

How is Your Portfolio Doing?

Economic Analysis of Evidence-Based Public Policy Choices

Wellington, New Zealand
March 16, 2009

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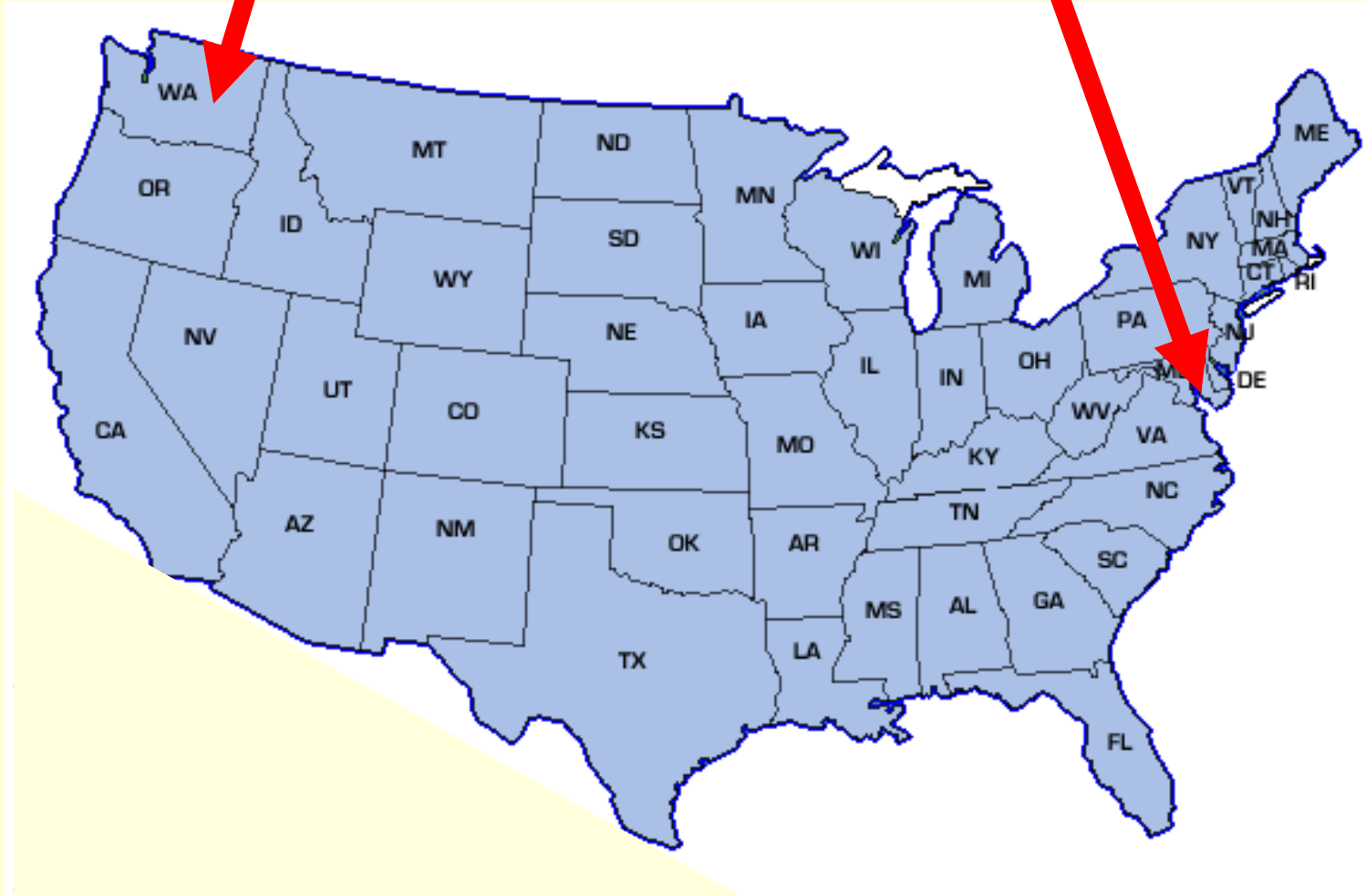
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Washington State

Washington DC





New Zealand



United States



Washington State

	New Zealand	United States	Washington State
Population (millions)	4.3	306	6.5
GDP/Capita (US\$,ppp)	\$26,610	\$47,000	\$50,000*
Income Inequality Index (0 to 100)	36	46	N/A
Taxes as % of GDP	37%	28%	N/A
Infant Mortality Rate (deaths/1000 livebirths)	5.0	6.3	5.1
Life Expectancy	79.0	78.1	N/A
Incarceration Rate (inmates/100,000pop)	197	751	465
Murder Rate (100,000pop)	1.3	5.7	3.0

Washington State Institute For Public Policy

Created by the 1983 Washington Legislature

Mission: carry out non-partisan research on projects assigned by the Washington legislature or the Institute's Board of Directors

Evidence & Economics: The Washington Story

1. What Works? & What's Economic?

The Washington Legislature has asked WSIPP to examine options affecting several outcomes:

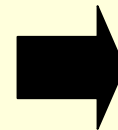
- ✓ *Crime (1994, 1999, 2003, 2005),*
- ✓ *Education and Early Education (2003, 2006, 2007),*
- ✓ *Child Abuse & Neglect (2003, 2007),*
- ✓ *Substance Abuse (2003, 2005),*
- ✓ *Mental Health (2005), and*
- ✓ *Developmental Disabilities (2008)*

2. What Difference Could it Make?

Can a portfolio of evidence-based programs affect statewide outcomes and save money?

3. Recent Legislative Actions in Washington

What Works & What is it Worth to You?



1. WSIPP researcher gathers all the studies she can locate on a topic.

2. She applies “standards of evidence” to identify the high quality studies.

3. She analyzes all of the high quality studies to estimate an average effect.

Our “Consumer Reports” Lists

1. What Works?
2. What Doesn't?
3. What Are the Benefits & Costs?

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

Washington State Institute for Public Policy Estimates as of October, 2006	Effect on Crime Outcomes	Benefits and Costs (Per Participant, Net Present Value, 2006 Dollars)			
		Benefits to Crime Victims (of the reduction in crime)	Benefits to Taxpayers (of the reduction in crime)	Costs (marginal program cost, compared to the cost of alternative)	Benefits (total) Minus Costs (per participant)
Programs for People in the Adult Offender System					
Vocational education in prison	-8.0% (4)	\$8,114	\$6,806	\$1,182	\$13,738
Intensive supervision: treatment-oriented programs	-16.7% (11)	\$9,318	\$3,369	\$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	-8.3% (6)	\$5,133	\$5,495	\$574	\$10,054
Correctional industries in prison	-5.9% (4)	\$5,360	\$4,486	\$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	\$433	\$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% (8)	\$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% (8)	\$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 Program (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% (4)	\$0	\$0	-\$8,077	-\$8,077
Sex offender cognitive-behavioral treatment	-10.2% (5)	\$32,515	\$8,377	\$33,664	\$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% (5)	\$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% (8)	\$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	\$4,822	\$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					
Case management in the community for drug offenders	0% (13)				Comment 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% (2)				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.

Aggressive/Disruptive Behavior in Schools: What Works?

Two major 2007 US reviews of evaluations of school-based interventions: Wilson & Lipsey, and Hahn et. al, (*American Journal of Preventive Medicine*).

- ✓ **Some approaches work**, both universal programs (school or class wide), & programs focused on individual children.
- ✓ What improvements can you expect? **A 30% reduction.** From, say, 20% with aggression to 14%. Or, 10% to 7%.
- ✓ **Risk?** Programs for **higher risk** schools or youth had better results. **Age?** Universal programs with younger students did better; age not significant for indicated programs.
- ✓ Program type didn't matter much. Therefore, do programs **easiest to implement and to maintain fidelity--** "Blueprints"
- ✓ Prevention, Portfolios, and Taxpayer Economics (ROI).

What Can Early Childhood Education Achieve?

We conducted a systematic review of every rigorous evaluation in the United States since 1965

Outcomes for <u>LOW INCOME</u> 3 & 4 year olds	Number of Studies	Average Result
High School Graduation	10	On-time graduation increases from 62% to 68%
K-12 Grade Repetition	24	Percent repeating a grade drops from 13% to 8%.
K-12 Special Education	23	Percent using special ed drops from 12% to 8%
Standardized Test Scores	27	2 to 4 percentage point increase in pass rates
Crime	8	Pct. with conviction by age 30 drops from 24% to 17%
Public Assistance	3	No significant effect
Teen Births (under 18)	4	No significant effect
Child Abuse and Neglect	1	Pct. with a substantiated case drops from 12% to 7%

The Economic Question:

Is Early Childhood Education for Low-Income 3 and 4 Year Olds a Good Investment?

(2005 US dollars, life-cycle present value)

Benefits

Increased high school graduation

\$9,966

Reduced K12 grade repetition

\$206

Reduced K12 special education

\$135

Reduced crime

\$5,068

Reduced child abuse & neglect

\$1,919

Reduced alcohol and drug abuse

\$278

Offset child care costs

\$1,897

Total Benefits Per Youth

\$19,469

Main Source of Benefits

Increased earnings

Lower K12 Costs

Lower K12 Costs

Lower CJS & Victim \$

Lower CWS & Victim \$

Increased earnings

Lower CC Costs

Cost Per Youth

\$7,709

Benefits Per Dollar of Cost

\$2.53 (8 to 10% ROI)

Example Program: Nurse Family Partnership (NFP)

Our review of the research found that NFP can affect these outcomes:

Statistically significant impacts

Child Abuse & Neglect in the Youth's Family
Standardized Test Scores (end of HS)
Crime Rates Later in the Youth's Life

Decrease
Increase
Decrease

High School Graduation
K-12 Grade Repetition
Disordered Drug Use
Disordered Alcohol Use

Increase
Decrease
Decrease
Decrease

What does this mean? Answer:

Without participation in Nurse Family Partnership, a "high risk" youth has a 23.9% chance of being abused or neglected in his or her lifetime; with NFP, the odds decrease to about 13.2%.

Economic Bottom Line for the Example Program: Nurse Family Partnership

Benefits Per Youth

Main Source of Benefits

Reduced child abuse and neglect	\$3,873	Lower CW / victim costs
Increased test scores	\$9,454	Increased earnings
Reduced crime	\$13,410	Lower CJ / victim costs
Increased high school graduation	\$1,141	Increased earnings
Reduced K-12 grade repetition	\$11	Lower K-12 Costs
Reduced alcohol and drug abuse	\$237	Increased earnings

Total Benefits Per Youth **\$26,986**

Cost Per Youth **\$8,931**

Benefits Per Dollar of Cost **\$3.02** **(= 9% ROI)**

Adult Offenders

Change In Crime **Benefits - Costs**
 (# of EB Studies) (per-person, life cycle)

Adult Drug Courts	-8.0% (57)	\$4,767
Education Prgs., Prison	-7.0% (17)	\$10,669
Drug Tx in Prison (TC or out-patient)	-5.7% (20)	\$7,835
Cog-Behavioral Treatment	-6.3% (25)	\$10,299
ISP: surveillance	-0.0% (23)	-\$3,747
ISP: treatment	-17.1% (11)	\$11,563

Juvenile Offenders

Functional Family Thpy.	-15.9% (7)	\$31,821
Multisystemic Therapy	-10.5% (10)	\$18,213
Aggression Repl. Trng.	-7.3% (4)	\$14,660
MDT Foster Care	-22.0% (3)	\$77,798
Restorative Justice (low risk)	-8.7% (21)	\$7,067

Prevention

Pre-School* (low income)	-14.2% (8)	\$12,196
Nurse Family Partnership*	-36.3% (2)	\$18,052

A “Portfolio” of Evidence-Based & Cost-Beneficial Investments

In the years ahead, what would Washington State look like on key outcomes if it invested in a portfolio of effective evidence-based crime-reduction programs?

Answer: Quite a bit different.

The Washington Legislature took action.

Summary

Evidence, Economics & Policy Action

1. Individually:

Some things work (some don't)
and some have attractive economics

2. Collectively:

A portfolio investment strategy can affect
statewide outcomes significantly

3. This Information Can Be Produced and It Can Help to Craft Public Policy

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 also 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. 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 18 and describe our research methods and results in greater detail.

[‡] Suggested citation: Steve Aos, Maria Miller, and Elizabeth Drake, (2006). *Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs, and Crime Rates*. Olympia: Washington State Institute for Public Policy.

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 529 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 costs and benefits 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 money, and crime rates can be reduced.

Institute

Publications:

www.wsipp.wa.gov

Reports Are
Available on:

- ✓ Criminal Justice
- ✓ Juvenile Justice
- ✓ Child Welfare
- ✓ Education
- ✓ Mental Health
- ✓ Substance Abuse
- ✓ Prevention



A scenic landscape photograph of Mount Rainier in Washington State. The mountain's snow-capped peak is the central focus, partially obscured by a layer of white clouds. The foreground is dominated by a lush green meadow with several tall, dark evergreen trees. A calm lake in the lower portion of the frame perfectly reflects the surrounding scenery, including the trees and the mountain. The sky is a vibrant blue with scattered white clouds.

Thank You!

Mount Rainier, Washington State

Selected Findings

Summary of Benefits and Costs (2003 Dollars)

Dollars Per Youth (PV lifecycle)	Benefits	Costs	B - C
Early Childhood Education	\$17,202	\$7,301	\$9,901
Nurse Family Partnership	\$26,298	\$9,118	\$17,180
Functional Family Therapy	\$16,455	\$2,140	\$14,315
Aggression Repl. Trng.	\$9,564	\$759	\$8,805
Life Skills Training	\$746	\$29	\$717
Seattle Soc. Dev. Project	\$14,246	\$4,590	\$9,837
Guiding Good Choices	\$7,605	\$687	\$6,918
Multi-D Treat. Foster Care	\$26,748	\$2,459	\$24,290
<u>Intensive Juv. Supervision</u>	\$0	\$1,482	-\$1,482

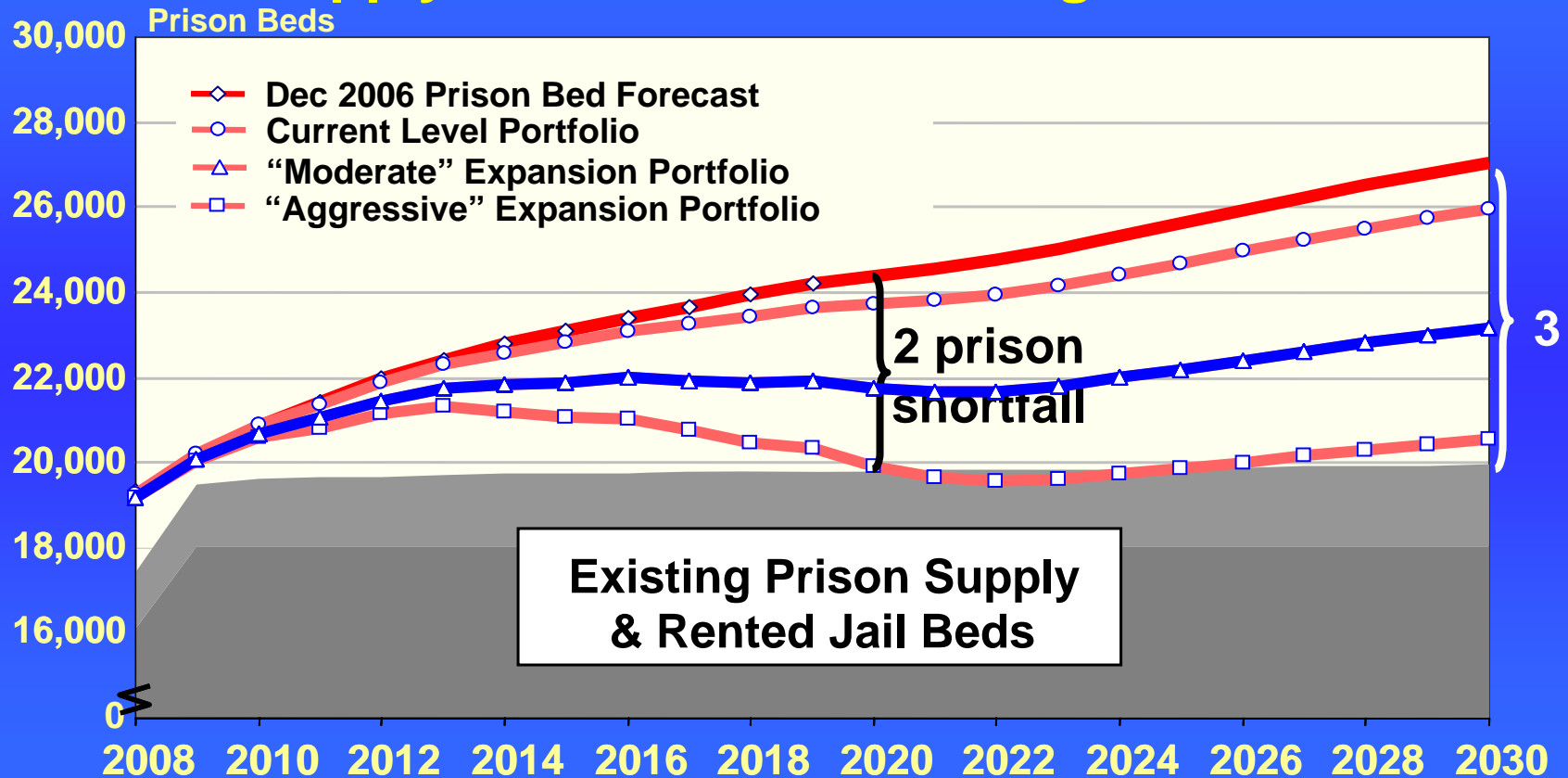
People Make Decisions, Studies Don't



**State
Capitol**

What Difference Could It Make? 3 Portfolios of Evidence-Based Options

Prison Supply & Demand in Washington: 2008 to 2030



Taxpayer Summary Statistics

Annual cost of portfolio

Current Level

\$41 million

Moderate

\$63 million

Aggressive

\$85 million

Long-run net taxpayer benefits

\$1.1 billion

\$1.7 billion

\$2.4 billion

Benefit-to-cost ratio

\$2.45

\$2.55

\$2.60

Return on investment

24%

27%

28%

Crime Rate in 2020 (2005 rate = 52)

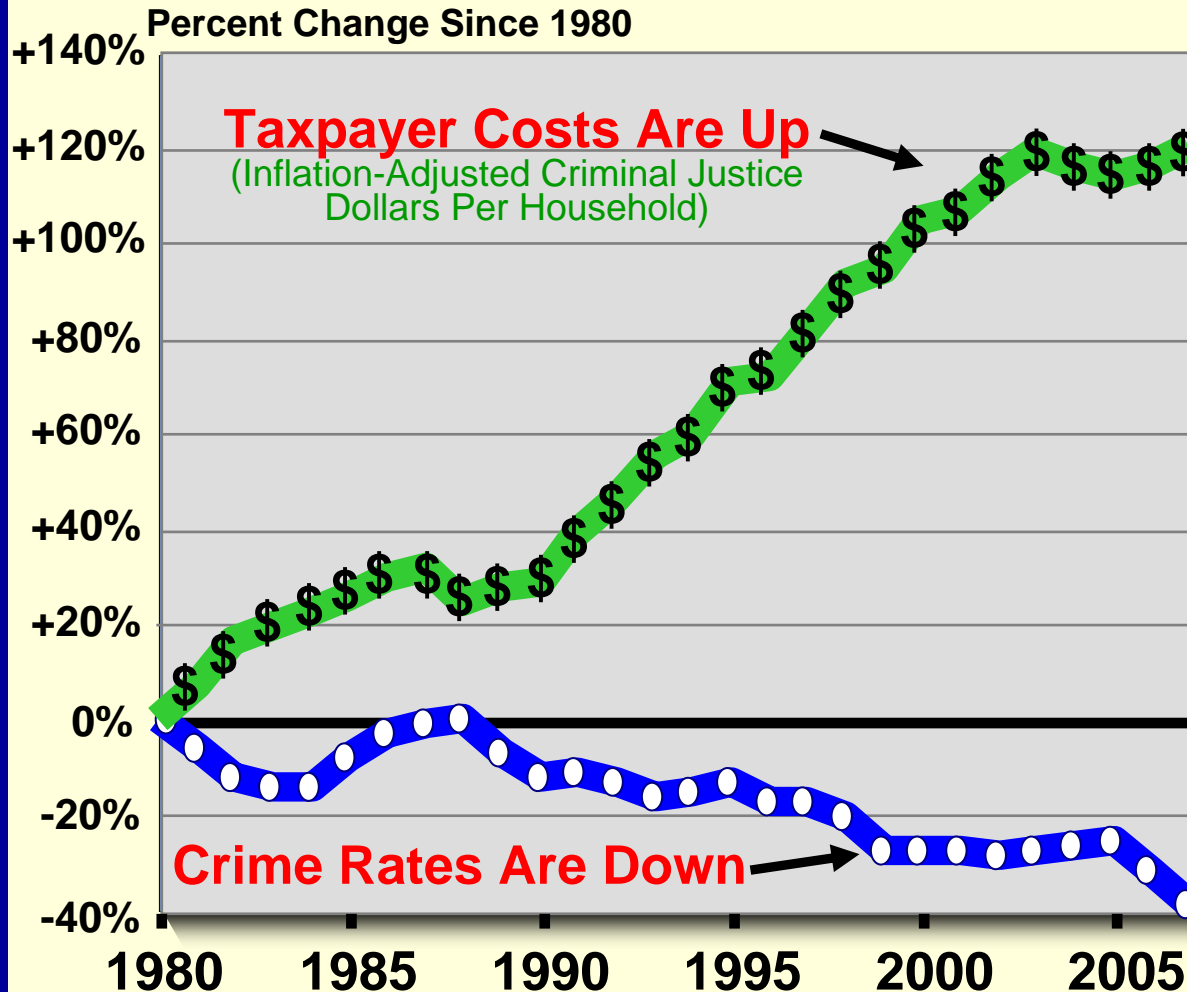
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Two "Big Picture" Outcome Measures Relevant to Policymakers

Crime Rates and Taxpayer Costs: 1980 to 2007



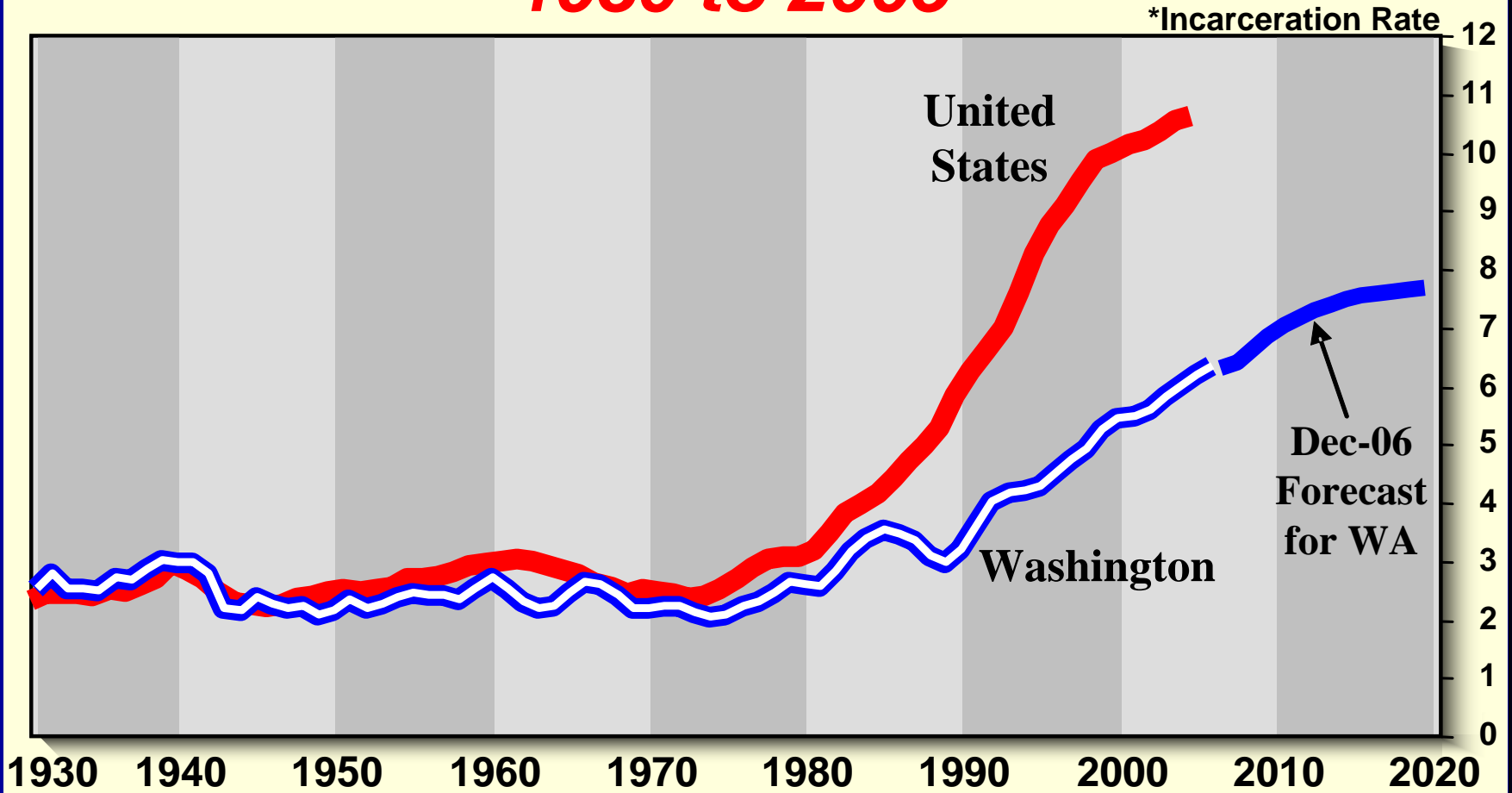
In 1980, taxpayers spent \$557 per household on the criminal justice system.

Today they spend \$1,223, a 120% increase.

In 2007, crime rates were 39% lower than they were in 1980.

All Data are for Washington State, Monetary Values in 2007 Dollars

Adult Prison Incarceration Rates: 1930 to 2005



*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.

Our “Consumer Reports” List of Programs: **Benefit-Cost Analysis**

	Total Benefits	Program Costs	Benefits Minus Costs
PREVENTION PROGRAMS			
Chicago Child Parent Centers	\$39,160	\$8,124	\$31,036
Nurse Family Partnership for Low-Income Families	\$26,986	\$8,931	\$18,054
Parents as Teachers	\$5,350	\$3,841	\$1,509
Iowa Family Development and Self Sufficiency	\$0	-\$448	\$448
Healthy Families America	\$2,437	\$4,267	-\$1,830
Other Home Visiting for At-Risk Mothers and Children	\$3,009	\$5,368	-\$2,359
INTERVENTION PROGRAMS			
Parent-Child Interaction Therapy (Oklahoma)	\$5,968	\$1,006	\$4,962
Intensive Family Preservation (Homebuilders®)	\$7,875	\$3,099	\$4,775
Dependency Drug Court (CA, AZ, NY)	\$2,801	\$3,772	-\$970
Intensive Case Management for ED Youth	\$0	\$2,120	-\$2,120
Other Family Preservation Services	\$0	\$2,814	-\$2,814
SAFE Homes (Connecticut)	\$0	\$5,721	-\$5,721
ADMINISTRATIVE POLICIES			
Subsidized Guardianship (Illinois)	\$0	-\$4,954	\$4,954
Family Assessment Response (Minnesota)	\$1,425	-\$1,326	\$2,751
Flexible Funding (Title IV-E Waivers in NC and OR)	\$947	\$0	\$947

Calculating the Economic Impact of a “Portfolio” of Evidence-Based Programs

In our sample portfolio, we included four programs that have particularly attractive economics:

- Home visiting (Nurse Family Partnership);
- Early childhood education for low-income youth (Chicago Child Parent Centers);
- Behavioral training for parents (Parent-Child Interaction Therapy);
- Intensive family preservation programs (Homebuilders[®] model).

Extend program services to 20% of the eligible, unserved population

Findings for the Portfolio

The economics of a portfolio of evidence-based programs look attractive:

- Overall effect for Washington:
 - Over 5 years, Washingtonians could receive long-term net benefits between **\$316 and \$493 million**.
 - The benefit-cost ratio would average **\$4.31** for this scenario (between **\$3.64 and \$4.98**).
- Taxpayer-only perspective:
 - Of the total benefits, WA taxpayers would receive long-term net benefits between **\$28 and \$34 million**.
 - The benefit-cost ratio for taxpayers would be between **\$1.04 and \$1.48**.
- We tested the uncertainty around these estimates.

Summary

- ✓ **Some evidence-based programs and policies improve child welfare outcomes, others do not.**
- ✓ **Some programs and policies are cost-beneficial over the long-term.**
- ✓ **Increasing the use of selected evidence-based programs can produce substantial benefits for Washington.**

Actions Taken or Underway in Washington

✓ **MORE COMPHENSIVE RESOURCE PORTFOLIOS**

- **2007 Legislature funded a long-run crime portfolio.** Evidence-based and economic adult & juvenile offender programs, and prevention programs are in the portfolio.
- **A tracking system,** to monitor and evaluate program implementation.

✓ **OTHER ACTIONS**

- **For EB Programs:** A state-adopted **evidence-based list**, coupled with **local government choice** (from the list).
- **For New Ideas:** A **research & development** funding level set by the state for local initiatives; **state evaluation**.
- **Formal statewide assessment tools** (to align the programs and the participants).
- **Program quality assurance** provided by state.