Diversion Progs. with Services (v. regular juvenile court processing)	20 (5077)	-.060	.005	.189	-.061	.023	**-.025**
Court Supervision vs. Simple Release without Services	8 (1431)	.014	.707	.951	.016	.755	**.000**
Diversion Programs with Services (vs. simple release)	7 (1716)	-.016	.641	.342	-.017	.668	**.000**
Scared Straight	10 (752)	.121	.029	.671	.134	.037	**+.106**
Juvenile Sex Offender Treatment	5 (196)	-.237	.024	.038	-.325	.074	**-.134**
Juvenile Drug Courts	15 (1624)	-.133	.000	.015	-.089	.122	**-.052**
Juvenile Curfews	1 (13)	-.114	.771	na	-.114	.782	**.000**
Juvenile Wilderness Challenge	9 (516)	-.253	.000	.001	-.205	.108	**.000**
Teen Courts	5 (622)	-.277	.000	.013	-.272	.007	**-.104**
Juvenile Boot Camps	14 (2266)	.025	.428	.003	.030	.571	**.000**
Restorative Justice-Juveniles	21 (3250)	-.138	.000	.000	-.152	.001	**-.081**
Other Family-Based Therapy Programs for Juvenile Offenders	12 (840)	-.329	.000	.000	-.377	.009	**-.180**
Juvenile Cognitive-Behavioral Treatment	8 (1786)	-.064	.055	.214	-.133	.062	**-.038**
Regular Surveillance-oriented Parole (v. no parole supervision)	2 (1671)	.064	.136	.382	.055	.337	**.000**
Juvenile Therapeutic Communities	1 (437)	-.047	.489	na	-.047	.504	**.000**
Guided Group Interaction	4 (368)	-.036	.629	.614	-.034	.702	**.000**
Juvenile Education Programs	3 (545)	-.194	.000	.022	-.438	.038	**-.286**
Juvenile Behavior Modification	4 (1022)	-.276	.000	.492	-.279	.000	**-.138**
Life skills education programs for juvenile offenders	3 (590)	-.125	.033	.076	-.132	.178	**-.047**
Juvenile Day Reporting	2 (137)	.102	.338	.501	.096	.477	**.000**
Juvenile Jobs Programs	3 (175)	.142	.194	.795	.142	.353	**.000**
Mentoring (in the juvenile justice system--in Washington)	1 (78)	-.095	.552	na	-.095	.757	**.000**
Counseling/psychotherapy for juvenile offenders	6 (153)	-.399	.001	.441	-.396	.001	**-.274**

Notes to the Table:
Criteria for inclusion in this review: 1) the study had to be published in English between 1970 and 2005; 2) the study could be published in any format—peer-reviewed journals, government reports, or other unpublished results; 3) the study had to have a randomly-assigned or demonstrably well-matched comparison group; 4) the study had to have intent-to-treat groups that included both completers and program dropouts, or sufficient information that the combined effects could be tallied; 5) the study had to provide sufficient information to code effect sizes; and 6) the study had to have at least a six-month follow-up period and include a measure of criminal recidivism as an outcome.

Exhibit A.3

Estimated Effect Sizes on Crime Outcomes - Prevention Programs for Children and Youth

(A negative effect size indicates the program achieves less crime)

Program listed in italics require, in our judgment, additional research before it can be concluded that they do or do not reduce recidivism.	Number of Studies Included in the Review (in parentheses is the total number of subjects in the treatment groups)	Meta-Analytic Results Before Applying Institute Adjustments					Adjusted Effect Size Used in the Benefit-Cost Analysis (estimated effect after downward adjustments for the methodological quality of the evidence, outcome measurement relevance, and researcher involvement)
		Fixed Effects Model			Random Effects Model		
		Weighted Mean Effect Size		Homo-geneity Test	Weighted Mean Effect Size		
		ES	p-value	p-value	ES	p-value	ES
Prevention Programs							
Specific Programs							
Nurse Family Partnership for Low-Income Mothers - Mother Outcomes	1 (38)	-.718	.001	na	-.718	.643	**-.359**
Nurse Family Partnership for Low-Income Mothers - Child Outcomes	1 (38)	-.375	.071	na	-.375	.409	**-.188**
Seattle Social Development Project	1 (156)	-.220	.036	na	-.220	.585	**-.110**
Guiding Good Choices (formerly PDFY)	1 (221)	-.190	.050	na	-.190	.555	**-.071**
Parent-Child Interaction Therapy[1]	1 (42)	-.642	.006	na	-.642	.231	**-.042**
General Program Types (expected effect of the average program)							
Early Childhood Education for Low Income 3- and 4-Year-Olds	8 (1682)	-.201	.000	.161	-.210	.000	**-.162**
High school graduation	1 (1000)	-.081	.071	na	-.081	.848	**-.061**
Home Visiting Programs for At-risk Mothers and Children[1]	19 (3421)	-.131	.000	.002	-.131	.005	**-.011**

Notes to the Table:
Criteria for inclusion in this review: 1) the study was published in English; 2) the study was published in any format--peer-reviewed journals, government reports, or other unpublished results; 3) the study had a randomly-assigned or demonstrably well-matched comparison group; 4) the groups had to have both completers and program dropouts included, or sufficient information that the combined effects could be tallied, 4) the study had sufficient information to code effect sizes; 5) the study was published between 1970 and 2005; 6) the study had a least a 6-month follow up period.

[1]These two programs measured effects on child abuse and neglect. Considerable research literature indicates a causal relationship between child abuse and subsequent child criminal behaviore. Using this relationship, we have translated effect sizes for child abuse into expected effects on crime outcomes.

Exhibit A.4
Citations to the Studies Used in the Meta-Analyses
(Some studies contributed independent effect sizes from more than one location)

Adolescent Diversion Project

Blakely, C. H. (1981) "The diversion of juvenile delinquents: a first step toward the dissemination of a successful innovation." Doctoral dissertation, Michigan State University.

Davidson, W. S. II., and Redner, R. (1988). "The prevention of juvenile delinquency: Diversion from the juvenile justice system." In R. H. Price, E. L. Cowen, R. P. Lorion, and J. Ramos-McKay (eds.), 14 Ounces of Prevention: A Casebook for Practitioners (pp. 123-137). Washington, D. C.: American Psychological Association.

Emshoff, J.G. and C.H. Blakely. (1983) "The diversion of delinquent youth: Family-focused intervention." Children and Youth Services Review 5: 343-356.

Adult Boot Camps

Austin, J., Jones, M., & Bolyard, M. (1993). Assessing the impact of a county operated boot camp: Evaluation of the Los Angeles County regimented inmate diversion program. San Francisco: National Council on Crime and Delinquency.

Burns, J. C., & Vito, G. F. (1995). An impact analysis of the Alabama boot camp program. Federal Probation, 59(1): 63-67.

Camp, D. A., Sandhu, H. S. (1995). Evaluation of female offender regimented treatment program (FORT). Journal of the Oklahoma Criminal Justice Research Consortium, 2: 50-77.

Colorado Department of Corrections. (1993). Colorado regimented inmate training program: A legislative report.

Farrington, D. P., Ditchfield, J., Hancock, G., Howard, P., Jolliffe, D., Livingston, M. S., & Painter, K. (2002). Evaluation of two intensive regimes for young offenders. London, UK: Home Office Research Study 239.

Gransky, Laura A. and Jones, Robert J. (1995). Evaluation of the Post-Release Status of Substance Abuse Program Participants. Illinois Criminal Justice Authority Report.

Harer, M. D., & Klein-Saffran, J. (1996). Lewisburg ICC Evaluation. Washington DC: Bureau of Prisons, Office of Research and Evaluation. Memo.

Jones, M., Ross, D. L. (1997). Is less better?: Boot camp, regular probation and rearrest in North Carolina. American Journal of Criminal Justice, 21(2): 147:161.

Kempinen, C. A., and Kurlychek, M. C. (2003). An outcome evaluation of Pennsylvania's boot camp: Does rehabilitative programming within a disciplinary setting reduce recidivism? Crime & Delinquency, 49(4): 581:602.

MacKenzie, D. L. & Souryal, C. (1994). Multisite evaluation of shock incarceration: Executive summary. Washington, DC: U.S. Department of Justice/NIJ.

Smith, R. P. (1998). Evaluation of the Work Ethic Camp. Olympia: Washington State Department of Corrections.

Stinchcomb, J. B., & Terry, W. C. (2001). Predicting the likelihood of rearrest among shock incarceration graduates: Moving beyond another nail in the boot camp coffin. Crime & Delinquency, 47(2): 221:242.

Wright, D. T., & Mays, G. L. (1998). Correctional boot camps, attitudes, and recidivism: The Oklahoma experience. Journal of Offender Rehabilitation, 28(1/2): 71-87.

Adult Drug Courts

Barnoski R., Aos S., (2003), Washington State's Drug Courts for Adult Defendants: Outcome Evaluation and Cost-Benefit Analysis. Washington State Institute for Public Policy, 03-03-1201.

Bavon, A. (2001). The effect of the Tarrant County drug court project on recidivism. Evaluation and Program Planning, 24: 13–24.

Bell, M. M. (1998). King County drug court evaluation: Final report. Seattle, WA: M. M. Bell, Inc.

Breckenridge, J. F., Winfree, Jr., L. T., Maupin, J. R., & Clason, D. L. (2000). Drunk drivers, DWI 'drug court' treatment, and recidivism: Who fails? Justice Research and Policy, 2(1): 87.

Brewster, M. P. (2001). An evaluation of the Chester County (PA) drug court program. Journal of Drug Issues, 31(1): 177–206.

Carey, S. M., & Finigan, M. W. (2004). A detailed cost-analysis in a mature drug court setting: A cost-benefit evaluation of the Multnomah County drug court. Journal of Contemporary Criminal Justice, 20(3): 315-338.

Craddock, A. (2002). North Carolina drug treatment court evaluation: Final report. Raleigh: North Carolina Court System.

Crumpton, D., Brekhus, J., Weller, J., & Finigan, M. (2003). Cost analysis of Baltimore City, Maryland drug treatment court. Portland, OR: NPC Research, Inc.

Deschenes, E. P., Cresswell, L., Emami, V., Moreno,K., Klein, Z., & Condon, C. Success of Drug Courts: Process and Outcome Evaluations in Orange County, California, Final Report. Submitted to the Superior Court of Orange County, CA, September 20, 2001.

Ericson, R., Welter, S., & Johnson, T. L. (1999). Evaluation of the Hennepin County drug court. Minneapolis: Minnesota Citizens Council on Crime and Justice.

Evaluation: Spokane County drug court program. (1999). Spokane, WA: Spokane County Drug Court.

Fielding, J. E., Tye, G., Ogawa, P. L., Imam, I. J., & Long, A. M. (2002). Los Angeles County drug court programs: Initial results. Journal of Substance Abuse Treatment, 23(3): 217-224.

Finigan, M. W. (1998). An outcome program evaluation of the Multnomah County S.T.O.P. drug diversion program. Portland, OR: NPC Research, Inc.

Godley, M. D., Dennis, M. L., Funk, R., Siekmann, M., & Weisheit, R. (1998). An evaluation of the Madison County assessment and treatment alternative court. Chicago: Illinois Criminal Justice Information Authority.

Goldkamp, J. S. & Weiland, D. (1993). Assessing the Impact of Dade County's Felony Drug Court. Final Report. Philadelphia: Crime and Justice Research Institute.

Goldkamp, J. S., Weiland, D., & Moore, J. (2001). The Philadelphia treatment court, its development and impact: The second phase (1998-2000). Philadelphia: Crime and Justice Research Institute.

Goldkamp, J. S., White, M. D., & Robinson, J. B. (2001). Do drug courts work? Getting inside the drug court black box. Journal of Drug Issues, 31(1): 27–72.

Gottfredson, D. C., Coblentz, K., & Harmon, M. A. (1997). A short-term outcome evaluation of the Baltimore City drug treatment court program." Perspectives, Winter: 33–38.

Gottfredson, D. C., Najaka, S. S., Kearley, B. (2002, November). A randomized study of the Baltimore City drug treatment court: Results from the three-year follow-up. Paper presented at the annual meeting of the American Society of Criminology, Chicago.

Granfield, R., Eby, C., & Brewster, T. (1998). An examination of the Denver drug court: The impact of a treatment-oriented drug-offender system. Law & Policy, 20: 183–202.

Harrell, A., Roman, J., and Sack, E., Drug court services for female offenders, 1996–1999: Evaluation of the Brooklyn treatment court (Washington, D.C.: The Urban Institute, 2001).

Johnson, G.D., Formichella, C.M., & Bowers D.J. (1998). Do drug courts work? An outcome evaluation of a promising program. Journal of Applied Sociology, 15(1): 44-62.

Latessa, E. J., Shaffer, D. K., & Lowenkamp C. (2002). Outcome evaluation of Ohio's drug court efforts: Final report. Cincinnati: Center for Criminal Justice Research, Division of Criminal Justice, University of Cincinnati.

Listwan, S. J., & Latessa, E. J. (2003). The Kootenai and Ada County drug courts: Outcome evaluation findings. Cincinnati, OH: Center for Criminal Justice Research, University of Cincinnati.

Listwan, S. J., Shaffer, D. K., & Latessa, E. J. (2001). The Akron municipal drug court: Outcome evaluation findings. Cincinnati: Center for Criminal Justice Research, University of Cincinnati.

Listwan, S. J., Sundt, J. L., Holsinger, A. M., & Latessa, E. J. (2003). The effect of drug court programming on recidivism: The Cincinnati experience. Crime & Delinquency, 49(3): 389-411.

Listwan, S. J., Shaffer, D. K., & Latessa, E. J. (2001). The Erie County drug court: Outcome evaluation findings. Cincinnati: Center for Criminal Justice Research, University of Cincinnati.

Logan, T., Hoyt, W., & Leukefeld, C. (2001) Kentucky drug court outcome evaluation: Behaviors, costs, and avoided costs to society. Lexington: Center on Drug and Alcohol Research, University of Kentucky.

Martin, T. J., Spohn, C. C., Piper, R. K., & Frenzel-Davis, E. (2001). Phase III Douglas County drug court evaluation: Final report. Institute for Social and Economic Development.

Martinez, A. I., & Eisenberg, M. (2003). Initial process and outcome evaluation of drug courts in Texas. Austin, Texas: Criminal Justice Policy Council.

McNeece, C. A. & Byers, J. B. (1995). Hillsborough County drug court: Two-year (1995) follow-up study. Tallahassee: Institute for Health and Human Services Research, School of Social Work, Florida State University.

Miethe, T. D., Lu, H., & Reese, E. (2000). Reintegrative shaming and recidivism risks in drug court: Explanations for some unexpected findings. Crime and Delinquency, 46(4): 522–541.

Peters, R. H. and Murrin, M. R. (2000). Effectiveness of treatment-based drug courts in reducing criminal recidivism. Criminal Justice and Behavior, 27(1): 72–96.

Rempel, M., Fox-Kralstein, D., Cissner, A., Cohen, R., Labriola, M., Farole, D., Bader, A., & Magnani, M. (2003). The New York State adult drug court evaluation: Policies, participants and impacts. New York, NY: Center for Court Innovation.

Shanahan, M., Lancsar, E., Haas, M., Lind, B., Weatherburn, D., & Chen, S. (2004). Cost-effectiveness analysis of the New South Wales adult drug court program. Evaluation Review, 28(1): 3-27.

Spohn, C., Piper, R. K., Martin, T., & Frenzel, E. D. (2001). Drug courts and recidivism: The results of an evaluation using two comparison groups and multiple indicators of recidivism. Journal of Drug Issues, 31(1): 149–176.

Stageberg, P., Wilson, B., & Moore, R. G. (2001). Final Report on the Polk County Adult Drug Court. Iowa Department of Human Rights, Division of Criminal and Juvenile Justice Planning.

Tjaden, C. D., Diana, A., Feldman, D., Dietrich, W., & Jackson, K. (2002). Denver drug court: Second year report, outcome evaluation. Vail, CO: Toucan Research and Computer Solutions.

Truitt, L., Rhodes, W. M., Seeherman, A. M., Carrigan, K., & Finn, P. (2000). Phase I: Case studies and impact evaluations of Escambia County, Florida and Jackson County, Missouri drug courts. Cambridge, MA: Abt Associates. Some results also reported in Belenko, S. (2001). Research on drug courts: A critical review, 2001 update. New York: The National Center on Addiction and Substance Abuse at Columbia University.

Turner, S., Greenwood, P., Fain, T., & Deschenes, E. (1999). Perceptions of drug court: How offenders view ease of program completion, strengths and weaknesses, and the impact on their lives. National Drug Court Institute Review, 2(1): 61-86.

Utah Substance Abuse and Anti-Violence Coordinating Council. (2001). Salt Lake County drug court outcome evaluation. Salt Lake City: Utah Substance Abuse and Anti-Violence Coordinating Council.

Vito, G. F., & Tewksbury, R. A. (1998). The impact of treatment: The Jefferson County (Kentucky) drug court program. Federal Probation, 62(2): 46–51.

Wolfe E., Guydish J., & Termondt J. (2002). A drug court outcome evaluation comparing arrests in a two year follow-up period. Journal of Drug Issues, 32(4): 1155-1171.

Adult Intensive Supervision Probation or Parole (ISP), Surveillance

Bagdon, W. & Ryan, J. E. (1993), "Intensive Supervision of Offenders on Prerelease Furlough: An Evaluation of the Vermont Experience," FORUM on Corrections Research, Volume 5(2), downloaded at: http://www.csc-scc.gc.ca/text/pblct/forum/e052/e052j_e.shtml

Brown, K. (1999). Intensive supervision probation: The effects of supervision philosophy on intensive probationer recidivism. Dissertation, University of Cincinnati. http://www.uc.edu/criminaljustice/graduate/Dissertations/KBrown.PDF

Byrne, J. M. and Kelly, L. (1989). "Executive Summary: Restructuring Probation as an Intermediate Sanction: An Evaluation of the Massachusetts Intensive Probation Supervision Program." Final Report to the National Institute of Justice, Research Program on the Punishment and Control of Offenders. Washington, D.C.: National Institute of Justice.

Deschenes, E.P., Turner, S., and Petersilia, J. (1995). "A Dual Experiment in Intensive Community Supervision: Minnesota's Prison Diversion and Enhanced Supervised Release Programs." Prison Journal 75(3): 330-357.

Erwin, B. S., Bennett, L. A. (1987). "New dimensions in probation: Georgia's experience with intensive probation supervision." Research Brief, National Institute of Justice, January.

Fulton, B., Stichman, A., Latessa, E., Lawrence, T. (1998). "Evaluating the prototypical ISP, Iowa correctional services second judicial district." Final Report. Division of Criminal Justice, University of Cincinnati.

Johnson, G. and R.M. Hunter. (1995). "Evaluation of the Specialized Drug Offender Program," pp. 214-234 in Ross, R. R. and Ross, R. D., Thinking Straight: The Reasoning and Rehabilitation Program for Delinquency Prevention and Offender Rehabilitation. Ottawa: Air Training and Publications.

Lichtman, Cary M. and Sue M. Smock. (1981.) "The Effects of Social Services on Probationer Recidivism: A Field Experiment." Journal of Research in Crime and Delinquency January, 81-100.

Petersilia, J., Turner, S., and Deschenes, E.P. (1992). "Intensive Supervision Programs for Drug Offenders." In Byrne, J. M., Lurigio, A. J. and Petersilia, J. (eds.), Smart Sentencing: The Emergency of Intermediate Sanctions. Sage: Newbury Park, 18-37.

Petersilia, Joan and Turner, Susan. (1990). Intensive Supervision for High-risk Probationers: Findings from Three California Experiments. Santa Monica, CA: RAND.

Smith, Linda G. and Akers, Ronald L. (1993). "A Comparison of Recidivism of Florida's Community Control and Prison: A Five-Year Survival Analysis." Journal of Research in Crime and Delinquency 30(3): 267-292.

Stichman, A., Fulton, B., Latessa, E., Lawrence, T. (1998). "Evaluating the prototypical ISP, Hartford intensive supervision unit Connecticut office of adult probation administrative office of the courts." Final Report. Division of Criminal Justice, University of Cincinnati.

Turner, S., Petersilia, J. (1992). "Focusing on high-risk parolees: experiment to reduce commitments to the Texas Department of Corrections." Journal of Research on Crime and Delinquency 29(1): 34-61.

Adult Intensive Supervision Probation or Parole (ISP), Treatment

Deschenes, E. P., Turner, S., and Petersilia, J. (1995). "A Dual Experiment in Intensive Community Supervision: Minnesota's Prison Diversion and Enhanced Supervised Release Programs." Prison Journal 75(3): 330-357.

Hanley, D. (2002). Risk differentiation and intensive supervision: a meaningful union?," Dissertation, University of Cincinnati.

Harrell, A., Mitchell, O., Hirst, A., Marlow, D., Merrill, J.C. (2002). "Breaking the Cycle of Drugs and Crime: Findings from the Birmingham BTC Demonstration." Criminology and Public Policy 1(2): 189-216.

Harrell, A., Mitchell, O., Merrill, J.C., & Marlowe, DB (2003). Evaluation of Breaking the Cycle. Washington, DC: The Urban Institute.

Harrell, A., Roman, J., Bhati, A., Parthasarathy, B. (2003). Evaluation of Breaking the Cycle. Washington, DC: The Urban Institute.

Paparozzi, M.A. (1994). A comparison of the effectiveness of an intensive parole supervision program with traditional parole supervision. Unpublished doctoral dissertation, Rutgers, The State University of New Jersey.

Pearson, F.S. (1988). "Evaluation of New Jersey's Intensive Supervision Program." Crime and Delinquency 34(4): 437-448.

Petersilia, Joan and Turner, Susan. (1990). Intensive Supervision for High-risk Probationers: Findings from Three California Experiments. Santa Monica, CA: RAND.

Aggression Replacement Training (ART) (including Washington studies)

Barnoski, R. (2004), Outcome Evaluation of Washington State's Research-Based Programs for Juvenile Offenders, Washington State Institute for Public Policy

Gibbs, J. C. (1995). "EQUIP: A Peer-Group Treatment Program for Delinquents," in Ross, R.R., Antonowicz, D.H., Dhaliwal, G.K., Going Straight, Effective Delinquency Prevention & Offender Rehabilitation, Ottawa: AIR Training Publications, Chapter 8.

Goldstein, A. P., Glick, B. (1995). "Aggression Replacement Training for Delinquents," in Ross, R.R., Antonowicz, D.H., Dhaliwal, G.K., Going Straight, Effective Delinquency Prevention & Offender Rehabilitation, Ottawa: AIR Training Publications, Chapter 6.

Behavioral Therapy for Sex Offenders

Davidson, Paul R. (1984). "Behavioral treatment for incarcerated sex offenders: post-release outcome." Paper presented at Conference at Kingston, Ontario, Canada, March.

Rice, Marnie E., Quinsey, Vernon L., Harris, Grant T. (1991). "Sexual Recidivism Among Child Molesters Released from a Maximum Security Psychiatric Institution." Journal of Consulting and Clinical Psychology 59: 381-386.

Case Management in the Community for Drug-Involved Offenders

Anglin, M. D., Longshore, D., Turner, S. (1999). "Treatment alternatives to street crime: An evaluation of five programs." Criminal Justice and Behavior 26(2): 168-195.

California Department of Corrections. (1996). Parolee Partnership Program: A Parole Outcome Evaluation. Sacramento: California Department of Corrections.

Hanlon, T. E., Nurco, D. N., Bateman, R. W., O'Grady, K. E. (1999). "The relative effects of three approaches to the parole supervision of narcotic addicts and cocaine abusers." The Prison Journal 79(2): 163-181.

Longshore, D., Turner, S., & Fain. T. (2005) Effects of case management on parolee misconduct. Criminal Justice and Behavior, 32(2): 205-222.

Owens, S., Klebe, K., Arens, S., Durham, R., Hughes, J., Moor, C., O'Keefe, M., Phillips, J., Sarno, J., & Stommel, J. (1997). The Effectiveness of Colorado's TASC Programs. Journal of Offender Rehabilitation, 26: 161-176.

Rhodes, W. and Gross, M. (1997). "Case Management Reduces Drug Use and Criminality Among Drug-Involved Arrestees: An Experimental Study of an HIV Prevention Intervention." Final report to the National Institute of Justice/National Institute on Drug Abuse.

Circles of Support & Accountability (Faith-based supervision of sex offenders)

Wilson, R.J., Picheca, J.E., Prinzo, M. 2005. "Circles of Support & Accountability: An evaluation of the Pilot Project in South Central Ontario", Draft report to Correctional Service of Canada, R-168, e-mailed to M. Miller Oct 20, 2005.

Cognitive-Behavioral for the General Population, in Prison

Armstrong, T. (2003). The effect of Moral Reconation Therapy on the recidivism of youthful offenders. Criminal Justice and Behavior, Vol. 30, No. 6, 668-687.

Burnett, Walter. (1997). "Treating Post-Incarcerated Offenders with Moral Reconation Therapy: A One-Year Recidivism Study," Cognitive Behavioral Treatment Review 6(3/4): 2.

Culver, H.E. 1993. Intentional Skill Development as an Intervention Tool. Doctoral dissertation, University of Massachusetts. UMI 9329590.

Falshaw, L., Friendship, C., Travers, R., Nugent, F. (2004) Searching for "What Works": HM Prison Service accredited cognitive skills programmes. British Journal of Forensic Practice 6(2): 3-13.

Friendship, C., Blud, L., Erikson, M., Travers, R., Thornton, D. (2003) Cognitive-behavioural treatment for imprisoned offenders: An evaluation of HM Prison Service's cognitive skills programmes. Legal and Criminological Psychology 8: 103-114

Golden, Lori (2002) Evaluation of the Efficacy of a Cognitive Behavioral Program for Offenders on Probation: Thinking for a Change. University of Texas Southwestern Medical Center at Dallas. <www.nicic.org/pubs/2002/018190.pdf >

Grandberry, G. (1998). "Moral Reconation Therapy Evaluation, Final Report." Olympia: Washington State Department of Corrections.

Henning, K. R., and Frueh, B. C. (1996). "Cognitive-Behavioral Treatment of Incarcerated Offenders: An Evaluation of the Vermont Department of Corrections' Cognitive Self-Change Program." Criminal Justice and Behavior 23(4): 523-541.

Hubbard, D.J., Latessa, E.J. (2004) Final Report. Evaluation of Cognitive-Behavioral programs for offenders: A look at outcome and responsivity in five treatment programs. Division of Criminal Justice, University of Cincinnati.

Johnson, G. and R.M. Hunter. (1995). "Evaluation of the Specialized Drug Offender Program," pp. 214-234 in Ross, R. R. and Ross, R. D., Thinking Straight: The Reasoning and Rehabilitation Program for Delinquency Prevention and Offender Rehabilitation. Ottawa: Air Training and Publications.

Larson, K. A. (1989) "Problem-Solving Training and Parole Adjustment in High-/risk Young Adult Offenders". The Yearbook of Correctional Education (1989):279-299.

Little, G. L., Robinson, K. D., Burnette, K. D. (1993). "Cognitive behavioral treatment of felony drug offenders: a five-year recidivism report." Psychological Reports 73: 1089-1090.

Little, G. L., Robinson, K. D., Burnette, K. D. (1993). "5 recidivism results on MRT-treated DWI offenders released." Cognitive Behavioral Treatment Review 2(4): 2.

Little, G. L., Robinson, K. D., Burnette, K. D., and Swan, E. S. (1998). "Nine-Year Reincarceration Study on MRT-Treated Felony Offenders: Treated Offenders Show Significantly Lower Reincarceration." Cognitive Behavioral Treatment Review 7(1): 2-3.

Ortmann, R. (2000). The effectiveness of a social therapy in prison - a randomized design. Crime & Delinquency 46(2) 214-232

Porporino, F. J. and Robinson, David. (1995). "An Evaluation of the Reasoning and Rehabilitation Program with Canadian Federal Offenders," Chapter 8 in Ross, R. R. and Ross, R. D., Thinking Straight: The Reasoning and Rehabilitation Program for Delinquency Prevention and Offender Rehabilitation. Ottawa: Air Training and Publications.

Raynor, Peter and Vanstone, M. (1996). "Reasoning and Rehabilitation in Britain: The Results of the Straight Thinking on Probation (STOP) Programme," International Journal of Offender Therapy and Comparative Criminology 40(4): 272-284.

Robinson, D. (1995). "The Impact of Cognitive Skills Training on Post-Release Recidivism Among Canadian Federal Offenders." Research Report, Correctional Research and Development, Correctional Service Canada.

Ross, R. R., Fabiano, E. A., and Ewles, C. D. (1988). "Reasoning and Rehabilitation." International Journal of Offender Therapy and Comparative Criminology 32: 29-36.

Van Voorhis, P., Spruance, L.M., Ritchey, P.N., Listwan, S.J., Seabrook, R. (2004) The Georgia Cognitive Skills Experiment: A replication of Reasoning and Rehabilitation. Criminal Justice and Behavior 31(3): 282-305.

Van Voorhis, P., Spruance, L.M., Ritchie, P.N, Johnson-Listwan, S., Seabrook, R., Pealer, J. (2002) The Georgia Cognitive Skills Experiment Outcome Evaluation Phase II. Cincinnati, OH: University of Cincinnati, Center for Criminal Justice Research. <http://www.uc.ed/criminaljustice/ProjectReports/Georgia_Phase_II_final.report.pdf>

Wilkinson, J. (2005) Evaluating evidence for the effectiveness of the Reasoning and Rehabilitation Programme. The Howard Journal of Criminal Justice 44(1): 70-85

Yessine, A.K., Kroner, D.G. (2004) "Altering Antisocial Attitudes among Federal Male Offenders on Release: A Preliminary Analysis of the Counter-Point Community Program". Research Report No. R-152, Correctional Research and Development, Correctional Service Canada.

Cognitive-Behavioral Therapy in Prison for Drug-Involved Offenders

Aos, S., Phipps, P., Barnoski, R. (2004) Washington's drug offender sentencing alternative: an evaluation of benefits and costs, Olympia: Washington State Institute for Public Policy.

Daley M., Love C. T., Shepard D. S., Petersen C. B., White K. L. and Hall F. B. (2004). Cost-Effectiveness of Connecticut's in-Prison Substance Abuse Treatment. Journal of Offender Rehabilitation, 39(3): 69-92.

Hall, E. A., Prendergast, M. L., Wellisch, J., Patten, M., and Cao, Y. (2004). "Treating drug-abusing women prisoners: An outcomes evaluation of the Forever Free program." The Prison Journal 84 (1):81-105.

Hanson, G. (2000). Pine Lodge intensive inpatient treatment program. Washington State Department of Corrections.

Pelissier, B., Rhodes, W., Saylor, W., Gaes, G., Camp, S. D., Vanyur, S. D., Wallace, S. (2000). "TRIAD Drug Treatment Evaluation Project: Final Report of Three-Year Outcomes: Part 1" Federal Bureau of Prisons, Office of Research and Evaluation. Downloaded: http://www.bop.gov/news/PDFs/TRIAD/TRIAD_pref.pdf

Porporino, F. J., Robinson, D., Millson, B., & Weekes, J. R. (2002). An outcome evaluation of prison-based treatment programming for substance users. Substance Use & Misuse, 37(8-10), 1047-1077.

Washington State Department of Corrections, Division of Management and Budget, Planning and Research Section, "Substance Abuse Treatment Program Evaluation of Outcomes and Management Report." (April 1998).

Wexler, H. K., Falkin, G. P., Lipton, D. S., Rosenblum, A. B. (1992). "Outcome Evaluation of a Prison Therapeutic Community for Substance Abuse Treatment," pp. 156-174 in Carl G. Leukefeld and Frank M. Tims (eds.), Drug Abuse Treatment in Prisons and Jails, NIDA research Monograph 118, Rockville, MD: NIDA.

Cognitive-Behavioral Treatment in Prison, Sex Offenders

Bakker, Leon, Stephen Hudson, David Wales and Riley, David. (1999). "…And there was Light": An Evaluation of the Kia Marama Treatment Programme for New Zealand Sex Offenders Against Children," Unpublished report.

Barnoski, R. (2006) Sex offender sentencing in Washington State: Does the prison treatment program reduce recidivism? Olympia: Washington State Institute for Public Policy. <http://www.wsipp.wa.gov/rptfiles/06-06-1205.pdf>

Looman, Jan, Abracen, Jeffrey, and Nicholaichuk, Terry P. (2000). "Recidivism Among Treated Sexual Offenders and Matched Controls: Data from the Regional Treatment Centre (Ontario)." Journal of Interpersonal Violence 15(3): 279-290.

Marques, Janice K. (1999). "How to answer the question 'does sex offender treatment work?'" Journal of Interpersonal Violence 14(4): 437-451.

Robinson, D. (1995). "The Impact of Cognitive Skills Training on Post-Release Recidivism Among Canadian Federal Offenders." Research Report No. R-41, Correctional Research and Development, Correctional Service Canada.

Song, L. and Lieb, R. (1995). Washington State Sex Offenders: Overview of Recidivism Studies, Olympia: Washington State Institute for Public Policy.

Cognitive-Behavioral Treatment in the Community, Sex Offenders

Allam, J. (1999). Sex Offender Re-Conviction–Treated vs. Untreated Offenders. West Midlands Probation Service Sex Offender Treatment Programme.

Baird, C., Wagner, D., Decomo, B., Aleman, T. (1994). Evaluation of the effectiveness of supervision and community rehabilitation programs in Oregon. National Council on Crime and Delinquency.

Marshall, W. L., Eccles, A., & Barbaree, H.E. (1991). "The treatment of exhibitionists: A focus on sexual deviance versus cognitive and relationship features." Behaviour Research & Therapy 29(2): 129-135.

McGrath, Robert J., Hoke, Stephen E., and Vojtisek, John E. (1998). "Cognitive-Behavioral Treatment of Sex Offenders: A Treatment Comparison and Long-Term Follow-Up Study." Criminal Justice and Behavior 25: 203-225.

Procter, Edward. (1996). "A five-year outcome evaluation of a community-based treatment programme for convicted sexual offenders run by the probations service." (England) The Journal of Sexual Aggression 2(1): 3-16.

Education in Prison (Basic Education or Post-Secondary)

Batiuk, M., Lahm, K., McKeever, M. Wilcox, N., & Wilcox, P. (2005). "Disentangling the effects of correctional education: Are current policies misguided? An event history analysis." Criminology and Criminal Justice 5: 55-74.

Batiuk, M.E., Moke, P., & Rountree, P.W. (1997). "Crime and rehabilitation: Correctional education as an agent of change." Justice Quarterly 14: 167-180.

Blackburn, F.S. (1981). "The Relationship between Recidivism and Participation in a Community College Program for Incarcerated Offenders." Journal of Correctional Education 32(3): 23–25.

Burke, L.O., & Vivian, J.E. (2001). "The effect of college programming on recidivism rates at the Hampden County House of Correction: A 5-year study." Journal of Correctional Education 52: 160-162.

Drake, E.K. (2005). Correctional education and its impacts on post-prison employment patterns and recidivism (unpublished). Olympia, WA: Washington State Department of Corrections.

Duguid, S., Hawkey, C. & Knights, W. (1998). "Measuring the impact of post-secondary education in prison: A report from British Columbia." Journal of Offender Rehabilitation 27(1/2): 87-106.

Harer, M. D. (1995). Prison education program participation and recidivism: A test of the normalization hypotheses. Washington, DC: Federal Bureau of Prisons, Office of Research and Evaluation.

Holloway, J., & Moke, P. (1986). "Post-secondary correctional education: An evaluation of parolee performance." Unpublished manuscript, Wilmington College, Ohio.

Linden, R., Perry, L., Ayers, D., & Parlett, T.A. (1984). "An evaluation of a prison education program. Canadian Journal of Criminology." 26: 65-73.

O'Neil, M. (1990). "Correctional higher education: Reduced recidivism?" Journal of Correctional Education 41: 28-31.

Mitchell, O. (2002). Statistical analysis of the three state CEA data. Unpublished.

Piehl, A. M. (1994). Learning while doing time. Kennedy School Working Paper #R94-25. Cambridge, MA: John F. Kennedy School of Government, Harvard University.

Walsh, A. (1985). An evaluation of the effects of adult basic education on rearrest rates among probationers. Journal of Offender Counseling, Services, and Rehabilitation, 9(4): 69-76.

Correctional Industries

Drake, E. (2003). "Class I Impacts: Work During Incarceration and Its Effects on Post-Prison Employment Patterns and Recidivism." Olympia: Washington State Department of Corrections.

Maguire, K. E., Flanagan, T. J., and Thornberry, T. P. (1988). "Prison Labor and Recidivism." Journal of Quantitative Criminology 4(1): 3-18.

Saylor, W. G., Gaes, G. G. (1996). "PREP: A Study of "Rehabilitating" Inmates Through Industrial Work Participation, and Vocational and Apprenticeship Training." Federal Bureau of Prisons: Washington, DC.

Smith, C. J., Bechtel, J., Patricky, A., Wilson-Gentry, L. (2005). Correctional Industries preparing inmates for re-entry: recidivism & post-release employment. Final draft report (email from author).

Counseling/Psychotherapy for Juvenile Offenders

Lee, R. and Olejnik, S. (1981). "Professional outreach counseling can help the juvenile probationer: A two-year follow-up study." Personnel and Guidance Journal 59: 445-449.

Persons, R.W. 1967. "Relationship Between Psychotherapy With Institutionalized Boys and Subsequent Community Adjustment." Journal of Consulting Psychology 31(2): 137-141.

Shivrattan, J. L. (1988). "Social interactional training and incarcerated juvenile delinquents." Canadian Journal of Criminology 30: 145-163.

Sowles, R.C. and J.H. Gill. 1970. "Institutional and Community Adjustment of Delinquents Following Counseling." Journal of Consulting and Clinical Psychology 34(3): 398-402.

Thambidurai, G. (1980) "A comparative Outcome Study of a Contract Parole Programs for Individuals Committed to the Youth Correctional Complex in the State of New Jersey". Unpublished Ph.D. thesis, Rutgers University of the State of New Jersey, New Brunswick, New Jersey.

Court Supervision (compared to simple release without services)

Davidson, W. S. II., and Redner, R. (1988). "The prevention of juvenile delinquency: Diversion from the juvenile justice system." In R. H. Price, E. L. Cowen, R. P. Lorion, and J. Ramos-McKay (eds.), 14 Ounces of Prevention: A Casebook for Practitioners (pp. 123-137). Washington, D. C.: American Psychological Association.

Dunford, F. W., Osgood, D. W., and Weichselbaum, H. F. (1982). National Evaluation of Diversion Projects, Executive Summary and microfiche, U.S. Department of Justice.

Koch, J. R. (1986). Community service and outright release as alternatives to juvenile court: An experimental evaluation (Doctoral dissertation, Michigan State University, 1985). Dissertation Abstracts International, 46(07), 2081A. (University Microfilms No. 85-20537).

National Council on Crime and Delinquency. (1987). The Impact of Juvenile Court Intervention. San Francisco: NCCD.

Patrick, S., Marsh, R. (2005). "Juvenile diversion: results of a 3-year experimental study." Criminal Justice Policy Review, 16(1): 59-73.

Severy, L. J. and Whitaker, J. M. (1982). "Juvenile Diversion: An Experimental Analysis of Effectiveness." Evaluation Review 6(6): 753-774.

Day Fines (compared to standard probation)

Turner, S. & Greene, J. (1999). "The FARE probation experiment: implementation and outcomes of day fines for felony offenders in Maricopa County." The Justice System Journal, 21(1): 1-21.

Diversion With Services (compared to Regular Juvenile Court Processing)

Baron, R., Feeney, F., Thornton, W. (1973). "Preventing delinquency through diversion: The Sacramento County 601 diversion project." Federal Probation 37(1): 13-18.

Crofoot, J.A. 1987. A Juvenile Diversion Program's Effectiveness With Varying Levels of Offender Severity. Doctoral dissertation, United State International University. Dissertation Abstracts International No. 8713047.

Davidson, W. S. II., and Redner, R. (1988). "The prevention of juvenile delinquency: Diversion from the juvenile justice system." In R. H. Price, E. L. Cowen, R. P. Lorion, and J. Ramos-McKay (eds.), 14 Ounces of Prevention: A Casebook for Practitioners (pp. 123-137). Washington, D. C.: American Psychological Association.

Dunford, F. W., Osgood, D. W, and Weichselbaum, H. F. (1982). National Evaluation of Diversion Projects, Executive Summary and microfiche, U.S. Department of Justice.

Howard, W. L. (1997). "The effects of tutoring, counseling and mentoring on altering the behavior of African American males in a juvenile diversion program." Dissertation: UMI 9717719.

Kelley, T. M., Schulman, J. L., Lynch, K. (1976). Decentralized intake and diversion: the juvenile court's link to the youth service bureau. Juvenile Justice 27(1): 3-11.

King, W.R., Holmes, S.T., Henderson, M.L., Latessa, E.J. 2001. "The Community Corrections Partnership: Examining the Long-Term Effects of Youth Participation in an Afrocentric Diversion Program." Crime & Delinquency 47(4): 558-572.

Koch, J. R. (1986). Community service and outright release as alternatives to juvenile court: An experimental evaluation (Doctoral dissertation, Michigan State University, 1985). Dissertation Abstracts International, 46(07), 2081A. (University Microfilms No. 85-20537).

Lipsey, M. W., Cordray, D. S., and Berger, D. E. (1981). "Evaluation of a Juvenile Diversion Program Using Multiple Lines of Evidence." Evaluation Review 5(3): 283-306.

Myers, W., Burton, P., Sanders, P., Donat, K., Cheney, J., Fitzpatrick, T., & Monaco, L. (2000). Project Back-on-Track at 1 year: A delinquency treatment program for early-career juvenile offenders. Journal of the American Academy of Child & Adolescent Psychiatry, 39(9), 1127-1134.

Palmer, T. and Lewis, R. V. (1980). An Evaluation of Juvenile Diversion. Cambridge: Oelgeschlager, Gunn & Hain.

Quay, H.C. and Love, C.T., (1977). "The Effect of a Juvenile Diversion Program on Rearrests." Criminal Justice and Behavior 4: 377-396.

Rausch, S. (1983.) "Court Processing Versus Diversion of Status Offenders: A Test of Deterrence and Labeling Theories." Journal of Research in Crime and Delinquency 20: 39-54.

Regoli, R., Wilderman, E., and Pogrebin, M. (1985) "Using an Alternative Evaluation Measure for Assessing Juvenile Diversion Programs," Children and Youth Services Review 7: 21-38.

Severy, Lawrence J. and J. Michael Whitaker. (1982). "Juvenile Diversion: An Experimental Analysis of Effectiveness," Evaluation Review 6(6): 753-774.

Stratton, J. G. (1975). Effects of crisis intervention counseling on predelinquent and misdemeanor juvenile offenders. Juvenile Justice 26(4): 7-18.

Wiebush, R.G. (1985). Recidivism in the Juvenile Diversion Project of the Young Volunteers in Action Program (Final Report).

Wooldredge, J., Hartman, I., Latessa, E., and Holmes, S. (1994). Effectiveness of culturally specific community treatment for African American juvenile felons. Crime and Delinquency 40(4): 589-598.

Diversion-With Services (compared to simple release)

Davidson, W. S. II., and Redner, R. (1988). "The prevention of juvenile delinquency: Diversion from the juvenile justice system." In R. H. Price, E. L. Cowen, R. P. Lorion, and J. Ramos-McKay (eds.), 14 Ounces of Prevention: A Casebook for Practitioners (pp. 123-137). Washington, D. C.: American Psychological Association.

Dunford, F. W., Osgood, D. W, and Weichselbaum, H. F. (1982). National Evaluation of Diversion Projects, Executive Summary and microfiche, U.S. Department of Justice.

Koch, J. R. (1986). Community service and outright release as alternatives to juvenile court: An experimental evaluation (Doctoral dissertation, Michigan State University, 1985). Dissertation Abstracts International, 46(07), 2081A. (University Microfilms No. 85-20537).

Lipsey, M. W., Cordray, D. S., and Berger, D. E. (1981). "Evaluation of a Juvenile Diversion Program Using Multiple Lines of Evidence." Evaluation Review 5(3): 283-306.

Severy, L. J. and Whitaker, J. M. (1982). "Juvenile Diversion: An Experimental Analysis of Effectiveness." Evaluation Review 6(6): 753-774.

Dangerous Mentally Ill Offenders

Lovell, D., Gagliardi, G.J., Phipps, P. (2005) Washington's Dangerous Mentally Ill Offender Law: Was Community Safety Increased? Olympia, WA: Washington State Institute for Public Policy.

Domestic Violence Courts

Grover, A.R., MacDonald, J.M., Alpert, G.P., Geary, I.A., Jr. (2003) "The Lexington County Domestic Violence Courts: A Partnership and Evaluation" National Institute of Justice Grant 2000-WT-VX-0015.

Newmark, L., Rempel, M., Diffily, K., Kane, K.M. (2001) "Specialized Felony Domestic Violence Courts: Lessons on Implementations and Impacts from the Kings County Experience" Washington DC: Urban Institute. <http://www.urban.org/UploadedPDF/410381_DomViolCourts.pdf>

Drug Treatment in Jail

Dugan J. R. and Everett, R. S. (1998). "An Experimental Test of Chemical Dependency Therapy for Jail Inmates." International Journal of Offender Therapy and Comparative Criminology 42(4): 360-368.

Knight, K., Simpson, D. D., Hiller, M. L. (2003). "Outcome Assessment of Correctional Treatment (OACT)." Internet retrieval.

Peters, Roger H., Kearns, William D., Murrin, Mary R., Dolente, Addis S., and May, Robert L. (1993). "Examining the Effectiveness of In-Jail Substance Abuse Treatment," Journal of Offender Rehabilitation 19: 1-39.

Taxman, Faye S. and David L. Spinner. (1997). "Jail Addiction Services (JAS) Demonstration Project in Montgomery County, Maryland: Jail and Community Based Substance Abuse Treatment Program Model." University of Maryland, College Park.

Tunis, S., Austin, J., Morris, M., Hardyman, P. and Bolyard, M. (1996). Evaluation of Drug Treatment in Local Corrections. Washington DC: National Institute of Justice (May).

Drug Treatment in the Community

Aos, S., Phipps, P., Barnoski, R. (2004) Washington's drug offender sentencing alternative: an evaluation of benefits and costs, Olympia: Washington State Institute for Public Policy.

Baird, C., Wagner, D., Decomo, B., Aleman, T. (1994). Evaluation of the effectiveness of supervision and community rehabilitation programs in Oregon. National Council on Crime and Delinquency.

California Department of Corrections. (1997). Los Angeles Prison Parole Network: An Evaluation Report. State of California.

Hepburn, J. R. (2005). "Recidivism Among Drug Offenders Following Exposure to Treatment", Criminal Justice Policy Review, 16: 237-259.

Lattimore, P.K., Krebs, C.P., Koetse, W., Lindquist, C., and Cowell, A.J. (2004). "Predicting the effect of substance abuse treatment on probationer recidivism." Journal of Experimental Criminology, 1(2): 159-189.

Early Childhood Education for Low Income Three- and Four-Year-Olds

Campbell, F. A., Ramey, C. T., Pungello, E. P., Sparling, J., & Miller-Johnson, S. (2002). Early Childhood Education: Young Adult Outcomes from the Abecedarian Project. Applied Developmental Science, 6: 42-57.

Garces, E., Thomas, D., and Currie, J. (2002) "Long-term effects of Head Start." American Economic Review, 92 (4): 999-1012

Lally, J.R., P.L. Mangione, and A.S. Honig. (1987). "Long-range impact of an early intervention with low-income children & their families." (San Francisco: Far West Laboratory for Educational Research and Development, The Center for Child & Family Studies.)

Oden, S., L. Schweinhart, D. Weikart, S. Marcus, and Y. Xie. (2000) Into adulthood: A study of the effects of Head Start. Ypsilanti, MI: High/Scope Press.

Pagani, Linda, Tremblay, Richard E., Vitaro, Frank, and Parent, Sophie. (1998). "Does preschool help prevent delinquency in boys with a history of perinatal complications?" Criminology 36(2): 245:267.

Reynolds, A.J., J.A. Temple, D.L. Robertson, and E.A. Mann. (2002) "Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers." Educational Evaluation and Policy Analysis 24(4): 267-303.

Schweinhart, L.J., Barnes, H.V., Weikart, D.P. Significant benefits: The High/Scope Perry Preschool Study through age 27. Ypsilanti, MI: High/Scope Press, 1993.

Education/Cognitive-Behavioral Treatment, Domestic Violence

Chen, H., C. Bersani, S.C. Myers, and R. Denton. (1989). "Evaluating the Effectiveness of a Court Sponsored Abuser Treatment Program." Journal of Family Violence 4(4): 309-322.

Davis, R.C., Taylor, B.G., Maxwell, C.D. 2000. "Does Batterer Treatment Reduce Violence? A Randomized Experiment in Brooklyn". Washington DC, National Institute of Justice. <http://www.ncjrs.gov/pdffiles1/nij/grants/180772.pdf>

Dunford, F.W. 2000. "The San Diego Navy Experiment: An Assessment of Interventions for Men Who Assault Their Wives." Journal of Consulting and Clinical Psychology 68(3): 468-476.

Feder, L., Forde, D.R. (2000). "A Test of the Efficacy of Court-Mandated Counseling for Domestic Violence Offenders: The Broward Experiment". National Institute of Justice Grant NIJ-96-WT-NX-0008, Final Report.

Gordon, J.A. and L.J. Moriarty. (2003) "The Effects of Domestic Violence Batterer Treatment on Domestic Violence Recidivism: The Chesterfield County Experience." Criminal Justice and Behavior 30(1): 118-134.

Harrell, A. "Evaluation of Court-Ordered Treatment for Domestic Violence Offenders". (Washington, D.C.: The Urban Institute, 1991).

Labriola, M., Rempel, M., Daveis, R.C. (2005). "Testing the Effectiveness of Batterer Programs and Judicial Monitoring. Results from a Randomized Trial at the Bronx Misdemeanor Domestic Violence Court" Center for Court Innovation. Draft sent to M. Miller by M Rempel.

Electronic Monitoring

Baird, C., Wagner, D., Decomo, B., Aleman, T. (1994). Evaluation of the effectiveness of supervision and community rehabilitation programs in Oregon. National Council on Crime and Delinquency.

Bonta, James, Wallace-Capretta, Suzanne, and Jennifer Rooney. 2000. "Can Electronic Monitoring Make A Difference? An Evaluation of Three Canadian Programs." Crime and Delinquency 46(1): 61-75.

Dodgson, K., Goodwin, P., Howard, P., Llewellyn-Thomas, S., Mortimer, E., Russell, N., et al. (2001). Electronic Monitoring of Released Prisoners: An Evaluation of the Home Detention Curfew Scheme (No. Home Office Research Study 222). London: Home Office Research Development and Statistics Directorate.

Finn, MA & Muirhead-Steves, S. (2002). The effectiveness of electronic monitoring with violent male parolees. Justice Quarterly, 19 (2), 293-312.

Jolin, Annette and Stipak, Brian. (1992). "Drug Treatment and Electronically Monitored Home Confinement: An Evaluation of a Community-Based Sentencing Option," Crime and Delinquency 38: 158-170.

Jones, M., Ross, D. L. (1997). "Electronic house arrest and boot camp in North Carolina: comparing recidivism," Criminal Justice Policy Review, 8(4): 383:404.

Klien-Saffran, J. (1992). "Electronic monitoring versus halfway houses: a study of federal offenders," Dissertation, obtained from UMI Dissertation Services.

Petersilia, Joan and Turner, Susan. (1990). Intensive Supervision for High-risk Probationers: Findings from Three California Experiments. Santa Monica, CA: RAND.

Sugg, D., Moore, L., and Howard, P. (2001). Electronic monitoring and offending behaviour—reconviction results for the second year of trials of curfew orders. Findings #141. London: Research, Development and Statistics Directorate, Home Office.

Employment Training and Job Assistance Programs in the Community

Anderson, D. B. & Schumacker, R. E. (1986). Assessment of job training programs. Journal of Offender Counseling, Services, & Rehabilitation 10, 41–49.

Beck, J. (1981). "Employment, Community Treatment Center Placement and Recidivism: A Study of Released Federal Offenders," Federal Probation, (45): 3-8.

Beck, L. (1979). "An Evaluation of Federal Community Treatment Centers," Federal Probation, (43): 36-40.

Berk, R. A., Lenihan, K. J., and Rossi, P. H. (1980). "Crime and Poverty: Some Experimental Evidence from Ex-Offenders." American Sociological Review 45: 766-786.

Bloom, H., Orr, L. O., Cave, G., Bell, S. H., Doolittle, F., and Lin, W. (1994). The National JTPA Study. Overview: Impacts, Benefits and Costs of Title II-A, Cambridge, Massachusetts: Abt Associates Inc.

Cave, G., Bos, H., Doolittle, F. & Toussaint, C. (1993). Jobstart: Final report on a program for school dropouts. New York, NY: Manpower Demonstration and Research Corporation.

Mallar, C. D. and Thornton, C. (1978). "Transitional Aid for Released Prisoners: Evidence From the Life Experiment." The Journal of Human Resources XIII(2): 208-236.

Menon, R., Blakely, C., Carmichael, D., and Snow, D. (1995). "Making a dent in recidivism rates: Impact of employment on minority ex-offenders." In Thomas, G., E. (1995). Race and ethnicity in America: Meeting the challenge in the 21st century, Washington, D.C.: Taylor and Francis, pp 279-293. See also, Finn, P. (1998). Texas' Project RIO (re-integration of offenders), Washington, D.C.: U.S. Department of Justice, June 1998.

Milkman, R. H. (1985). "Employment Services for Ex-Offenders Field Test--Detailed Research Results." McLean, VA: Lazar Institute.

Rossman, S., Sridharan, S., Gouvis, C., Buck, J., Morley, E. (1999) "Impact of the opportunity to succeed program for substance-abusing felons: Comprehensive final report." Washington, DC: The Urban Institute.

Schochet, P. Z., Burghardt, J., and Glazerman, S. (2001). National Job Corps Study: The Impacts of Job Corps on Participants' Employment and Related Outcomes, Mathematica Policy Research, Inc., Washington D.C.: U.S. Department of Labor.

Uggen, C. (2000). Work as a turning point in the life course of criminals: A duration model of age, employment, and recidivism. American Sociological Review 67, 529–546.

Faith-Based Programs for General Offenders

Burnside, J., J. Adler, N. Loucks, and G. Rose. 2001. Kainos Community in Prisons: Report of an Evaluation. RDS OLR 11/01. Presented to Research Development and Statistics Directorate, Home Office, HM Prison Service England and Wales and Kainos Community. <http://www.homeoffice.gov.uk/rds/pdfs/kainos_finalrep.pdf>.

Johnson, B.R. 2004. "Religious Programs and Recidivism Among Former Inmates in Preson Fellowship Programs: A Long-Term Follow-up Study". Justice Quarterly 21(2):329-354.

O'Connor, T., Su, Y., Ryan, P., Parikh, C., Alexander, E. 1997. "Detroit Transition of Prisoners: Final Evaluation Report". Center for Social Research, MD

Trusty, B. and M. Eisenberg. 2003. Initial Process and Outcome Evaluation of the InnerChange Freedom Initiative: The Faith-Based Prison Program in TDCJ. Austin, TX: Criminal Justice Policy Council. <http://www.cjpc.state.tx.us/reports/adltrehab/IFIInitiative.pdf>.

Wilson, L.C., C. Wilson, S.R. Drummond, and K. Kelso. 2005. "Promising Effects on the Reduction of Criminal Recidivism: An Evaluation of the Detriot Transition of Prisoner's Faith Based Initiative." Draft emailed to Marna Miller by Joe Williams.

Functional Family Therapy (including Washington)

Alexander, J. F., and Parsons, B. F. (1973). "Short-term behavioral intervention with delinquent families: impact on family process and recidivism." Journal of Abnormal Psychology 81(3): 219-225.

Barnoski, R. (2004), Outcome Evaluation of Washington State's Research-Based Programs for Juvenile Offenders, Washington State Institute for Public Policy

Barton, C., Alexander, J. F., Waldron, H., Turner, C. W., and Warburton, J. (1985). "Generalizing treatment effects of functional family therapy: Three replications." American Journal of Family Therapy 13: 16-26.

Gordon, D. A. (1995). "Functional family therapy for delinquents." In Ross, R. R., Antonowics, D., H., Dhaliwal, G. K., (eds.), Going Straight: Effective Delinquency Prevention and Offender Rehabilitation. Ottawa, Ontario: Air training and Publications, pp 163-178.

Gordon, D., Graves, K., and Arbuthnot, J. (1995). "The effect of functional family therapy for delinquents on adult criminal behavior." Criminal Justice and Behavior 22(1): 60-73.

Hannson, K. (1998). Functional Family Therapy Replication in Sweden: Treatment Outcome with Juvenile Delinquents. Paper presented to the Eighth International Conference on treating addictive behaviors. Santa Fe, NM, February 1998, as reported in: Alexander, J., Barton, C., Gordon, D., Grotpeter, J., Hansson, K., Harrison, R., Mears, S., Mihalic, S., Parsons, B., Pugh, C., Schulman, S., Waldron, H., and Sexton, T. (1998). Blueprints for Violence Prevention, Book Three: Functional Family Therapy. Boulder, CO: Center for the Study and Prevention of Violence.

Klein, N. C., Alexander, J. F., and Parsons, B. V. (1977). "Impact of family systems intervention on recidivism and sibling delinquency: A model of primary prevention and program evaluation." Journal of Consulting and Clinical Psychology 45: 469-474.

Family Integrated Transitions (FIT)

Aos, S. (2004) Washington State's Family Integrated Transitions Program for juvenile offenders: Outcome evaluation and benefit-cost analysis. Olympia WA: Washington State Institute for Public Policy.

Guided Group Interaction

Allen, R.F., H.N. Dubin, S. Pilnick, and A.C. Youtz. 1970. Collegefields: From Delinquency to Freedom. Seattle: Special Child Publications, Inc.

Empey, L. T. and Erickson, M. L. (1972). The Provo experiment: Evaluating community control of delinquency. Lexington, MA: Lexington.

Empey, L. T. and Lubeck, S.G. (1971). The Silverlake Experiment: Testing Delinquency Theory and Community Intervention. Chicago: Adine Publishing Company.

Stephenson, R.M, Scarpitti, F.R. (1974) "Group Interaction as Therapy: The Use of the Small Group in Corrections" Contributions in Sociology Number 13. Westport CT, Greenwood Press.

Guiding Good Choices (formerly PDFY)

Mason, W.A., R. Kosterman, J.D. Hawkins, K.P. Haggerty, and R.L. Spoth. (2003) "Reducing adolescents' growth in substance use and delinquency: Randomized trial effects of a parent-training prevention intervention." Prevention Science 4(3): 203-212.

High School Graduation

Lochner, L, Moretti, E. (2004), "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports," American Economic Review, 94(1): 155-189.

Home Visiting During Pregnancy and Early Childhood

Barth, R.P. (1991) "An experimental evaluation of in-home child abuse prevention services." Child Abuse and Neglect 15: 363-375.

Barth, R.P., Hacking, S., Ash J.R. (1988) Preventing child abuse: an experimental evaluation of the child parent enrichment project. Journal of Primary Prevention 8(4) 201-217.

Brayden, R.M., W.A. Altemeier, M.S. Dietrich, D.D. Tucker, M.J. Christensen, F.J. McLaughlin et al. (1993) "A prospective study of secondary prevention of child maltreatment." Journal of Pediatrics 122: 511-516.

Caruso, G.L. (1989) "Optimum Growth Project: Support for families with young children." Prevention in Human Services 6: 123-139.

Center on Child Abuse Prevention Research, National Committee to Prevent Child Abuse. (June 1996). Intensive home visitation: A randomized trial, follow-up and risk assessment study of Hawaii's Healthy Start Program, Executive summary. Washington, D.C.: National Center on Child Abuse and Neglect, Administration for Children, Youth and Families, U.S. Department of Health and Human Services. NCCAN Grant No. 90-CA-1511.

Chambliss, J.W., J.G. Emshoff (1999) The evaluation of Georgia's Healthy Families Program. Results of Phase 1 and 2. EMSTAR Research, unpublished manuscript.

Duggan, A., E. McFarlane, L. Fuddy, L. Burrell, S.M. Higman, A. Windham, C. Sia. (2004) randomized trial of a statewide home visiting program: impact in preventing child abuse and neglect. Child Abuse and Neglect 28:597-622.

DuMont, K., Mitchell-Herzfeld, S., Greene, R., Lee, E., Lowenfels, A., Rodriguez, M. (2006). Healthy Families New York (HGNY) randomized trial: Impacts on parenting after the first two years.

Earle, R.B. (1995) "Helping to prevent child abuse—and future criminal consequences: Hawaii Healthy Start." Program Focus. NCJ 156216. Washington, DC: National Institute of Justice, Office of Justice Programs, U.S. Department of Justice.

Ernst, C.C., T.M. Grant, A.P. Streissguth, and P.D. Sampson. (1999) "Intervention with high-risk alcohol and drug-abusing mothers: II. Three-year findings from the Seattle model of paraprofessional advocacy." Journal of Community Psychology 27(1): 19-38.

Galano, J., L. Huntington (1999) Year VI Evaluation of the Hampton, Virginia Healthy Families Partnership: 1992-1998. Hampton, Virginia Healthy Families Partnership.

Gray, J.D., C.A. Cutler, J.G. Dean, and C.H. Kempe. (1979) "Prediction and prevention of child abuse and neglect." Journal of Social Issues 35: 127-139.

Hardy, J.B. and Streett, R. (1989) "Family support and parenting education in the home: An effective extension of clinic-based preventive health care services for poor children." Journal of Pediatrics 115: 927-931.

Huxley, P. and R. Warner. (1993) "Primary prevention of parenting dysfunction in high risk cases." American Journal of Orthopsychiatry 63(4): 582-588.

Landsverk, J., T. Carrilio, C.D. Connelly, W.C. Ganger, D.J. Slymen, R.R. Newton, L. Leslie, C. Jones. (2002) Healthy Families San Diego Clinical Trial Technical Report. Child and Adolescent Services Research Center, San Diego Children's Hospital and Health Center.

Loman, L.A. and D. Sherburne. (2000) "Intensive home visitation for mothers of drug-exposed infants: An evaluation of the St. Louis linkages program." St. Louis, MO: Institute of Applied Research.

Mulsow, M.H. and V.M. Murray. (1996) "Parenting on edge: Economically stressed, single, African American adolescent mothers." Journal of Family Issues 17(5): 704-721.

Stevens-Simon, C., Nelligan, D, Kelly, L. (2001) Adolescents at risk for mistreating their children Part II: a home-and clinic-based prevention program. Child Abuse and Neglect 25(6) 753-769.

Velasquez, J., M. Christensen, and B. Schommer. (1984) "Part II: Intensive services help prevent child abuse." American Journal of Maternity and Child Nursing 9: 113-117.

Increased Drug Testing on Parole (compared with minimal drug testing)

Haapanen, R., Britton, L. (2002). "Drug testing for youthful offenders on parole: an experimental evaluation," Criminology & Public Policy, 1(2): 217-244.

In-prison therapeutic communities with community aftercare for drug-involved offenders

Field, G. (1985). "The Cornerstone Program: A Client Outcome Study." Federal Probation 49: 50-55.

Knight, K., Simpson, D. D., Hiller, M. L. (1999). "Three-year reincarceration outcomes for in-prison therapeutic community treatment in Texas." The Prison Journal, 79(3): 337-351.

Prendergast, M. L., Hall, E. A., Wexler, H. K., Melnick, G., Cao, Y. (2004). "Amity prison-based therapeutic community: 5-year outcomes." The Prison Journal 84(1):36-60.

In-Prison Therapeutic Communities Without Community Aftercare for Drug-Involved Offenders

Belenko, S., Foltz, C., Lang, M. A., Sun, H. (2004). "Recidivism Among High-Risk Drug Felons: A Longitudinal Analysis Following Residential Treatment." Journal of Offender Rehabilitation, 40(1/2): 105-132.

Gransky, Laura A. and Jones, Robert J. (1995). "Evaluation of the Post-Release Status of Substance Abuse Program Participants." Illinois Criminal Justice Authority Report.

Klebe, K. J., O'Keefe, M. (2004). "Outcome evaluation of the Crossroads to Freedom House and Peer I therapeutic communities." National Institute of Justice Grant 99-RT-VX-K021

Mosher, C., Phillips, D. (2002). Program evaluation of the pine lodge pre-release residential therapeutic community for women offenders in Washington State, final report.

Oregon Department of Corrections. (1996). Evaluation of the Powder River and Turning Point Alcohol and Drug Treatment Programs. Salem, OR.

Swartz, J. A., Lurigo, A. J., Slomka, S. A. (1996). The impact of IMPACT: An assessment of the effectiveness of a jail-based treatment program. Crime and Delinquency. 42(4): 553-573.

Welsh, W. N. (2003). Evaluation of prison-based therapeutic community drug treatment programs in Pennsylvania. PA: Pennsylvania Commission on Crime and Delinquency.

Wexler, H. K., Falkin, G. H., Lipton, D. S., Rosenblum, A. B. (1992). "Outcome Evaluation of a Prison Therapeutic Community for Substance Abuse Treatment," Criminal Justice and Behavior, 17(1):71-92.

Wilson, R.J., Picheca, J.E., Prinzo, M. 2005. "Circles of Support & Accountability: An evaluation of the Pilot Project in South Central Ontario", Draft report to Correctional Service of Canada, R-168, e-mailed to M. Miller Oct 20, 2005.

Intensive Supervision of Sex Offenders in the Community

Stalans, L.J., Seng, M., Yarnold, P., Lavery, T., Swartz. 2001. "Process and Initial Evaluation of the Cook County Adult Probation Department's Sex Offender Program: Final and Summary Report for the Period of June, 1997 to June, 2000". Illinois Criminal Justice Information Authority: Chicago. <http://www.icjia.state.il.us/public/pdf/researchreports/An%20Implementation_Project%20in%20Cook%20County.pdf>

Stalans, L.J., Seng, M., Yarnold, P.R. (2002) Long-term Impact Evaluation of Specialized Sex Offender Probation Programs in Lake, DuPage and Winnebago Counties. Illinois Criminal Justice Information Authority: Chicago. <http://www.icjia.state.il.us/public/pdf/ResearchReports/Long-termDuPageWinnebago.pdf>

Jail Diversion (pre and post booking programs), MICA Offenders

Broner, N., P.K. Lattimore, A.J. Cowell, and W. Schlenger. (2004). "Effects of Diversion on Adults with Mental Illness Co-occurring with Substance Use: Outcomes from a National Multi-Site Study." Behavior Sciences and the Law, Vol. 21, pp. 1-23.

Christy, A., Poythress, N. G., Boothroyd, R. A., Petrila, J., Mehra, S. (2005), "Evaluating the efficiency and community safety goals of the Broward County Mental Health Court," Behavioral Sciences & the Law, 23(2): 227-243.

Cosden, M., Ellens, J., Schnell, J. & Yamini-Diouf, J. (2004). Evaluation of the Santa Barbara County Mental Health Treatment Court with Intensive Case Management. University of California, Santa Barbara.

Steadman, H.J., Cocozza, J.J., Veysey, B.M. (1999). Comparing outcomes for diverted and nondiverted jail detainees with mental illnesses. Law and Human Behavior 23(6): 615-627.

Juvenile Justice Other Family Based Therapy Approaches

Bank, L., Marlowe, J. H., Reid, J. B., Patterson, G. R., and Weinrott, M. R. (1991). "A comparative evaluation of parent-training interventions for families of chronic delinquents." Journal of Abnormal Child Psychology 19(1): 15-33.

Byles, J. A., and Maurice, A. (1979). "The juvenile services project: An experiment in delinquency control." Canadian Journal of Criminology 21: 257-262.

Gruher, M. 1979. "Family Counseling and the Status Offender." Juvenile and Family Court Journal 30: 23-27.

Hinton, W.J. (2004) "Examining the Impact of a Family Systems Counseling Approach for Reducing the Recidivism Rates of First Offender Juveniles." Unpublished Ph.D. Thesis. Mississippi State University, Mississippi State, MS.

McPherson, S. J., McDonald, L. E., and Ryer, C. W. (1983). "Intensive counseling with families of juvenile offenders." Juvenile and Family Court Journal 34: 27-33.

Metzger, D.S. (1997) "School-Based Probation in Pennsylvania (Final Report)". Philadelphia: University of Pennsylvania, Center for Studies of Addiction. As described in "Creating a New Criminal Justice System for the 21st Century, Bureau of Justice Assistance.

Moore, R. H. (1987). "Effectiveness of citizen volunteers functioning as counselors for high-risk young male offenders." Psychological Reports 61: 823-830.

Quinn, W.H., Van Dyke, D.J. (2004) A multiple family group intervention for first-time juvenile offenders: Comparisons with probation and dropouts on recidivism. Journal of Community Psychology, 32(2): 177-200.

Schwitzgebel, R. and D.A. Kolb. 1964. "Inducing Behaviour Change in Adolescent Delinquents." Behavioural Research Therapy 1: 297-304.

Shore, M. F, and Massimo, J. L. (1979). "Fifteen yeas after treatment: A follow-up study of comprehensive vocationally oriented psychotherapy." American Journal of Orthopsychiatry 49: 240-245.

Spence, S. H., and Marzillier, J. S. (1981). "Social skills training with adolescent male offenders: 11. Short-term, long-term and generalized effects." Behavior Research & Therapy 19: 349-368.

Stringfield, Nolan. (1977.) "The Impact of Family Counseling in Resocialization Adolescent Offenders Within a Positive Peer Treatment Milieu." Offender Rehabilitation 1:349-360.

Juvenile Behavior Modification

Jesness, Carl F. (1975.) "Comparative Effectiveness of Behavior Modification and Transactional Analysis Programs for Delinquents." Journal of Consulting and Clinical Psychology 43(6): 758-779.

Sarason, I.G. (1978). "A cognitive Social Learning Approach to Juvenile Delinquency" in Hare, R.D. and Schalling, D. (Eds.) Psychopathic Behaviour: Approaches to Research. Chichester, UK, John Wiley & Sons.

Juvenile Boot Camp

Aloisi, M. & LeBaron, J., (2001). The juvenile justice commission's stabilization and reintegration program: an updated recidivism analysis. New Jersey Dept. of Law & Public Safety

Barnoski, R. (2004), Washington's juvenile basic training camp: outcome evaluation, Olympia: Washington State Institute for Public Policy.

Bottcher, J., & Ezell, M. E. (2005) "Examining the effectiveness of boot camps: a randomized experiment with a long-term follow up," Journal of Research in Crime and Delinquency, 42(3): 309-332.

Florida Department of Juvenile Justice (1996), Leon County Sheriff's Department Boot Camp: A Follow-Up Study of the First Five Platoons. Prepared by the Bureau of Data and Research, Management Report Number 35.

Florida Department of Juvenile Justice (1996), Pinellas County Boot Camp: A Follow-Up Study of the First Four Platoons. Prepared by the Bureau of Data and Research, Management Report Number 33.

Florida Department of Juvenile Justice (1997), Polk County Juvenile Boot Camp: A Follow-Up Study of the First Four Platoons. Prepared by the Bureau of Data and Research, Management Report Number 46.

Florida Department of Juvenile Justice. (1996). Manatee County Sheriff's Department Boot Camp: A Follow-Up Study of the First Seven Platoons. Prepared by the Bureau of Data and Research, Management Report Number 24.

Florida Department of Juvenile Justice. (1997). Bay County Sheriff's Office Juvenile Boot Camp: A Follow-Up Study of the First Seven Platoons. Prepared by the Bureau of Data and Research, Management Report Number 44.

Florida Department of Juvenile Justice. (1997). Martin County Sheriff's Office Juvenile Boot Camp: A Follow-Up Study of the First Four Platoons. Prepared by the Bureau of Data and Research, Management Report Number 43.

Peters, M., Thomas, D., and Zamberlan, C. (1997). Boot Camps for Juvenile Offenders, Office of Juvenile Justice and Delinquency Prevention.

Trulson, C., R., Triplett, R., Snell, C. (2001). "Social control in a school setting: evaluating a school-based boot camp," Crime & Delinquency 47(4): 573-609.

Zhang, S. X., (2000). An evaluation of the Los Angeles County juvenile drug treatment boot camp, final report. San Marcos, CA: California State University at San Marcos.

Juvenile Cognitive-Behavioral

Bottcher, J. 1985. The Athena Program: An Evaluation of a Girl's Treatment Program at the Fresno County Probation Department's Juvenile Hall. Sacramento: California Youth Authority.

Cann, J., Falshaw, L., Nugent, F., Friendship, C. (2003) Understanding What Works: accredited cognitive skills programmes for adult men and young offenders. Research Findings No. 226. London: Home Office

Guerra, N. G. and Slaby, R. G. (1990). Cognitive mediators of aggression in adolescent offenders: 2. Intervention. Developmental Psychology 26: 269-277.

Hubbard, D.J., Latessa, E.J. (2004) Final Report. Evaluation of Cognitive-Behavioral programs for offenders: A look at outcome and responsivity in five treatment programs. Division of Criminal Justice, University of Cincinnati.

Leeman, L.W., J.C. Gibbs, and D. Fuller. 1993. "Evaluation of a Multi-Component Group Treatment Program for Juvenile Delinquents." Aggressive Behavior 19: 281-292.

Mitchell, J., Palmer, E.J. (2004) Evaluation the "Reasoning and Rehabilitation" program for young offenders. Journal of Offender Rehabilitation 39(4):31-45.

Pullen, S. 1996. Evaluation of the Reasoning and Rehabilitation Cognitive Skills Development Program as Implemented in Juvenile ISP in Colorado. Denver: Colorado Department of Public Safety, Division of Criminal Justice. <http://dcj.state.co.us/ors/pdf/docs/cog96.pdf>.

Robertson, A.A., P.W. Grimes, and K.E. Rogers. 2001. "A Short-Run Cost-Benefit Analysis of Community-Based Interventions for Juvenile Offenders." Crime & Delinquency 47(2): 265-285.

Juvenile Curfews

McDowall, D., Loftin, C., Wiersema, B. (2000). "The impact of youth curfew laws on juvenile crime rates," Crime & Delinquency, 46(1): 76-91.

Juvenile Day Reporting

Byles, John A. (1981.) "Evaluation of an Attendance Center Program for Male Juvenile Probationers." Canadian Journal of Criminology 23: 343-355.

Velasquez, J.S. and C.G. Lyle. 1985." Day Versus Residential Treatment for Juvenile Offenders: The Impact of Program Evaluation." Child Welfare 64(2): 145-156.

Juvenile Drug Courts

Anspach, D. F., Ferguson, A. S., & Phillips, L. L. (2003). Evaluation of Maine's statewide juvenile drug treatment court program. Augusta, ME: University of Southern Maine.

Byrnes, E. C., Hickert, A. O. (2004). Process and outcome evaluation of the third district juvenile drug court in Dona Ana County, New Mexico. Glacier Consulting Inc.

Carey, S. M. (2004). Clackamas County juvenile drug court outcome evaluation: Final report. Portland, OR: NPC Research, Inc.

Gilmore, A. S., Rodriguez, N., Webb, V. J. (2005). "Substance Abuse and Drug Courts: The Role of Social Bonds in Juvenile Drug Courts," Youth Violence and Juvenile Justice, 3(4): 287-315.

Hartmann, D. J., Rhineberger, G. M., Gregory, P., Mullins, M., Tollini, C., & Williams, Y. (2003). Evaluation of the Kalamazoo County juvenile drug treatment court program: October 1, 2001 – September 30, 2002 Year 5. Kalamazoo, Michigan: Kercher Center for Social Research, Western Michigan University.

Henggeler, S. W., Halliday-Boykins, C.A., Cunningham, P. B., Randall, J., Shapiro, S,B, Chapman, J.E. (2006). Juvenile drug court: enhancing outcomes by integrating evidence-based treatments. Journal of Consulting and Clinical Psychology, 74(1): 42-54.

Huff, D., Stageberg, P., Wilson, B. S., & Moore, R. G. (n.d.). An assessment of the Polk County juvenile drug court. Des Moines: Iowa Department of Human Rights, Division of Criminal & Juvenile Justice Planning & Statistical Analysis Center.

Latessa, E. J., Shaffer, D. K., and Lowenkamp C., Outcome evaluation of Ohio's drug court efforts: Final report (Cincinnati: Center for Criminal Justice Research, Division of Criminal Justice, University of Cincinnati, July 2002).

LeGrice, L. N. (2003). Effectiveness of juvenile drug court on reducing delinquency. Doctoral dissertation, University of Texas at Arlington.

Nebraska Crime Commission, (2004). Tri-County Juvenile Drug Court Evaluation Final Report (PDF), http://www.ncc.state.ne.us/pdf/juvenile_justice_materials/2004_DTC_Report.pdf

O'Connell, J. P., Nestlerode, E., Miller, M. L. (1999). "Evaluation of the juvenile drug court diversion program," State of Delaware Executive Department, Statistical Analysis Center, October 1999.

Parsons, B. V. Byrnes, E. C., (n.d.). Byrne Evaluation Partnership Program Final Report, University of Utah Social Research Institute.

Pitts, W. J., Guerin, P. (2004). Evaluation of the eleventh judicial district court San Juan County juvenile drug court: Quasi-experimental outcome study using historical information. Institute for Social Research, University of New Mexico.

Juvenile Education Programs

Bednar, R.L., P.F. Zelhart, L. Greathouse, and S. Weinberg. 1970. "Operant Conditioning Principles in the Treatment of Learning and Behavior Problems With Delinquent Boys." Journal of Counseling Psychology 17(6): 492-497.

Odell, B.N. 1974. "Accelerating Entry Into the Opportunity Structure: A Sociologically-Based Treatment for Delinquent Youth." Sociology and Social Research 58(3): 312-317.

Texas Youth Commission. (1993). The relationship between GED attainment and recidivism, an evaluation summary. Texas Youth Commission Department of Research and Planning.

Juvenile Intensive Parole Supervision

Barnoski, R. (2002). Evaluating How Juvenile Rehabilitation Administration's Intensive Parole Program Affects Recidivism. Olympia: Washington State Institute for Public Policy.

Greenwood, Peter W., Deschenes, Elizabeth Piper, and John Adams. (1993). "Chronic Juvenile Offenders: Final Results from The Skillman Aftercare Experiment." RAND: Santa Monica.

Rodriguez-Labarca, J., & O'Connell, J. P., (2004). "Delaware's serious juvenile offender program: an evaluation of the first two years of operation," State of Delaware, Statistical Analysis Center, Doc Num: 100208-040204.

Schwitzgebel, R. K., and Baer, D. J. (1967). Intensive supervision by parole officers as a factor in recidivism reduction of male delinquents," The Journal of Psychology, 67: 75-82.

Sealock, Miriam D., Gottfredson, Denise C., and Gallagher, Catherine A. (1997.) "Drug Treatment for Juvenile Offenders: Some Good and Bad News." Journal of Research in Crime and Delinquency 34(2): 210-236.

Sontheimer, H., and Goodstein, L. (1993). "Evaluation of juvenile intensive aftercare probation: aftercare versus system response effects." Justice Quarterly 10: 197-227.

Weibush, R. G., Wagner, D., McNultly, B., Wang, Y., Le, T (2005). Implementation and outcome evaluation of the intensive aftercare program, final report. Office of Juvenile Justice and Delinquency Prevention. Washington DC: U.S. Department of Justice.

Juvenile Intensive Probation (as alternative to incarceration)

Barton, W. H. and Butts, J. A. (1990). "Viable options: intensive supervision programs for juvenile delinquents." Crime and Delinquency 36(2): 238-256.

Deschenes, E. P., Greenwood, P. (1998). "Alternative placements for juvenile offenders: Results from the evaluation of the Nokomis Challenge Program." The Journal of Research in Crime and Delinquency 35(3): 267-294.

Gottfredson, D. C., Barton, W. H. (1993). "Deinstitutionalization of juvenile offenders," Criminology, 31(4): 591-611.

Lerman, P. (1975). Community treatment and social control. Chicago: University of Chicago Press.

Weibush, R. G. (1993). "Juvenile intensive supervision: the impact on felony offenders diverted from institutional placement." Crime and Delinquency 39(1): 68-89.

Juvenile Intensive Probation Supervision

Barnoski, R. (2003). Evaluation of Washington's 1996 Juvenile Court Program (Early Intervention Program) for High-risk, First-time Offenders: Final Report. Olympia: Washington State Institute for Public Policy.

Land, K.C.; P.L. McCall; and K.F. Parker. 1994. "Logistic Versus Hazards Regression Analysis in Evaluation Research: An Exposition and Application to the North Carolina Court Counselors' Intensive Protective Supervision Project." Evaluation Review 18(4):411–37.

Robertson, A.A., P.W. Grimes, and K.E. Rogers. 2001. "A Short-Run Cost-Benefit Analysis of Community-Based Interventions for Juvenile Offenders." Crime & Delinquency 47(2): 265-285.

Juvenile Jobs Programs

Hackler, James C. and John L. Hagan. (1975). "Work and Teaching Machines as Delinquency Prevention Tools: A Four-Year Follow-Up." Social Service Review 49:92-106.

Minor, K.I. 1988. An Evaluation of an Intervention Program for Juvenile Probationers. Doctoral dissertation, Western Michigan University. UMI No. 8827331.

Willman, Mark T. and John R. Snortum. (1982.) "A Police Program for Employment of Youth Gang Members." International Journal of Offender Therapy and Comparative Criminology 26:207-214.

Juvenile Offender Interagency Coordination

Barnoski, R. (2004), Outcome Evaluation of Washington State's Research-Based Programs for Juvenile Offenders, Washington State Institute for Public Policy

Bottoms, A. E. (1995). "Intensive community supervision for young offenders: outcomes, process and cost," Cambridge: University of Cambridge Publications.

California Board of Corrections (2002), "Repeat offender prevention program, final report," Sacramento: California Board of Corrections, December 2002.

Carney, M.M. and F. Buttell. (2003) "Reducing juvenile recidivism: Evaluating the wraparound services model." Research on Social Work Practice 13(5): 551-568.

Fagan, J., and Reinarman, C. (1991). "The Social Context of Intensive Supervision: Organizational and Ecological Influences on Community Treatment," pp 341-394 in Armstrong, Troy L. (ed), Intensive Interventions with High Risk Youth, (1991) New York: Willow Tree Press.

Giblin, M. J. (2002), "Using police officers to enhance the supervision of juvenile probationers: an evaluation of the Anchorage CAN program," Crime and Delinquency, 48 (1): 116-137.

Howard, L., Mish, G., Burke, C., Pennell, S. (2002), "San Diego county probation department's repeat offender prevention program final evaluation report," San Diego Regional Planning Agency, October 2002.

King County Juvenile Justice Evaluation Work Group. (2002). "New Start: Juvenile justice evaluation report July 1999 - March 2002." King County Washington Department of Community and Human Services.

Lane, J. Turner, S., Fain, F., Sehgal, A. (2005), Evaluating an experimental intensive juvenile probation program: Supervision and official outcomes, Crime and Delinquency, 51 (1): 26-52.

Little, M., Kogan, J., Bullock, R., & Van Der Laan, P. (2004). "ISSP: An evaluation in multi-systemic responses to persistent young offenders known to children's services," British Journal of Criminology, 44(2): 225-240.

National Council on Crime and Delinquency. (1987). The Impact of Juvenile Court Intervention. San Francisco: NCCD.

Tolan, Patrick, Perry, H., Shelley, M., and Jones, Theodore. (1987). "Delinquency Prevention: An Example of Consultation in Rural Community Mental Health." Journal of Community Psychology 15: 43-50.

Zhang, S. X. and Zhang, L. (2005), An experimental study of the Los Angeles county repeat offender prevention program: its implementation and evaluation, Criminology and Public Policy, 4 (2): 205-236.

Juvenile Sex Offender Treatment

Borduin, C. M., Henggeler, S. W., Blaske, D. M., and Stein, R. (1990). "Multisystemic treatment of adolescent sexual offenders." International Journal of Offender Therapy and Comparative Criminology 35: 105-114.

Borduin, C. M., Schaeffer, C. M., and Heiblum, N. (2000). Multisystemic treatment of aggressive and nonaggressive sexual offending in adolescents: Instrumental and ultimate outcomes. Manuscript in preparation.

Guarino-Ghezzi, G. S. and Kimball, L. M. (1998). "Juvenile sex offenders in treatment." Corrections Management Quarterly 2: 45-54.

Lab, Steven P., Shields, Glenn, Schondel, Connie. (1993). "Research note: An evaluation of juvenile sexual offender treatment." Crime and Delinquency 39(4): 543-553.

Worling, J. R., and Curwen, T. (2000). "Adolescent sexual offender recidivism: Success of specialized treatment and implications for risk prediction." Child Abuse and Neglect 24(7): 965-982.

Juvenile Therapeutic Community

Pealer, J.A. (2004) A Community of Peers - Promoting Behavior Change: The Effectiveness of a Therapeutic Community for Juvenile Male Offenders in Reducing Recidivism. Unpublished Ph.D. Thesis. University of Cincinnati.

Juvenile Wilderness Challenge

Castellano, T. C., Soderstrom, I. R. (1992). "Therapeutic wilderness programs and juvenile recidivism: a program evaluation." Journal of Offender Rehabilitation: 17(3/4): 19-46.

Cytrynbaum, S., & Ken, K. (1975). The Connecticut Wilderness program: A Preliminary Evaluation Report. Hartford, CT: The Council on Human Services.

Deschenes, E. P. and Greenwood, P. (1998). "Alternative placements for juvenile offenders: Results from the evaluation of the Nokomis Challenge Program." The Journal of Research in Crime and Delinquency: 35(3): 267-294.

Elrod, H. Preston and Minor, Kevin. (1992.) "Second Wave Evaluation of a Multi-Faceted Intervention for Juvenile Court Probationers." International Journal of Offender Therapy and Comparative Criminology 36(3): 247-262.

Hileman, M. A. (1979). An evaluation of an environmental stress-challenge program on the social attitudes and recidivism behavior of male delinquent youth. Unpublished master's thesis, Southern Illinois University, Carbondale. Results cited in: West, S.T. & Crompton, J.L. (1999) Do Outdoor Adventure Programs Alleviate Negative Behavior Among At-Risk Youth? A Review of the Empirical Literature.http://rptsweb.tamu.edu/Faculty/Witt/conpubs/crompt.pdf

Kelly, F. J. & Baer, D. J. (1971). "Physical challenge as a treatment for delinquency," Crime and Delinquency, 17(4): 437-445.

Metametrics, Inc. (1984). Evaluation of the Breakthrough Foundation Youth at Risk Program: The 10-day Course and Follow-up Program.

Willman, H. C., Chun, R. Y. F. (1973) "Homeward bound: an alternative to the institutionalization of adjudicated juvenile offenders." Federal Probation, 37:52-58.

Winterdyk, J. and Roesch, R. (1982). "A wilderness experiential program as an alternative for probationers: An evaluation." Canadian Journal of Criminology 24: 39-49.

Life Skills Education Programs

Jolin, Annette, Day, Michael, Christophersen, Kristin, Friedman, Sharon, Newton, Sophie, and Hooper, Richard. (1997). "An Evaluation of the WICSW-Lifeskills Program for women at the Columbia River Correctional Institution: Preliminary Results. Portland State University, College of Urban and Public Affairs.

Melton, Roni and Pennell, Susan. (1998). "Staying Out Successfully: An Evaluation of an In-custody Life Skills Training Program." San Diego, CA: Association of Governments.

Miller, Marsha L. (1997). "Evaluation of the Life Skills Program." Division of Correctional Education, Department of Corrections, Delaware. Wilmington, Delaware.

Life Skills Education Programs for Juvenile Offenders

Department of the Youth Authority, State of California. 1985. Program Research and Review Division. "Assessment of Planned Re-entry Program (PREP).

Department of the Youth Authority, State of California. 1985. Program Research and Review Division. "Assessment of Planned Re-entry Program (PREP).

Josi, D. A., and Sechrest, D. K. (1999). "A pragmatic approach to parole aftercare: Evaluation of a community reintegration program for high-risk youthful offenders." Justice Quarterly 16(1): 51-80.

Medical Treatment of Sex Offenders

Wille, R., and Beier, K. M. (1989). Castration in Germany. Annals of Sex Research 2: 103-133.

Mentoring (Juvenile Justice)

Drake, E., Barnoski, R. (2006) Recidivism findings for the Juvenile Rehabilitation Administration's mentoring program: Final report. Olympia, WA. Washington State Institute for Public Policy. <http://www.wsipp.wa.gov/rptfiles/06-07-1202.pdf>

Mixed Treatment-Sex Offenders

Hanson, R.K., I. Broom, and M. Stephenson. 2004. "Evaluating Community Sex Offender Treatment Programs: A 12-Year Follow-Up of 724 Offenders." Canadian Journal of Behavioural Science 36(2): 87-96.

Song, L., and Lieb, R. (1995). Washington State Sex Offenders: Overview of Recidivism Studies, Olympia: Washington State Institute for Public Policy.

Multisystemic Therapy

Borduin, C. M., Henggeler, S. W., Blaske, D. M., and Stein, R. (1990). "Multisystemic treatment of adolescent sexual offenders." International Journal of Offender Therapy and Comparative Criminology 35: 105-114.

Borduin, C. M., Schaeffer, C. M. (2001). "Multisystemic treatment of juvenile sexual offenders: a progress report."

Cunningham, Alison (2002) Randomized Study of MST in Ontario, Canada, http://www.lfcc.on.ca/mst_final_results.html

Henggeler, S.W., Halliday-Boykins, C. A., Cunningham, P. B., Randall, J., Shapiro, S. B., Chapman, J. E. (2006). "Juvenile drug court: enhancing outcomes by integrating evidence-based treatments." Journal of Consulting and Clinical Psychology, 74(1); 42-54

Henggeler, S. W., Clingempeel, W. G., Brondino, M. J., S. G. Pickrel, (2002). "Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders." Journal of the American Academy of Child and Adolescent Psychiatry 41(7): 868-874.

Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., and Hanley, J. H. (1997). "Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination." Journal of Consulting and Clinical Psychology 65: 821-833.

Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., and Hanley, J. H. (1993). "Family preservation using multisystemic therapy: long-term follow-up to a clinical trial with serious juvenile offenders." Journal of Child and Family Studies 2(4): 283-293.

Ogden, T. and C.A. Halliday-Boykins. (2004) "Multisystemic treatment of antisocial adolescents in Norway: Replication of clinical outcomes outside of the US." Child and Adolescent Mental Health 9(2): 77-83.

Schaeffer, C. M., & Borduin, C. M. (2005). "Long-term follow-up to a randomized clinical trial of multisystemic therapy with serious and violent juvenile offenders," Journal of Consulting and Clinical Psychology 73(3): 445-453.

Timmons-Mitchell, J., Bender, M. B., Kishna, M. A., Mitchell, C. C. (2006), "An Independent Effectiveness Trial of Multisystemic Therapy with Juvenile Justice Youth," Journal of Clinical Child and Adolescent Psychology, 35(2):227-236.

Multidimensional Treatment Foster Care

Chamberlain, P. (1990). "Comparative evaluation of specialized foster care for seriously delinquent youths: A first step." Community Alternatives: International Journal of Family Care 2: 21-36.

Chamberlain, P., Fisher, P. A., Moore, K. (2002). "Multidimensional treatment foster care: applications of the OSLC intervention model to high-risk youth and their families," in Antisocial behavior in children and adolescents: developmental analysis and the Oregon model for intervention, ed. Reid, J. B., Patterson, G. R., Snyder, J. J. Washington DC: American Psychological Association.

Leve, L. D., Chamberlain, P., Reid, J. B. (2005). "Intervention outcomes for girls referred from juvenile justice: effects on delinquency." Journal of Consulting and Clinical Psychology, 73(6):1181-5.

Nurse Family Partnership for Low-Income Mothers - Child Outcomes

Olds D, Henderson CR, Cole R, et al. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized trial. The Journal of the American Medical Association. 1998; 280(14): 1238-1244.

Nurse Family Partnership for Low-Income Mothers - Mother Outcomes

Olds, David L., Eckenrode, John, et al. (1997). "Long-term effects of home visitation on maternal life course and child abuse and neglect." JAMA: Journal of the American Medical Association 278(8): 637.

Parole/No Parole

Drake, E. and Barnoski, R. (2006) The Effects of Parole on Recidivism: Juvenile Offenders Released From Washington State Institutions, Final Report. Olympia: Washington State Institute for Public Policy, Document No. 06-05-1203.

Jackson, P. C. (1983). Some effects of parole supervision on recidivism. British Journal of Criminology, 23, 17-34.

Parent Child Interaction Therapy (PCIT)

Chaffin, M., J.F. Silovsky, B. Funderburk, L.A. Valle, E.V. Brestan, T. Balachova, S. Jackson, J. Lensgraf, and B.L. Bonner. (2004) "Parent-child interaction therapy with physically abusive parents: Efficacy for reducing future abuse reports." Journal of Consulting and Clinical Psychology. Vol. 2, NO. 3, pp. 500-510.

Psychotherapy for Sex Offenders

Hanson, R. Karl, Steffy, R.A., and Gauthier, R. (1993). "Long Term Recidivism of Child Molesters." Journal of Consulting and Clinical Psychology 61: 646-652.

Nutbrown, V., and Stasiak, E. (1987). Research monograph: A retrospective analysis of O.C.I. cost effectiveness 1977-1981. Ontario Correctional Institute.

Romero, Joseph J. and Linda M. Williams. (1983). "Group Psychotherapy and Intensive Probation Supervision with Sex Offenders: A Comparative Study." Federal Probation 47: 36-42.

Regular Supervision Compared to No Supervision

Solomon, Amy L., Kachnowski, Vera, Bhati, Avi, (2005). "Does Parole Work? Analyzing the Impact of Postprison Supervision on Rearrest Outcomes. Urban Institute

Restorative Justice Programs for Lower Risk Adult Offenders

Bonta, J., S. Wallace-Capretta, and J. Rooney. 2000. "A Quasi-Experimental Evaluation of an Intensive Rehabilitation Supervision Program." Criminal Justice and Behavior 27(3): 312-329.

Dignan, J. 1990. Repairing the Damage: An Evaluation of an Experimental Adult Reparation Scheme in Kettering, Northamptonshire. Sheffield, UK: Centre for Criminological and Legal Research, Faculty of Law, University of Sheffield.

Paulin, J., Kingi, V., Lash, B. (2005). The Rotorua Second Chance Community-Managed Restorative Justice Programme: An Evaluation. http://www.justice.govt.nz/pubs/reports/2005/rotorua-second-chance-community-managed-restorative-justice/index.html

Paulin, J., Kingi, V., Lash, B. (2005). The Wanganui Community-Managed Restorative Justice Programme: An Evaluation. http://www.justice.govt.nz/pubs/reports/2005/wanganui-community-managed-restorative-justice/

Rugge, T., J. Bonta, and S. Wallace-Capretta. 2005. Evaluation of the Collaborative Justice Project: A Restorative Justice Program for Serious Crime. Public Safety and Emergency Preparedness Canada. Ottawa, Ontario, Canada. <http://www.psepc-sppcc.gc.ca/publications/Corrections/cjp/cjp_toc_e.asp>

Triggs, S. (2005). New Zealand Court-Referred Restorative Justice Pilot: Evaluation, Prepared by the Crime and Justice Research Centre Victoria University of Wellington, Ministry of Justice,

Restorative Justice-Juveniles

Evje, A. and R. Cushman, (2000). A Summary of the Evaluations of Six California Victim Offender Rehabilitation Programs. San Francisco, CA: Judicial Council of California, Administrative Office of the Courts.

Luke, G. and B. Lind. 1998. Reducing Juvenile Crime: Conferencing Versus Court. Sydney, Australia: New South Wales Bureau of Crime and Statistics and Research. <http://www.lawlink.nsw.gov.au/lawlink/bocsar/ll_bocsar.nsf/vwFiles/CJB69.pdf/$file/CJB69.pdf>.

McCold, P., & Wachtel, B. (1998). Restorative Policing Experiment: The Bethlehem Police Family Group Conferencing Project. Community Service Foundation. Pipersville, Pennsylvania

McGarrell, E.F. 2001. "Restorative Justice Conferences as an Early Response to Young Offenders." Juvenile Justice Bulletin (August). Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. <http://www.ncjrs.org/pdffiles1/ojjdp/187769.pdf>.

Niemeyer, M. and D. Shichor. 1996. "A Preliminary Study of a Large Victim/Offender Reconciliation Program." Federal Probation 60(3): 30-34.

Nugent, W. and J.B. Paddock. 1996. "Evaluating the Effects of a Victim-Offender Reconciliation Program on Reoffense." Research on Social Work Practice 6(2)2: 155-178.

Rowe, W. (2002). A meta-analysis of six Washington state restorative justice projects. Bellingham, Washington: Cambie Group International, Inc.

Roy, S. 1993. "Two Types of Juvenile Restitution Programs in Two Midwestern Counties: A Comparative Study." Federal Probation 57(4): 48-53.

Schneider, Anne L. (1986). "Restitution and Recidivism Rates of Juvenile Offenders: Results from Four Experimental Studies." Criminology 24(3): 533-553.

Sherman, L.W., H. Strang, and D.J. Woods. 2000. Recidivism Patterns in the Canberra Reintegrative Shaming Experiments (RISE). Canberra, Australia: Centre for Restorative Justice, Research School of Social Sciences, Australian National University. <http://www.aic.gov.au/rjustice/rise/recidivism/report.pdf>.

Stone, S., Helms, W., & Edgeworth, P (1998). Cobb County juvenile court mediation program evaluation. State University of West Georgia.

Umbreit, M.S. 1994. Victim Meets Offender: The Impact of Restorative Justice and Mediation. Monsey, NY: Willow Tree Press.

Wade, K., Swenson, D., Miller, D., Sager, S. (2004). An evaluation of restorative justice programs Milwaukee and Outagamie counties. Madison Wisconsin: Legislative Audit Bureau.

Wiinamaki, L.A. 1997. Victim-Offender Reconciliation Programs: Juvenile Property Offender Recidivism and Severity of Reoffense in Three Tennessee Counties. Doctoral dissertation, University of Tennessee, Knoxville. UMI No. 9823140.

Scared Straight

Buckner, John C. and Meda Chesney-Lind. (1983.) "Dramatic Cures for Juvenile Crime: An Evaluation of a Prisoner-Run Delinquency Prevention Program." Criminal Justice and Behavior 10(2): 227-247.

Cook D. D., Spirrison, C. L. (1992). "Effects of a prisoner-operated delinquency deterrence program: Mississippi's Project Aware," Journal of Offender Rehabilitation, 17: 89-99.

Finchkenauer, J. O. and Gavin, P. W. (1999). Scared Straight: the panacea phenomenon revisited. Prospect Heights, Il: Waveland Press.

Greater Eygpt Regional Planning & Development Commission. (1979). Menard Correctional Center: Juvenile tours impact study. Carbondale, IL.

Lewis, R. V. (1983). Scared straight--California style: Evaluation of the San Quentin Squires program. Criminal Justice and Behavior 10(2), 209-226.

Locke, T. P., Johnson, G. M., Kirigin-ramp, K., Atwater, J. D., Gerrard, M. (1986). An evaluation of a juvenile education program in a state penitentiary. Evaluation Review 10(3): 281-298.

Michigan Department of Corrections. (1967). A six month follow-up of juvenile delinquents visiting the Ionia Reformatory (Research Report No. 4). Lansing: Michigan Department of Corrections, May.

Orchowsky, S. and Taylor, K. (1981). The insiders juvenile crime prevention program: an assessment of a juvenile awareness program. Richmond: Virginia Department of Corrections.

Vreeland, A. D. (1981). Evaluation of Face-to Face: A juvenile aversion program. Unpublished doctoral dissertation, University of Texas, Dallas.

Yarborough, J. C. (1979). Evaluation of JOLT as a deterrence program. Lansing: Michigan Department of Corrections, Program Bureau.

Seattle Social Development Project (SSDP)

Hawkins, J.D., Kosterman, R., Catalano, R.F., Hill, K.G., Abbott, R.D., (2004). Promoting Positive Adult Functioning through Social Development Intervention in Childhood: Long-term Effects from the Seattle Social Development Project, paper presented at Society for Prevention Research annual meeting in Quebec City, used with permission.

Team Child

Ezell, Mark. (1997). Teamchild: Evaluation of the Second Year, Unpublished Manuscript.

Norrbin, S. C., Rasmussen, D. W., Von-Frank, D. M. (2004). "Using civil representation to reduce delinquency among troubled youth." Evaluation Review, 28(3): 201-217.

Teen Courts

Butts J.; J. Buck; and M. Coggeshall. 2002. The Impact of Teen Court on Young Offenders. Washington, DC: The Urban Institute.

Hissong, R. 1991. Teen court—Is it an effective alternative to traditional sanctions? Journal for Juvenile Justice and Detention Services 6:14–23.

North Carolina Administrative Office of the Courts. 1995. Report on the Teen Court Programs in North Carolina. Raleigh, NC: North Carolina Administrative Office of the Courts.

Therapeutic Community Programs, MICA Offenders

Sacks, S., Sacks, J. Y., McKendrick, K., Banks, S., & Stommel, J. (2004). Modified TC for MICA offenders: Crime outcomes. Behavioral Sciences and the Law, 22: (4), 477-501.

Van Stelle, K. R., Moberg, D. P. (2004). Outcome data from MICA Clients after participation in an institutional therapeutic community. Journal of Offender Rehabilitation. 39(1): 37-62.

Vocational Education in Prison

Callen, V. and J. Gardner. (2005). "Vocational Education and Training Provision and Recidivism in Queensland Correctional Institutions." National Center for Vocational Education Research (NCVER): Queensland, Australia.

Lattimore, P. K., Witte, A. D., Baker, J. R. (1990). "Experimental assessment of the effect of vocational training on youthful property offenders." Evaluation Review 14(2): 115-133.

Saylor, W. G., Gaes, G. G. (1996). "PREP: A Study of "Rehabilitating" Inmates Through Industrial Work Participation, and Vocational and Apprenticeship Training." Federal Bureau of Prisons: Washington, D.C.

Washington's Dialectical Behavior Therapy (DBT)

Drake, E., Barnoski, R. (2006) Recidivism findings for the Juvenile Rehabilitation Administration's dialectical behavior therapy program: Final report. Olympia, WA. Washington State Institute for Public Policy. <http://www.wsipp.wa.gov/rptfiles/06-07-1201.pdf>

Work Release Programs From Prison

Jeffrey, R. and Woolpert, S. (1974) "Work Furlough as an Alternative to Incarceration," The Journal of' Criminology, 65(3): 405-415.

LeClair, D. P. & Guarino-Ghezzi, S. (1991). "Does incapacitation guarantee public safety? Lessons from the Massachusetts furlough and prerelease programs", Justice Quarterly, (8)1: 9-36

Turner, S. M. and Petersilia, J. (1996). "Work Release in Washington: Effects on Recidivism and Corrections Costs." Prison Journal 76(2): 138-164.

Waldo, G. P. and Chiricos, T. G. (1977). "Work release and recidivism: an empirical evaluation of a social policy." Evaluation Quarterly 1(1): 87-108.

Appendix B: Methods and Parameters to Forecast the Benefits and Costs of Evidence-Based Options

The purpose of this study is to project whether there are "evidence-based" options that can:

- ✓ reduce the future need for prison beds,
- ✓ save money for state and local taxpayers, and
- ✓ contribute to lower crime rates.

To do this, our modeling approach follows three distinct and sequential steps. First, we review the empirical evidence to identify whether there are any "evidence-based" public criminal justice and prevention policies and programs that have a proven ability to affect crime rates. This step employs meta-analytic techniques and produces an effect size on crime outcomes for each option we consider. Appendix A describes our procedures and results for this first step.

Second, we determine whether each option has favorable economics—that is, we calculate the long-term benefits and costs for many of the effect sizes from the first step.

In the third step, we project how statewide implementation of alternative portfolios of evidence-based options would influence the long-run need for prison beds, state and local fiscal costs, and crime rates in Washington.

Appendix B describes the technical procedures for steps two and three. The computations for each of these steps are carried out in a model built for Microsoft Excel with Visual Basic for Applications.

B1. Procedures to Calculate the Benefits and Costs of an Individual Evidence-Based Crime Option

We estimate and count three events corresponding to the three outcomes of legislative interest: (a) the effect that each option has on the average daily population of prison populations; (b) the effect that each option has on the number of times a person enters the criminal justice system (this measure, in turn, is an input to our estimates of criminal justice costs); and (c) the effect that each option has on the number of crimes that a person is likely to commit.

The procedures to calculate the effect of each option on average daily prison population, the number of entries to the criminal justice system, and the number of crimes follow these routines:

$$ADP_y = \sum_{s=1}^{S} Crimedist_{(y-(s-1)*lag)} * Crimeprob * Crimechg_{(y-(s-1)*lag)} * PLOS_s$$

$$Entry_y = \sum_{s=1}^{S} Crimedist_{(y-(s-1)*lag)} * Crimeprob * Crimechg_{(y-(s-1)*lag)}$$

$$Crime_y = \sum_{s=1}^{S} Crimedist_{(y-(s-1)*lag)} * Crimeprob * Crimechg_{(y-(s-1)*lag)} * Offpersent * Vicpersoff$$

ADP_y is the effect that an evidence-based option is expected to have on prison average daily population in year y of the long-term follow-up time horizon y. For each offender population under study, the long-term follow-up horizon y is the maximum number of "at-risk" years estimated for future criminal outcomes following release from incarceration or placement in the community. For prevention programs, the long-term follow-up horizon begins at the age when treatment is performed.

$Entry_y$ is the effect that an evidence-based option is expected to have on the number of times a person enters the criminal justice system for a conviction in year y of the long-term follow-up horizon y. $Crime_y$ is the effect that an evidence-based option is expected to have on the number of crimes a person commits.

As described below, for each population for which evidence-based resources can be applied, we produce the following information:

- For each population (adult offender populations, juvenile offender populations, and general non-offender populations), we compute a probability density distribution indicating when convictions are likely to happen. For offender populations, these probability distributions are estimated with 13 years of follow-up reconviction data. We used Palisade Corporation's @RISK software, which has a probability distribution fitting function, to estimate the parameters of the density distributions. For nearly all of the crime distributions, lognormal density distributions were the best fitting models. In the three equations above, these distributions are notated as $Crimedist_y$, where y is the density distribution value at each year in the long-term follow-up horizon.

- We compute the probability that a person will be convicted (or re-convicted) for a felony or misdemeanor crime over the course of the follow-up period. In the three equations above, this is notated as $Crimeprob$.

- We compute the average number of sentences (convictions) over the course of the follow-up period. In the three equations, this is notated as S.

- We compute the average time between sentences over the follow-up period. In the three equations above, this is notated as lag.

- We compute the average number of offenses per sentence over the follow-up period. In the three equations above, this is notated as $Offpersent$.

- We also compute the type of offenses for which a person is convicted over the follow-up period. We count seven types of convictions: murder, felony sex crime, felony robbery, felony assault, felony property crime, felony drug crime, and misdemeanor crime.

In each of the three equations listed above there is a variable, notated as $Crimechg_y$, which indicates the degree to which a program is estimated to affect crime. We compute this factor to be the change in the relative risk of being convicted for a crime, $Crimeprob$, based on the effect size for the option. This variable is computed as:

$$Crimechg_y = \frac{\left(\sin(\arcsin(\sqrt{Crimeprob}) + \frac{(ES*(1+decayrate)^{y-1})}{2})^{\wedge}2 \right)}{Crimeprob} - 1$$

The variable ES is the Institute-adjusted effect size for each evidence-based option, as computed from the meta-analyses described in Appendix A. The variable $decayrate$ is a parameter that allows the user to model exponential rates of decay (or growth) in the effect size over time. We put this feature in the model because many of the effect sizes computed for these options are based on individual studies with relatively short follow-up periods, often one or two years. Since we use these effect sizes to make long-term estimates of the effect that a program may have on crime outcomes, we provide a $decayrate$ variable to test what happens if the effects of programs erode over time.

The ADP equation contains a term indicating the average length of stay per prison sentence, $PLOS_s$. For each population studied, this variable is the expected length of stay for the weighted average types of convictions for the population. This term is computed as follows:

$$OFFTOT = \sum_{o=1}^{O} OFFTYPE_o$$

$$PLOS_s = \sum_{o=1}^{O} \left[\frac{OFFTPYE_o}{OFFTOT} * PROBPRISON_o * LOS_o \right]$$

First, for each population, we sum the seven types of offenses to create a variable $OFFTOT$. This distribution is, of course, different for every type of population studied.

Next, the average prison length of stay for the average sentence, $PLOS_s$, is computed as the sum of each offense type's probability of occurrence, $OFFTYPE_o/OFFTOT$, times the probability that a conviction for offense type o results in a prison term, times the average prison length of stay for offense type o. Information on the probability of prison for each offense type is taken from the latest data from the Washington State Sentencing Guidelines Commission (SGC). The same source is used for information on the average length of stay for each type of prison sentence. The average sentence length data from the SGC is adjusted to reflect average reductions in actual time served for some sentences for "good time." These data are obtained from the Washington State Department of Corrections.

We compute the expected cash flows of avoided costs for each option with the following equations:

$$Taxben_y = ADP_y * Prison\$ + Entry_y * \left(Stateentry\ \$ + Localentry\ \$ \right)$$

$$Totalben_y = Taxben_y + Crime_y * Victim\$$$

The $Taxben_y$ equation calculates the expected streams of annual benefits that accrue to taxpayers as a result of reduced criminal justice costs. The $Totalben_y$ equation adds the benefits that accrue to crime victims (who are not victimized when crime does not happen) to the taxpayer benefits to produce a annual stream of total benefits.

In these two equations, there are four marginal cost terms: $Prison\$$, $Stateentry\$$, $Localentry\$$, and $Victim\$$. These terms describe how mariginal operating and capital costs change when prison average daily population goes up or down by one unit; how other state and local criminal justice operating and capital costs change when convictions go up or down by one unit; and how the victim costs of crime change when crime goes up or down per crime. Three of these variables, $Stateentry\$$, $Localentry\$$, and $Victim\$$, are expected value variables dependent on the type of population for each evidence-based option. For example, the state cost per entry to the criminal justice system will, on an expected value basis, be lower for a lower-risk juvenile diversion population than it will for a higher risk adult sex offender population. We discuss our estimates for these variables below.

B2. Life-Cycle Costs of Crime
The model estimates life-cycle costs for seven major types of crime and 14 types of costs incurred as a result of crime, as shown in Exhibit B.1. The 14 types of costs estimated in the model reflect those paid by taxpayers in Washington and those incurred by crime victims.

Exhibit B.1
Types of Crimes and Resource Costs Analyzed in the Benefit-Cost Model

Types of Crime	Types of Resource Costs Incurred
Murder/Manslaughter	Police and Sheriffs' Offices
Rape/Sex	Superior Courts and County Prosecutors
Robbery	Juvenile Detention, with Local Sentence
Aggravated Assault	Juvenile Detention, with JRA Sentence
Felony Property Crimes	Juvenile Local Probation
Drug Offenses	Juvenile Rehabilitation, Institutions
Misdemeanor Crimes	Juvenile Rehabilitation, Parole
	Adult Jail, with Local Sentence
	Adult Jail, with Prison Sentence
	State Community Supervision, Local Sentence
	Department of Corrections, Institutions
	Department of Corrections, Post-Prison Supervision
	Crime Victim Monetary Costs
	Crime Victim Quality of Life Costs

Criminal Justice System Costs in Washington. In the Institute's cost-benefit model, the costs of the criminal justice system paid by taxpayers are estimated for each significant part of the publicly financed system in Washington. The costs of police and sheriffs, superior courts and county prosecutors, local juvenile detention services, local adult jails, state juvenile rehabilitation, and state adult corrections are estimated separately in the analysis. Operating costs are estimated for each of these criminal justice system components, and annualized capital costs are estimated for the capital-intensive sectors.

The model uses estimates of marginal operating and capital costs of the criminal justice system.[19] Marginal criminal justice costs are defined as those costs that change over the period of several years as a result of changes in workload measures. Some short-run costs must be changed instantly when a workload changes. For example, when one prisoner is added to the state adult corrections system, certain variable food and service costs increase immediately, but new corrections staff are not hired the next day. Over the course of a governmental budget cycle, however, new corrections staff are likely to be hired to handle the larger average daily population of the prison. In the Institute's analysis, these "longer-run" marginal costs have been estimated, rather than immediate, short-run marginal costs. These longer-run marginal costs reflect both the immediate short-run changes in expenditures, and those operating expenditures that change after governments make adjustments to staffing levels, often in the next budget-writing cycle.

Appendix Exhibit B.2 summarizes the Institute's estimates for the per-unit marginal operating costs of the criminal justice system in Washington.[20] Exhibit B.3 displays additional information on adult sentences and resources.

Crime Victim Costs. In addition to costs paid by taxpayers, many of the costs of crime are borne by victims. Some victims lose their lives. Others suffer direct, out-of-pocket, personal or property losses. Psychological consequences also occur to crime victims, including feeling less secure in society. The magnitude of victim costs is very difficult—and in some cases impossible—to quantify.

In recent years, however, national studies have taken significant steps in estimating crime victim costs. One U.S. Department of Justice study by Miller, Cohen, and Wiersema (1996) divides crime victim costs into two types: (a) Monetary costs, which include medical and mental health care expenses, property damage and losses, and the reduction in future earnings incurred by crime victims; and (b) Quality of Life cost estimates, which place a dollar value on the pain and suffering of crime victims.[21] In that study, the quality of life victim costs are computed from jury awards for pain, suffering, and lost quality of life; for murders, the victim quality of life value is estimated from the amount people spend to reduce

risks of death. The quality of life victim cost calculations are controversial for use in setting public policy.[22]

In the Institute's analysis, victim costs from the Miller, Cohen, and Wiersema (1996) study are used as estimates of per-unit victim costs in Washington State. The victim cost estimates currently in the model are shown in Exhibit B.2.

B3. Procedures to Forecast the Effects of Alternative Portfolios of Evidence-Based Options
As noted, the purpose of this study is to project whether there are "evidence-based" options that can:

- ✓ reduce the future need for prison beds,
- ✓ save money for state and local taxpayers, and
- ✓ contribute to lower crime rates.

To do this, we combine the information on the effects of individual evidence-based options with other information on the number of people in Washington who could realistically be expected to benefit from an option. After portfolios of these options are selected, total impacts are then forecast. Several endogenous analytical steps are implemented to account for diminishing returns as combinations of options are expanded.

For each evidence-based option selected for inclusion in the example portfolios (see page 12), we include a number of exogenous inputs, including:

- The official Washington State population forecast by single year age group to 2030. This is used to forecast the basic size of various populations in Washington that might become involved in the juvenile or the adult justice system.

- The latest long-term forecast of prison average daily population and prison releases from the Washington State Caseload Forecast Council (CFC). The prison release population forecast forms the starting point for the size of the populations that could be treated with evidence-based in-prison programs. As programs are selected and average daily populaton is reduced, we endogenously reduce the size of subsequent prison release cohorts.

- We obtained a variety of information on the prevalence of various factors for various populations from the Washington State Department of Corrections (DOC), the Washington State Juvenile Rehabilitation Administration (JRA), and local adult and juvenile courts. For example, DOC indicated to us the percentage of inmates with a significant substance abuse problem. We multiply this factor by the size of a prison release cohort to determine how many people could benefit from evidence-based drug treatment.

- Estimates of the number of offenders already receiving a form of evidence-based treatment was obtained from the relevant agencies in Washington (Department of Corrections, Juvenile Rehabilitiation Administration, and local judicial courts). For example, DOC was able to tell us how many people are currently enrolled in drug treatment in a year. We use this information to determine the size of the remaining potential for a program such as in-prison drug treament. We then reduce this total potential by the "moderate" or "aggressive" parameters described on page 12.

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[19] A few average cost figures are currently used in the model when marginal cost estimates cannot be reasonably estimated.
[20] For more detail on the equations used to estimate per-unit marginal operating costs, see S. Aos, R. Lieb, J. Mayfield, M. Miller, and A. Pennucci. (2004). *Benefits and costs of prevention and early intervention programs for youth: Technical appendix.* Olympia: Washington State Institute for Public Policy, Doc. No. 04-07-3901.
[21] T. R. Miller, M. A. Cohen, and B. Wiersema. (1996). *Victim costs and consequences: A new look.* Research Report. Washington DC: National Institute of Justice.

[22] See, for example, T. R. Clear. (1996). The cost of crime—Or are prisons or community programs the best crime prevention investment? *Community Corrections Report* 4 November/December.

- For some programs included in our portfolios, we conducted surveys of local correctional and judicial agencies. For example, we contacted the courts in Washington to find out how many have adult or juvenile drug courts. In addition, we inquired about each court's operating characteristics. We conducted a similar survey for restorative justice programs for juvenile offenders.

B4. Determining the Market Potential for Portfolios

To identify a portfolio of cost-beneficial choices, we estimate two populations for each program to determine the market potential:

- Those eligible for and participating in the program.
- Those eligible for but not participating in the program.

To describe this process, we use sex offender cognitive-behavioral treatment in the Department of Corrections (DOC) as an example.

First, we must determine how many of the base population are eligible for the program. Using data from DOCs' Sex Offender Treatment Program, we calculated that 583 offenders, or 7 percent, releasing from prison in 2005, met eligibility criteria for the program.

Second, of those eligible to participate in the program, we calculate the percentage of people actually served. The number served is based on "intent to treat." That is, we calculate the number of people who, at the very least, began the program. Once we know who started the program, we are able to determine what the market pool is for potential program expansion. In essence, what is the remaining population of people who could have been, but were not, served by the program? Of the offenders releasing from prison in 2005, approximately 142 began sex offender treatment. This means that 24 percent of the eligible population was served. Conversely, 76 percent of the eligible market pool, or 441 offenders, were unserved. We then apply the effect sizes from Exhibit 4 to determine what the potential impact is on forecasted populations if the market were to be penetrated.

In most situations it is not realistic to provide programs to 100 percent of the unserved market. Therefore, we have the ability in the model to adjust this realistic override potential for each individual program to penetrate a given percentage of the unserved market. That is, we may assume we are only able to provide programs for 25 percent of the unserved market.

For some program areas, enough detail exists in the data to identify how many people refuse treatment. From this information, we can determine what the maximum program expansion is to be for that particular market. For example, of the 583 eligible sex offenders who released from prison, 79 percent were willing to participate. In addition, 24 percent of the eligible population were served, and conversely, 76 percent were not served. Therefore, we can calculate the maximum market potential as follows:

$$x = \frac{.79 - .24}{.76}$$

Approximately 72 percent of the potential market pool is willing to participate. Thus, we cannot penetrate the market beyond 72 percent.

B5. Prison Average Daily Population (ADP) Forecast

Adjustments were made to the Caseload Forecast Council's (CFC) prison forecast in two instances.

Adjustments in the Forecast for Existing Programs. The CFC forecast does not directly account for the impact of current levels of programs on the forecasted prison population. Rather, the forecast implicitly captures prison ADP by virtue of the program's length of the existence in its current operational capacity. Therefore, we calculate the number of years a program has been in operation at its current level, and we use this figure to correct for program effects not yet reflected in the CFC forecast. Using the probability density function for recidivism of the target population, we calculate the percent of a program's effects that have occurred in the years the program has been in operation.

For example, DOC's Sex Offender Treatment Program has been in existence since the 1980s; however, the program underwent significant changes in the 1990s and has been at its current operational level since 1996. Thus, we calculate that the program has been in existence for 10 years. From the probability density function for sex offenders released from prison, we estimate that 86 percent of the total impact of the program has been fully absorbed into the CFC forecast.

Adjustments in the Forecast as Market Potential Is Increased. The CFC prison release forecast assumes current-day treatment levels. This means that as we expand programs, the impact of the effectiveness of these programs will not be captured in the forecast. We have developed a method to adjust for the impact of program expansion on the forecast.

As more people are served by crime-reducing programs, future prison populations decrease, and therefore, fewer people release from prison. Thus, future base populations are adjusted as the market potential is increased to serve more people eligible for the programs.

For example, as the cumulative effect of a portfolio reduces prison average daily population in a year, we reduce the size of the release cohort two years later.

The violator forecast also assumes current-day treatment levels. We adjust the violator forecast in a similar manner also with a two-year lag.

B6. Crime Distributions for Offender and Non-Offender Populations

The Institute maintains a criminal records database, which is a synthesis of criminal charge information, for all individuals in Washington State. The database includes elements from the following sources:

- The Administrative Office of the Courts (AOC): data include criminal records for juvenile court, superior court, and courts of limited jurisdiction.
- The Department of Corrections (DOC): data include conviction information on offenders under the jurisdiction of DOC.

Offender Populations. With this criminal records database, we estimate recidivism crime curves for various offender populations. Recidivism is defined as any offense committed after release to the community, or after initial placement in the community, that results in a Washington State conviction. This includes convictions in juvenile and adult court.

For this study, we collected recidivism data on five populations of offenders who became at-risk in the community during calendar year 1990. We selected 1990 because that year allowed a 13-year follow-up period to observe subsequent convictions. We also allow a one-year period to allow for court processing of any offenses toward the end of the 13-year follow-up period.

For adult offenders, we observe the 13-year recidivism patterns for (1) those offenders released from DOC facilities in 1990, and (2) those offenders sentenced to DOC community supervision in 1990. For juvenile offenders, we observe the 13-year recidivism patterns for (3) those offenders released from Washington State Juvenile Rehabilitation Administration (JRA) facilities in 1990, (4) those offenders sentenced to diversion through local-sanctioning courts in 1990, and (5) those offenders sentenced to detention/probation through local-sanctioning courts in 1990.

These five populations were further broken down by their current most serious offense category. That is, we computed recidivism information for populations based on their most serious offense for which they were convicted prior to the 13-year follow-up period. These categories include: (1) misdemeanors, (2) drug, (3) property, (4) sex, (5) violent (non-sex), (6) drug and property, (7) violent and sex, and (8) total felony and misdemeanor offenses.

Thus, we calculated separate crime distributions for 40 populations. For example, we estimate distributions for adult sex offenders released from prison, drug and property offenders sentenced to community supervision, and misdemeanor youth sent to diversion. Exhibit B.4 shows the detail of these recidivism rates for all the populations.

We then estimate the following recidivism information for each of the populations:

- Probability density distributions for any type of recidivism event.
- Average number of adjudications (new convictions or sentences) per person in the follow-up period.
- Average number of offenses per person in the follow-up period.

We calculate probability density distributions for each of the 40 populations using lognormal, gamma, or weibull distributions. We select the distribution with the best fit and use the output parameters in the model to calculate impacts on crime.

We also calculate the total number of adjudications and offenses a person had during the follow-up period. Recidivism adjudications and offenses were broken down into the following offense categories: murder, sex, robbery, assault, property, drug, and misdemeanor. Using this information, we then determine the average number of adjudications, or "entries," a person had through the criminal justice system. In addition, we calculate the average number of offenses per entry. Exhibit B.5 provides additional background information on sentence outcomes and resources for adult offenders.

Non-Offender Populations. To determine the impact of prevention programs on future crime, we calculate the probability of obtaining a conviction over the life-course. This is done in three steps.

First, we selected a birth cohort. We chose the 1973 birth cohort because this gave us the longest follow-up period (32 years) while having the most complete criminal records data.

Using OFM state population data, we abstracted the number of people living in Washington State who were born in 1973 for each of the follow-up years. For example, in 1993, there were 66,379 20-year-olds (1973 birth cohort) living in Washington. We collected this population data through 2005 when the 1973 cohort was 32 years old.

Second, using the Institute's criminal records database, we selected people who had a misdemeanor or felony conviction and were born in 1973 (n=25,773). We calculated how old someone was at the time of their adjudication and then determined when the first felony occurred in the follow-up period. If there was no felony, we counted when the first misdemeanor occurred. For example, 5.2 percent of the 25,773 had their first conviction at age 20.

Finally, we calculated the average size of the 1973 cohort weighted by crime propensity at each follow-up year. In addition, we calculated the total number of adjudications and offenses for the 1973 cohort during each follow-up period. Adjudications and offenses were broken down into the same offense categories as previously mentioned.

Annual Rate of Decay for Short-Term Follow-up. Most of the evaluations in the meta-analysis look at crime outcomes that have a relatively short follow-up period. For example, most recidivism follow-up periods are between 18 and 36 months. In our model, however, we estimate long-run crime curves using a 13-year follow-up period. Because we are applying effect sizes of programs that have only been evaluated with short-run crime outcomes, we must use caution. Therefore, the further a person is from treatment, we decay the effect sizes. In the model, we have created the ability to decay the effect size by a given percentage. In this study's portfolios, we have decayed the effect size by 20 percent.

B7. Length of Stay Change

In Washington, the sentence for a crime is based on the seriousness of the offense and the offender's criminal history. The Sentencing Guidelines Commission (SGC) publishes a grid showing the sentence by seriousness and the number of previous convictions. The sentence length for a given crime increases as criminal history increases.

To account for these lengthening sentences, we use the sentencing grid and Institute average length of stay data to create a new sentencing grid weighted for the frequency of conviction and the likelihood of prison. This enables us to estimate the effect of increasing trips through the criminal justice system on sentence length.

We estimated this first, by determining the average length of stay for recidivists convicted of the following offense categories: murder, sex, robbery, assault, property, drug, and misdemeanor. We assume offenders who released from prison have at least three prior offenses and then determine the following:

- Likelihood of conviction.
- Likelihood of going to prison if convicted.
- Average length of stay (LOS).

Next, we determine what the offense seriousness level is upon the fourth conviction. We do this by matching the LOS for the offense category with the seriousness level in the sentencing grid and with a sentence most similar to the LOS. For example, the average LOS in prison for murder (all offenses from manslaughter through first degree murder) is 13.4 years.

This LOS, with three prior offenses, is closest to the sentence at Seriousness Level XIII.

We then weight the sentences in the grid for the likelihood of recidivism in the offense categories and the likelihood of going to prison.

Finally, we create a single grid and increasing average sentences with increasing number of prior convictions. We plot this weighted average sentence by number of offenses. The result is a linear relationship; the slope indicates that each subsequent conviction increases the average prison sentence by an additional 0.1839 year.

B8. Adjustment for At-Risk Populations Used for Prevention Programs

To estimate the effects of prevention programs, we use the rates for the non-offender population described in B6, adjusted for increased risk associated with low-income status. Our adjustment factors were calculated from a study of the Nurse Family Partnership.[23] Using the comparison groups for mothers and children, we calculated the ratio of crime in the low-income group to crime in the entire population. These ratios were then multiplied by rates for the child and adult non-offender populations to yield crime profiles for these higher-risk populations.

B9. Discounted Effect Size for Multiple Treatments

Currently, there is no research that demonstrates what effect multiple treatments have on crime. One might argue that the effect size could actually increase with each dosage of treatment. Likewise, one could argue that each subsequent treatment has less of an effect than the first. Because there is no literature to support either argument, we have opted on the side of caution and applied the law of diminishing returns to the model.

The law of diminishing returns states that, at a certain point, adding one unit of input no longer returns one unit of output. Thus, multiple treatments will achieve, incrementally, a smaller effect than the previous treatment. Among the general parameters available in the model, we have the capability of applying diminishing returns to people receiving treatment.

For each population and portfolio, we calculate the average number of programs per offender. When the number exceeds 1, we discount the effect size by 25 percent for each additional program.

B10. Program Costs

The estimated costs for programs and comparison groups are listed in Exhibit B.5. The costs for each group were adjusted to 2006 dollars using the implicit price deflator. The net cost of programs shown in Exhibit 4 is the difference between the adjusted costs for program and comparison groups.

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[23] D. L.Olds, J. Eckenrode, et al. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. *Journal of the American Medical Association* 278(8): 637-643. D. Olds, C. R. Henderson, R. Cole, et al. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized trial. *Journal of the American Medical Association* 280(14): 1238-1244.

Exhibit B.2
Estimates of Marginal Resource Operating Costs, Per Unit

Resource	Units Used In Cost Estimate	Murder/ Man- slaughter	Rape & Sex Offenses	Robbery	Aggravated Assault	Property	Drug	Mis- demeanor	Year in Which Unit Cost Estimates are Based	Annual Real Cost Escalation Rate
Costs, Per Unit, By Type of Crime										
State and Local Governmental Operating Costs Paid by Taxpayers										
Police and Sheriff's Offices	$ Per Arrest	$31,648	$6,438	$6,438	$6,438	$5,370	$5,370	$305	2004	0.0%
Superior Courts & County Prosecutors	$ Per Conviction	$127,905	$5,685	$1,522	$1,522	$1,522	$1,522	$593	1996	0.0%
Juvenile Detention, with Local Sentence	Annual $ Per ADP	$30,300	$30,300	$30,300	$30,300	$30,300	$30,300	$30,300	1995	0.0%
Juvenile Local Probation	Annual $ Per ADP	$1,928	$1,928	$1,928	$1,928	$1,928	$1,928	$1,928	1995	0.0%
Juvenile Rehabilitation, Institutions	Annual $ Per ADP	$36,000	$36,000	$36,000	$36,000	$36,000	$36,000	$0	1996	0.0%
Juvenile Rehabilitation, Parole	Annual $ Per ADP	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$0	1996	0.0%
Adult Jail, with Local Sentence	Annual $ Per ADP	$17,047	$17,047	$17,047	$17,047	$17,047	$17,047	$17,047	1995	0.0%
Adult Community Supervision, Local Sentence	Annual $ Per ADP	$2,688	$2,688	$2,688	$2,688	$2,688	$2,688	$0	1994	0.0%
Department of Corrections, Institutions	Annual $ Per ADP	$22,600	$22,600	$22,600	$22,600	$22,600	$22,600	$0	2006	0.0%
Department of Corrections, Post-Prison Supervision	Annual $ Per ADP	$2,688	$2,688	$2,688	$2,688	$2,688	$2,688	$0	1994	0.0%
Costs Paid by Crime Victims										
Victim Costs--Monetary, Out of Pocket Costs[1]	$ Per Crime	$1,098,828	$6,649	$2,513	$1,559	$5,103	$0	$0	1995	0.0%
Victim Costs--Quality of Life[1]	$ Per Crime	$2,038,965	$88,124	$6,221	$8,466	$67	$0	$0	1995	0.0%

(1) Miller, T. R., Cohen, M. A., Wiersema, B. *Victim Costs and Consequences: A New Look*, U.S. Dept. of Justice, 1996.

Exhibit B.3
Adult Sentence and Resource Use Information

State Prison and Local Resource Use for Adult Offenders, by Type of Crime

	Sentence Outcome		Sentenced to Prison			Sentenced to Local Sanction	
Crime	Percent Receiving Prison Sentence	Percent Receiving Local Jail or Community Supervision Sentence	Average Prison Sentence, in Years	Average Prison Length of Stay, in Years	Post-Prison Supervision, in Years	Average Jail Length of Stay, in Years	Average Community Supervision Length of Stay, in Years
Murder/Manslaughter	98%	2%	16.0	13.4	2.6	0.85	1.00
Rape	38%	62%	7.9	6.9	3.0	0.29	2.00
Robbery	74%	26%	5.3	3.9	2.0	0.47	1.00
Aggravated Assault	39%	61%	3.3	2.7	2.0	0.35	1.00
Property	31%	69%	2.2	1.6	0.0	0.23	1.00
Drug	35%	65%	1.9	1.3	1.0	0.24	1.00
Misdemeanor	0%	100%	0.0	0.0	0.0	0.25	0.50

Exhibit B.4
Recidivism Information for Various Populations: 13-Year Follow-Up

Population (current most serious offense):	Total number	Total recidivism rate	Average adjudications per recidivist	Average offenses per adjudication	Mis-demeanor	Property	Drug	Assault	Robbery	Sex	Murder	Total
Adult Community (1990 sentences)												
Felony Drug	3,889	57%	4.52	1.19	52%	13%	28%	5%	1%	1%	0%	100%
Felony Property	6,428	58%	4.90	1.22	54%	27%	12%	5%	2%	1%	0%	100%
Felony Violent (not sex)	1,539	52%	4.27	1.21	58%	16%	12%	9%	3%	2%	1%	100%
Felony Sex	619	27%	2.50	1.23	54%	14%	13%	8%	2%	9%	0%	100%
Misdemeanor	590	54%	4.77	1.20	59%	16%	15%	6%	2%	2%	0%	100%
Felony Drug & Property	10,317	58%	4.76	1.21	53%	22%	18%	5%	2%	1%	0%	100%
Felony Violent	2,158	45%	3.96	1.21	58%	16%	12%	9%	2%	3%	1%	100%
All	13,065	56%	4.65	1.21	54%	21%	17%	5%	2%	1%	0%	100%
Adult Prison (1990 releases)												
Felony Drug	920	58%	4.55	1.21	47%	14%	31%	5%	2%	0%	0%	100%
Felony Property	876	78%	5.93	1.27	48%	33%	12%	4%	3%	1%	0%	100%
Felony Violent (not sex)	914	64%	5.03	1.22	54%	19%	14%	7%	4%	1%	0%	100%
Felony Sex	462	42%	3.02	1.29	52%	11%	10%	8%	3%	15%	1%	100%
Misdemeanor	0	0%	0.00	0.00	0%	0%	0%	0%	0%	0%	0%	0%
Felony Drug & Property	1,796	68%	5.32	1.25	48%	26%	19%	4%	3%	1%	0%	100%
Felony Violent	1,376	56%	4.53	1.23	53%	18%	13%	7%	4%	4%	1%	100%
All	3,172	63%	5.01	1.24	50%	23%	17%	5%	3%	2%	0%	100%
Juvenile Rehabilitation Administration (1990 releases)												
Felony Drug	88	67%	6.98	1.20	47%	12%	26%	9%	5%	1%	1%	100%
Felony Property	491	81%	6.96	1.28	47%	34%	7%	7%	4%	1%	0%	100%
Felony Violent (not sex)	245	72%	6.93	1.21	57%	20%	9%	10%	3%	1%	0%	100%
Felony Sex	133	64%	4.68	1.28	56%	30%	4%	4%	3%	2%	2%	100%
Misdemeanor	105	80%	9.05	1.20	51%	24%	11%	9%	3%	1%	0%	100%
Felony Drug & Property	579	79%	6.96	1.27	47%	32%	9%	7%	4%	1%	0%	100%
Felony Violent	378	69%	6.20	1.23	56%	22%	8%	8%	3%	1%	1%	100%
All	1,062	75%	6.93	1.25	50%	28%	9%	8%	3%	1%	1%	100%
Juvenile Diversion (1990 sentences)												
Felony Drug	35	51%	3.67	1.26	54%	20%	14%	8%	1%	1%	0%	100%
Felony Property	568	47%	3.73	1.21	60%	27%	7%	4%	2%	1%	0%	100%
Felony Violent (not sex)	29	45%	2.85	1.35	70%	14%	12%	4%	0%	0%	0%	100%
Felony Sex	0	0%	0.00	0.00	0%	0%	0%	0%	0%	0%	0%	0%
Misdemeanor	11,710	46%	4.09	1.22	62%	24%	6%	5%	2%	1%	0%	100%
Felony Drug & Property	603	47%	3.73	1.21	59%	27%	7%	4%	2%	1%	0%	100%
Felony Violent	29	45%	2.85	1.35	70%	14%	12%	4%	0%	0%	0%	100%
All	12,342	46%	4.07	1.22	62%	24%	6%	5%	2%	1%	0%	100%
Juvenile Detention/Probation (1990 sentences)												
Felony Drug	211	68%	5.96	1.17	51%	14%	24%	9%	2%	0%	1%	100%
Felony Property	3,017	69%	5.20	1.24	54%	30%	7%	6%	2%	1%	0%	100%
Felony Violent (not sex)	321	67%	4.67	1.21	54%	24%	9%	9%	3%	1%	0%	100%
Felony Sex	247	51%	4.14	1.23	58%	22%	7%	8%	1%	4%	0%	100%
Misdemeanor	2,524	73%	5.93	1.21	58%	25%	7%	7%	3%	1%	0%	100%
Felony Drug & Property	3,228	69%	5.25	1.24	54%	29%	8%	6%	2%	1%	0%	100%
Felony Violent	568	60%	4.47	1.22	55%	23%	8%	9%	2%	2%	0%	100%
All	6,320	70%	5.47	1.22	56%	26%	8%	6%	3%	1%	0%	100%
General Population (1973 birth cohort)												
All	67,825	38%	2.57	1.19	64%	20%	8%	4%	1%	2%	0%	100%

Distribution of Offenses During the Follow-Up Period (columns: Misdemeanor, Property, Drug, Assault, Robbery, Sex, Murder, Total)

Program name	Program Group Treatment Cost		Comparison Group Treatment Cost		Note
	Cost per Program Participant	Year dollars Are Denominated	Cost per Program Participant	Year dollars Are Denominated	
Adult Programs					
Adult drug courts	$3,891	2001	$0	2006	Barnoski, R., Aos, S. 2003. Olympia, WA. Washington State Institute for Public Policy.
Cognitive-behavioral therapy in prison or community	$105	2006	$0	2006	Communication with R. Cole at DOC, Oct 2006.
Correctional industries in prison	$417	2006	$0	2006	Aos, S. 2005. Correctional industries programs for adult offenders in prison: Estimates of benefits and costs. Olympia, WA. Washingotn State Institute for Public Policy.
Drug treatment in community	$574	2006	$0	2006	Communication with R. Warick at DOC.
Drug treatment in prison (therapeutic communities or outpatient)	$1,604	2006	$0	2006	Communication w R. Warick & K. Metzner at DOC 09/2006
General education in prison (basic education or post-secondary)	$962	2006	$0	2004	Communication with R. Warick at DOC.
Electronic monitoring to offset jail time	$1,236	2006	$2,107	2006	WSIPP estimate, assuming that one-half of jail time could be replaced with electronic monitoring.
Employment and job training in the community	$400	2006	$0	2006	WSIPP estimate, based on costs reported in the experimental literature.
Intensive supervision: surveillance-oriented programs	$3,217	1999	$0	2006	WSIPP analysis of likelihood of going to jail on technical violation (Petersilia, 1992) and increased costs of supervision.
Intensive supervision: treatment-oriented programs	$6,115	1999	$0	2006	Aos, S. et al. (2001) *Comparative Costs and Benefits of Programs to Reduce Crime*. Olympia WA: Washington State Institute for Public Policy.
Sex offender treatment in prison with aftercare	$12,585	2005	$0	2006	Communication with R. Warick at DOC. Cost includes $9885 for in-prison treatment and $2700 for mandatory aftercare.
Vocational education in prison	$1,182	2006	$0	2006	Communication w R. Warick at DOC, Oct 2006. Based on the total expenditures in FY06 divided by the number of participants in the year who had 1 hr or more of participation
Juvenile Programs					
Adolescent Diversion Project (for lower risk offenders)	$1,600	1997	$0	2006	Aos, S. et al. (2001) *Comparative Costs and Benefits of Programs to Reduce Crime*. Olympia WA: Washington State Institute for Public Policy.
Aggression Replacement Training	$897	2006	$0	2006	Communication with R. Pinto at JRA, Sept 2006
Aggression Replacement Training in institution	$205	2006	$0	2006	Communication with R. Pinto at JRA, Sept 2006
Family Integrated Transitions	$8,968	2003	$0	2006	Aos, S. (2004) *Washington state's family integrated transitions program for juvenile offenders: Outcome evaluation and benefit-cost analysis*. Olympia WA: Washington State Institute for Public Policy.
Functional Family Therapy on probation	$2,100	2002	$0	2006	Communication with . Patnode at JRA, Dec 2003
Interagency coordination programs	$205	2006	$0	2006	Communication with R. Pinto at JRA, Sept 2006
Juvenile boot camp to offset institution time	$38,688	2004	$46,374	2006	Based on days for boot camp (from Barnoski, R. (2004) Washington's Juvenile Basic Training Camp: Outcome Evaluation), prices obtained from Ken Brown, Washington State Juvenile Rehabilitation Administration.
Juvenile drug courts	$2,643	2004	$0	2006	Anspach, D. F., Ferguson, A. S., & Phillips, L. L. (2003). *Evaluation Of Maine's Statewide Juvenile Drug Treatment Court Program*. Augusta, ME: University of Southern Maine.
Juvenile intensive parole supervision	$7,785	2001	$1,984	2006	Barnoski, R. (2003) *Evaluating How Juvenile Rehabilitation Administration's Intensive Parole Program Affects Recidivism*. Olympia, WA. Washington State Institute for Public Policy.
Juvenile intensive probation supervision programs	$2,773	2001	$1,338	2006	Aos, S. (2002) *The Juvenile Justice System in Washington State:Recommendations to Improve Cost-Effectiveness. Olympia WA: Washington State Institute for Public Policy*.
Sex offender cognitive-behavioral treatment	$0	2005	$0	2006	
Juvenile wilderness challenge	$2,935	2004	$0	2006	WSIPP estimate, based on costs reported in the experimental literature.
Multidimensional Treatment Foster Care (v. regular group care)	$32,730	2006	$24,537	2006	Per communication with Chris Simmons at JRA, an average of 7months length of stay at $153.78 per day vs WSIPP estimate of average stay in a group home.
Multisystemic Therapy	$4,264	2006	$0	2006	Communication with R. Pinto at JRA, Sept 2006
Regular surveillance-oriented parole (v. no parole supervision)	$1,176	2005	$0	2006	Drake, E. and Barnoski, R. (2006) *The Effects of Parole on Recidivism: Juvenile Offenders Released From Washington State Institutions, Final Report*. Olympia: Washington State Institute for Public Policy
Restorative justice for low-risk offenders	$838	2004	$0	2006	WSIPP estimate, based on costs reported in the experimental literature.
Scared Straight	$50	1999	$0	2006	WSIPP assumed a nominal program cost per participant.
Teen courts	$891	2004	$0	2006	WSIPP estimate, based on public and volunteer costs reported in the experimental literature.
Prevention Programs					
Pre-K education for low income 3 & 4 year olds	$551	2003	$0	2006	Communication with J. Patnode at JRA, December 2003
Nurse Family Partnership-Mothers	$5,019	2003	$0	2006	WSIPP estimate of the portion of cost attributable to crime reduction.
Nurse Family Partnership-Children	$680	2003	$0	2006	WSIPP estimate of the portion of cost attributable to crime reduction.