



Return on Investment: Preventative Health Initiatives to Help States Achieve Their Goals



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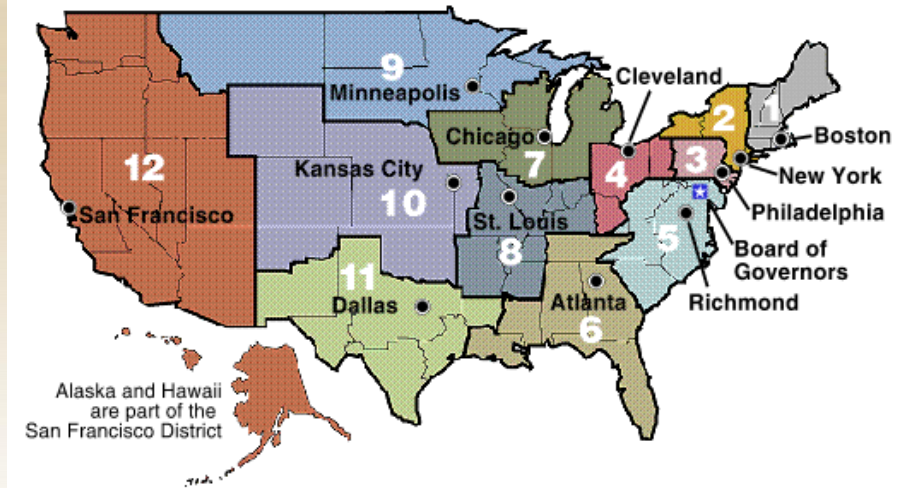
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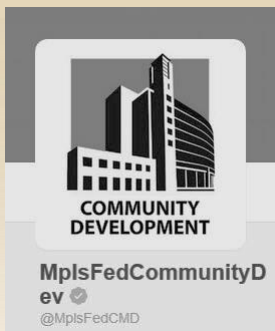
Roadmap for Discussion

- Brief Overview of the Federal Reserve System and Community Development
- Return on investment studies
- Pay for Success contracts
- Key considerations for states

Federal Reserve System



Federal Reserve System Community Development



- Function within the Federal Reserve System.
- Promote fair access to credit and economic growth in low to moderate income (LMI) communities.
- Research. Information Sharing. Training. Convening.



Federal Reserve System Healthy Communities Initiative



Community Development

Understand LMI community development & regulations

Demonstrated ability to aggregate subsidies and flexible capital from several sources

Tools untapped by health professionals

Continually innovating to ensure sustainability

Healthy Communities

Healthy food access

Healthy housing

Healthcare access

Early child care

Infrastructure & land use

Health and Human Services

Understand social determinants of health & needs of LMI populations

Framework for defining healthy communities

Data on health outcomes and healthcare costs

Public and private financial resources untapped by CD professionals

New Partners. New Resources. New Ideas. Long-Term Cost Savings.

ROI: Preventative Health Initiatives to Help States Achieve their Goals



- Reliable ROI studies are based on interventions rooted in the science of human development.
- ROI studies illustrate cost savings to taxpayers based on outcomes compared with a counterfactual.
- Pay for Success contracts are designed to optimize performance incentive structure and attract additional capital.
- How might an ROI study, pay-for-success program, or ROI framing apply to an initiative in your state?

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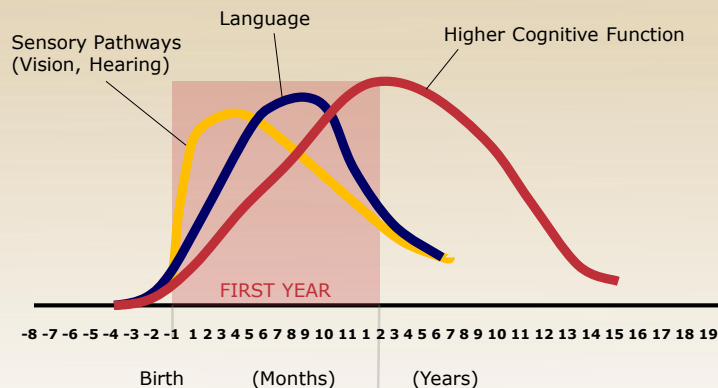
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Human Brain Development Synapse Formation Dependent on Early Experiences



Source: Nelson (2000)

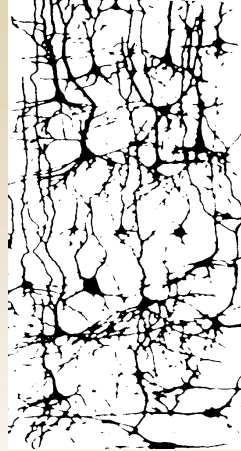
Human
Brain
at Birth



6 Years Old



14 Years Old

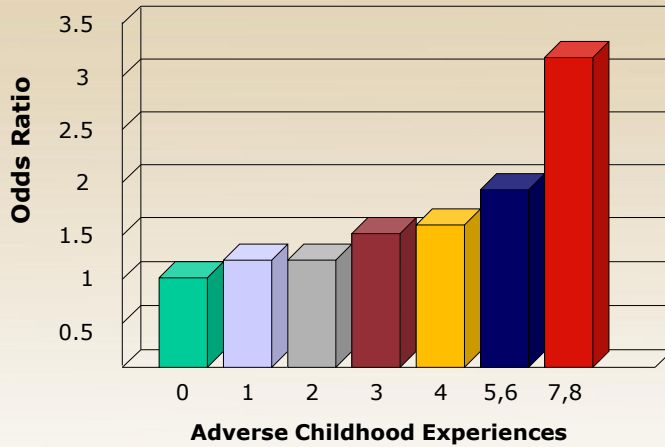


Source: Chugani, Phelps & Mazziotta (1987)

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Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences



Source: Dong, Giles, Felitti, Dube, Williams, Chapman, & Anda (2004)

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Return on Investment Studies and Framing



- Nurse Family Partnership
- Early Childhood Education
- Special Supplemental Nutrition Program for Women, Infants and Children

Nurse-Family Partnership



Home visiting program by registered nurses for at-risk mothers, prenatal through first two years of child's life.

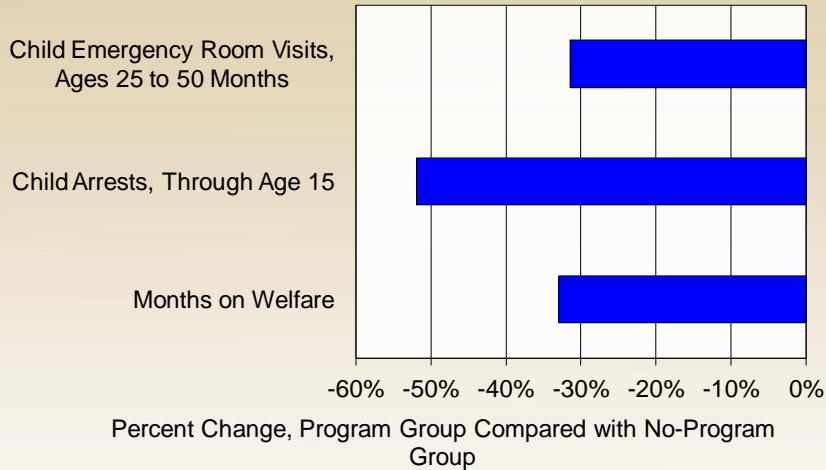
- Elmira, NY (1977), low-income whites, semi-rural
- Memphis, TN (1987), low-income blacks, urban
- Denver, CO (1994), low-income mixed population, largely Hispanic

Effects Found in Two or More Trials



- Improved prenatal health
- Fewer subsequent pregnancies
- Increased intervals between births
- Fewer childhood injuries
- Improved school readiness
- Increased maternal employment

Elmira Prenatal/Early Infancy Project High-Risk Families



Source: David Olds, et al.

Benefit-Cost Ratios for Early Childhood Longitudinal Studies



- Elmira Prenatal/Early Infancy Project
 - \$5 to \$1
- Perry Preschool
 - \$16 to \$1
- Abecedarian Educational Child Care
 - \$4 to \$1
- Chicago-Child Parent
 - \$10 to \$1

Sources: Karoly, et al (1998); Schweinhart, et al. (2005); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Masse & Barnett (2002); Reynolds, Temple, White, Ou, & Robertson (2011)



Special Supplemental Nutrition Program for Women, Infants and Children

- Available for low-income pregnant, postpartum and breastfeeding women, infants and children
- U.S. cost of preterm births: Over \$26 billion a year
 - Average first-year medical costs for a premature/low birth-weight baby: \$49,033
 - \$4,551 for a baby born without complications
- If 90% of U.S. infants were breastfed exclusively for six months – save \$13 billion.

Sources: National WIC Association (2015); Bartick & Reinhold (2010)



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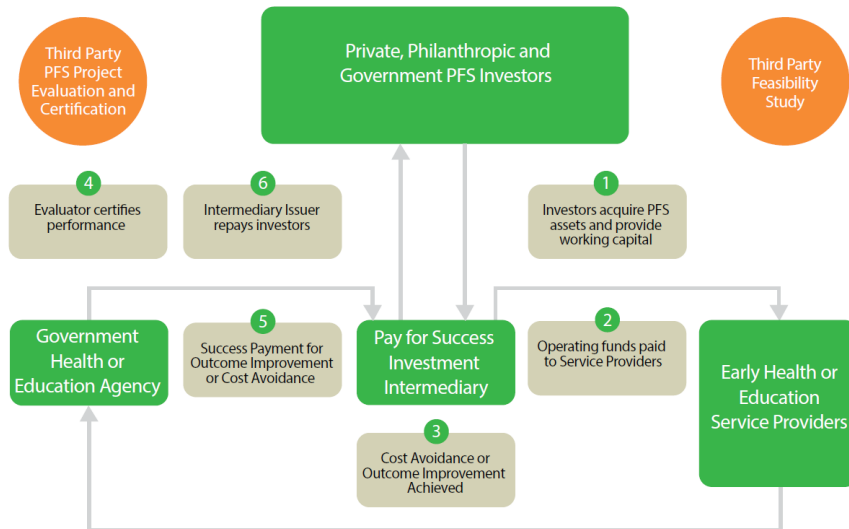


Pay for Success Models

- Create incentives to achieve outcomes that result in cost savings or improved outcomes
- Attract private sector capital to expand promising and proven initiatives
 - Private sector takes on risk
- Include rigorous evaluation component
- Challenges:
 - Isolating cost savings or improved outcomes
 - Cost savings spread across government jurisdictions

Pay for Success Structure

Flow of Funds in a PFS Project (arrows)



Source: ReadyNation

Pre-K for Low-Income Children in Salt Lake City, Granite School District



- Goldman Sachs: \$4.6 million, 5% loan
J.B. Pritzker: \$2.4 million, 5% subordinated loan
- United Way of Salt Lake serves as intermediary, Imprint Capital serves as social investment banker.
- After initial funding, subsequent investments made based on the availability of repayment funds from public entities realizing cost savings.
- Through 6th grade, special-education cost avoidance used to pay 5% annual interest and debt principle. After debt principle is paid, 40% of special-education cost avoidance paid to investors. After 6th grade, government retains benefits.

OREGON CHILDREN AT RISK

Between 2001 and 2010, almost half a million children were born in Oregon. Over 2% of these children entered the foster care system before age four. Many of these children were at foreseeable risk. P4P research and modeling has identified key characteristics of children and their families that predict the likelihood of childhood abuse and neglect. Children without these characteristics are at much lower risk.

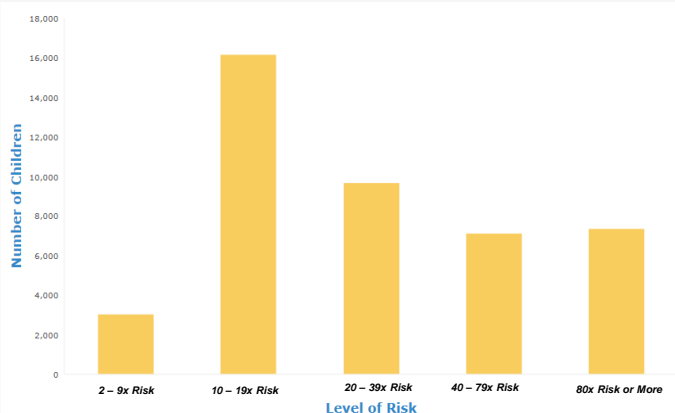
These data show all children born in Oregon between 2001 and 2010. Children with predictive factors are at much higher risk of maltreatment and entering foster care than children with none of these factors.

Oregon Children 43,320

Select and unselect any combination of the following P4P predictive factors:

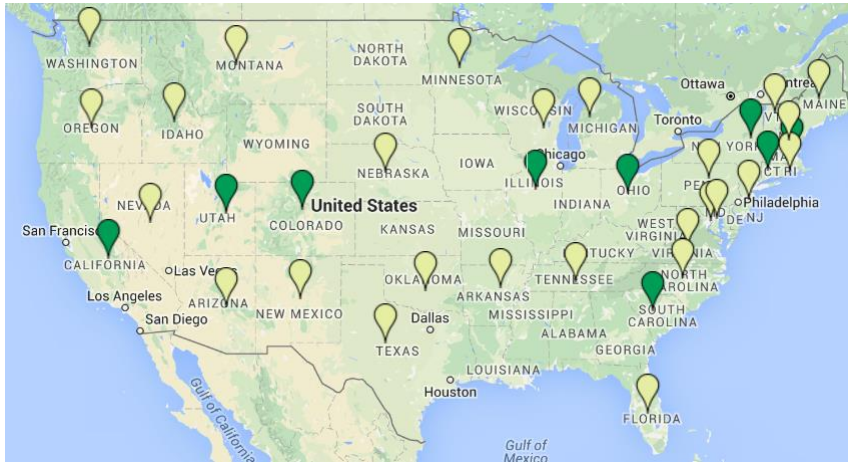
- Poverty
- Parental education
- Parental substance abuse
- Parental criminal activity
- Parental mental health
- Family instability

Children Born at Elevated Risk of Abuse and Neglect



Source: ECONorthwest and CEbP analysis of Oregon DHS Data. Data shown include all children born in Oregon between 2001 and 2010. Comparison population is all children born with none of these predictive factors. These are not all possible predictive factors, but they exerted the strongest influence on the chances of maltreatment and were confirmed in the literature review.

Pay for Success Activity Map



Sources: Nonprofit Finance Fund, Pay for Success Learning Hub

U.S. Pay for Success Projects

11 projects launched from 2012-16



- **New York City** – Recidivism reduction at Rikers Island Prison (8/12)
- **Salt Lake County, UT** – Special education avoidance (6/13)
- **New York State** – Recidivism reduction and labor force reentry (12/13)
- **Massachusetts** – Prison avoidance and employment support (1/14)
- **Chicago** – Special education avoidance (10/14)
- **Massachusetts** – Supportive housing for the homeless (12/14)
- **Cuyahoga County, OH** – Foster care avoidance (12/14)
- **Santa Clara County, CA** – Supportive housing for the homeless (7/15)
- **Denver** – Supportive housing for the homeless (2/16)
- **South Carolina** – Home visiting for low-income mothers (2/16)
- **Connecticut** – Family-based substance abuse treatment (2/16)



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Key Considerations for States

- Review cost-benefit and cost-effectiveness studies that relate to proposed interventions.
- Consider cross-jurisdiction and cross-agency partnerships depending on flows of costs and benefits.
- Is Pay for Success a good fit?
- Even if not, consider data tracking methods and internal strategies to allocate cost savings.

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