THE BENEFITS AND COSTS OF PREVENTION: INFORMING PUBLIC POLICY

WASHINGTON STATE INSTITUTE FOR PUBLIC POLICY

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Washington State Institute for Public Policy

Non-partisan research at legislative/board direction

Nature of the Institute

- ✓ Created by 1983 Legislature
- ✓ General purpose
- ✓ Legislative & Executive Board
- ✓ Projects assigned by bills or Board

Assignments:

- ✓ Criminal justice
- ✓ K-12 and early education
- ✓ Child welfare
- ✓ Mental health
- ✓ Substance abuse
- ✓ Employment/workforce training
- ✓ Public health
- ✓ Health care

Are there evidence-based policies that improve outcomes with a positive return on investment?

Our 3-step "investment advisor" research approach

1. **Evidence:** What works to improve outcomes; what does not?
   - We meta-analyze all rigorous evaluations of policies to improve public outcomes of legislative interest.
2. **Economics:** What is the return on investment?
   - We compute benefits and costs to the people of Washington State using a consistent framework.
3. **Risk:** What is the likelihood that a program or policy will at least "break even?"
   - We model the uncertainty around measurement and assumptions to assess the riskiness of each option.

Step 1: What is the evidence?

- ✓ Many groups use the words "evidence-based." We use standardized methods to assess evidence.
- ✓ Find all program evaluations on a given topic.
- ✓ Screen those evaluations for rigor.
  - Comparison group?
  - Statistical controls?
  - Causality
- ✓ Meta-analyze average effect on each outcome.
  - Standardized metric
  - How much change can we expect?

Step 1: Example
Early education programs for low-income children

- ✓ Find all program evaluations on a given topic.
- ✓ Screen those evaluations for rigor.
- ✓ Meta-analyze average effect on each outcome.

Step 2: What are the economics?

- ✓ Many different approaches are possible
- ✓ We use benefit-cost analysis
  - Societal perspective (participants, taxpayers, and others)
  - Consistent across outcomes
  - Requires assumptions and informed guesses!

Step 2: What are the economics?
The basics of benefit-cost analysis

For normal people . . .

Gains – Losses = ☺ or ☹

Plusses – Minuses = ☺ or ☹

For economists . . .

Benefits – Costs = Net Present Value (NPV)

(ΔUnits X Price) – Costs = NPV

The program evaluation question

This is what benefit-cost analysis contributes to the program evaluation question

Step 2: Example

Early education programs for low-income children

Benefits	–	Costs	=	Net Present Value (NPV)
(ΔUnits X Price)	–	Costs	=	NPV

8 percentage point change in high school graduation

Graduation is worth ~ $350,000 over a child's life

Program costs are about $7,000 per child

Step 3: What is the risk?

✓ Uncertainty across many domains

- Program effectiveness
- General assumptions, e.g.,

  Discount rate

  Value of a statistical life

✓ Monte Carlo analysis

- Randomly draw within defined parameters
- 10,000 simulation runs
- Bottom-line statistic: How likely for the program to at least "break even" (pay for itself over the long term)?

Early Education for Low-Income Children

Updated results for Washington State

Increased ed. attain.	▪ Increased earnings	$29,375
Reduced crime	▪ Lower CJ system costs ▪ Fewer victimizations	$5,071
Decr. K-12 resources	▪ Lower special education costs ▪ Less grade repetition	$1,315
Other impacts	▪ Lower health care costs	$3,204

Total benefits per-family	$33,423
Cost per-family	-$7,037
Net present value (NPV)	**$26,386**

WSIPP Reports to the Legislature

From WSIPP's current findings on prevention

Program Benefits and costs are life-cycle present values per participant, in 2013 dollars. Some programs achieve other benefits we cannot , at present time, monetize.	Monetary Benefits			Costs	Summary Statistics		
	Total	Tax-payer	Non Tax-payer		Benefits Minus Costs	Benefit to Cost Ratio	Odds of Positive Result
School-based mentoring	$33,515	$9,445	$24,069	$1,786	$31,729	$18.77	78%
Early ed (for low-income)	$33,423	$10,375	$23,048	$7,037	$26,386	$4.76	89%
Nurse Family Partnership	$27,174	$9,955	$17,219	$9,842	$17,332	$2.77	71%
Good Behavior Game	$8,890	$2,655	$6,234	$158	$8,732	$56.34	92%
Life Skills Training	$3,461	$804	$2,657	$97	$3,363	$35.66	93%
PATHS	$10	$18	$8	$117	$107	$0.09	8%
Early Head Start	$1,725	$3,103	$4,828	$10,767	$12,492	n/e	16%

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LEGISLATIVE · BUILDING
WSIPP's mission is to carry out practical, non-partisan research—at legislative direction—on issues of importance to Washington State.
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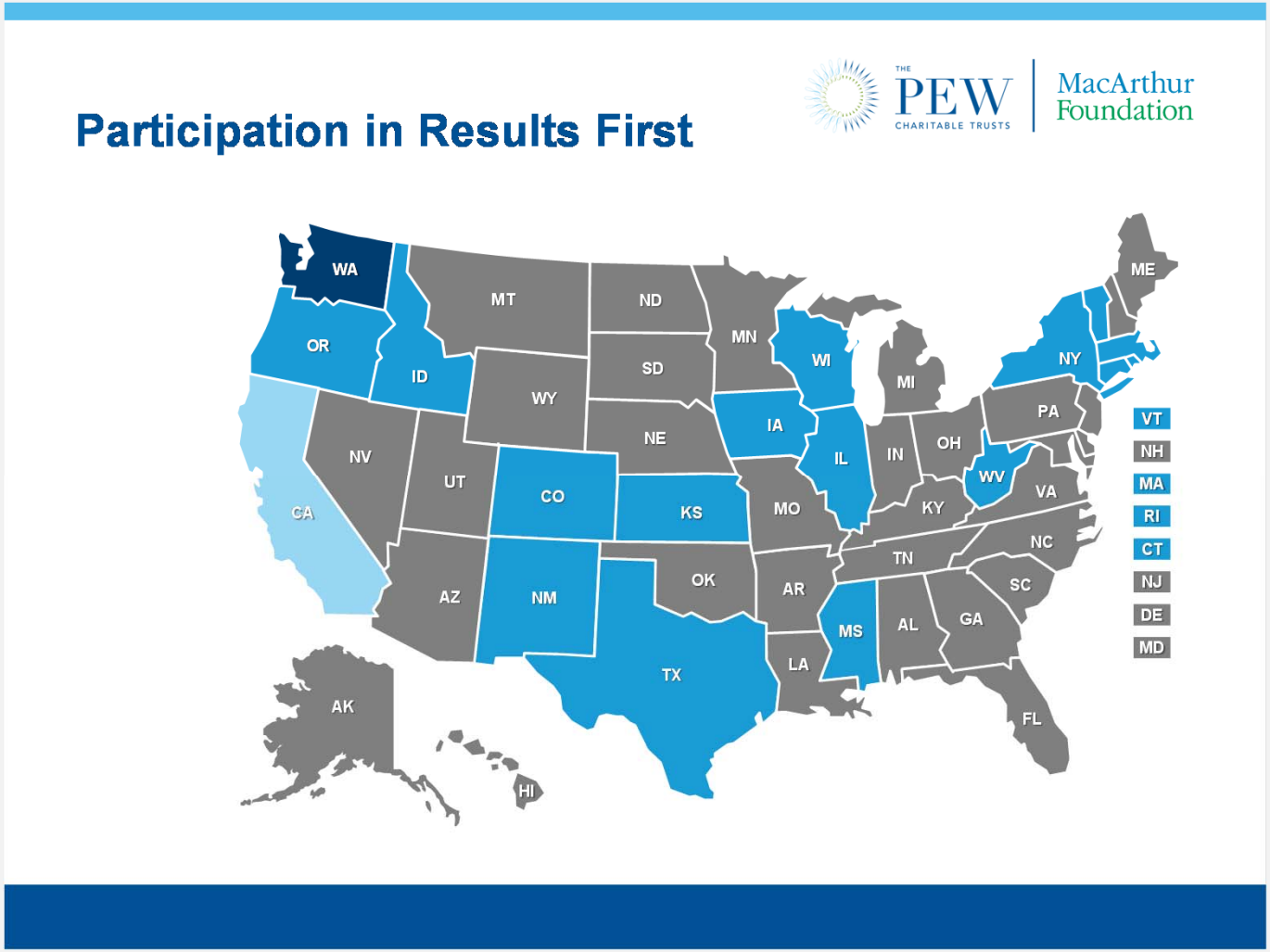
The Washington state legislature has used this information!

- ✓ Writing state budgets
  - Direct budget references
  - Inventories of what works
  - Caseload forecast
- ✓ Making policy decisions
  - Drug sentencing grid
  - K-12 class size reductions

Seventeen U.S. states now testing WSIPP's approach



THANK YOU!