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Planning for a Pay for Outcomes Approach in Home Visiting

A Review of Research to Inform Maternal, Infant, and Early Childhood Home Visiting Outcome Selection, Projected Savings, and Pricing

Module 4: Administrative and Government Cost Data Sources

OPRE Report 2020-90

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Introduction

Pay for outcomes (PFO) is a payment model that promotes innovative financing for social initiatives, connecting funding to outcomes and cost savings. The Bipartisan Budget Act of 2018 (Public Law 115–123, Section 50605) allows Maternal Infant and Early Childhood Home Visiting Program awardees to pursue PFO arrangements. PFO can help awardees expand services, improve outcomes, reach new or underserved populations, and/or engage new stakeholders. This resource provides information to inform PFO feasibility studies and PFO project development, including outcome selection, projected savings, and outcome payment pricing for financial agreements. **Module 4 summarizes the administrative and government data sources used in return on investment (ROI) calculations cited in previous modules.**

Purpose of this resource

One of the first steps in a PFO feasibility study (see Introduction) is to identify outcomes to be monetized. This resource provides information about existing studies and reports to inform decisions about outcomes, but it does not walk through how to conduct a PFO project.

- *Introduction* provides background information on PFO and feasibility studies.
- *Module 1: Overview of Outcomes Demonstrated in Home Visiting Studies* presents an in-depth scan of home visiting outcomes achieved by model.
- *Module 2: Economic Value of Home Visiting Outcomes* details monetary values researchers have used to establish savings in home visiting return on investment analyses.
- *Module 3: Economic Value of Outcomes in Non-Home Visiting Research* summarizes monetary values researchers have used for similar outcomes beyond home visiting studies.
- *Module 4: Administrative and Government Cost Data Sources* collates the administrative data sources used in the return on investment calculations.

Module 4 Overview

A key step in determining the feasibility of a PFO approach and structuring a PFO initiative is estimating cost savings associated with achieving targeted outcomes through home visiting. Administrative data is one source to inform these estimates.

Module 4 provides an overview of the types of data sources awardees may use to monetize outcomes. It then summarizes administrative and government data sources that ROI studies from Modules 2 and 3 used to determine per unit costs of outcomes.

Information is organized by the outcome domains used in the Home Visiting Evidence of Effectiveness (HomVEE) review, which assesses the quality of the research evidence for early childhood home visiting models (Sama-Miller et al., 2019). ROI studies have used administrative or government data to monetize outcomes in six of the eight domains.

How to Use Module 4

Once an awardee identifies potential outcome measures for a PFO initiative, the next step is to estimate the monetary value of improved outcomes. These estimates inform both the PFO feasibility study and the structuring of the PFO initiative. Awardees may estimate potential value based on anticipated cost savings or cost avoidance and social benefit.

One approach is to apply the per unit costs to the outcomes they have achieved in the past to estimate future savings. Awardees should use local cost data when possible to ensure a value more reflective of their community.

Awardees can use Module 4 to identify sources for local cost data. Module 4 provides administrative and government data sources researchers have used to monetize home visiting outcomes. Awardees can use these sources to help find similar data sources for their own location via an Internet search.

HomVEE Outcome Domains

Child development and school readiness

Child health

Family self-sufficiency

Linkages and referrals

Maternal health

Positive parenting practices

Reduction in child maltreatment

Reduction in juvenile delinquency, family violence, and crime

Bolded domains have ROI studies included in this module

Administrative and Government Cost Data Sources

Awardees can use data from a variety of sources to inform the monetary value of home visiting outcomes. Researchers have drawn per unit costs from published research, technical reports, national surveys, program participant interviews, and so on. Administrative and government data sources offer the advantage of already being collected, available, and specific to the awardee's location.

Administrative records include client and program-level data collected by local implementing agencies and partner organizations. Patient billing records, for instance, provide data to determine the actual average cost for emergency department usage in a particular health system. Awardees could also use Medicaid data to calculate the health care cost of preterm births to low-income mothers for a geographic area.

Government reports, surveys, or websites may also provide cost data for a region, state, or other locality. State departments of human or social services, for example, often publish their daily reimbursement rates for foster care out-of-home placement. States also post the monthly value of public assistance packages such as Temporary Assistance to Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP) or food stamps, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and childcare subsidies. Data from state or federally sponsored surveys are also available online.

Exhibits 1–6 summarize the administrative data sources researchers have used to calculate per unit costs for home visiting outcomes, as cited in Modules 2 and 3. Government sources that allow users to view results at the regional, state, or local level appear as well. Outcomes are listed as defined by each study.

Exhibit 1. Administrative and Government Cost Data Sources for Child Development and School Readiness Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|--|---|---|
| Child Development | | |
| French et al., 2018 | Clinician (counselors and psychologists) annual salary | U.S. Department of Labor, Bureau of Labor Statistics, State Occupational Employment and Wage Estimates |
| French et al., 2018 | Behavioral and mental health specialist salary | U.S. Department of Labor, Bureau of Labor Statistics, State Occupational Employment and Wage Estimates |
| Honeycutt et al., 2015 | Therapist salary | Bureau of Labor Statistics, 2010 |
| Lynch et al., 2017 | Health services for medical provider, and emergency room and mental health provider | Oregon Health Plan |
| Lynch et al., 2017 | Other services (e.g., vocational assistance, case management, family therapist) | Bureau of Labor Statistics Oregon Health Plan Mental Health Fee Schedule Oregon Health Plan Medical-Dental Fee Schedule |
| Washington State Institute for Public Policy (WSIPP), 2019 | Health care associated with disruptive behavior disorder | Medical Expenditure Panel Survey |
| Child Education | | |
| Glazner et al., 2004 | Education | State administrative data |
| WSIPP, 2019 | K-12 grade repetition | Washington State Office of the Superintendent of Public Instruction |
| WSIPP, 2019 | K-12 special education | Washington State Office of the Superintendent of Public Instruction |
| WSIPP, 2019 | Costs of higher education | Integrated Postsecondary Education Data System |

Note: Outcomes are listed as defined by each study.

Exhibit 2. Administrative and Government Cost Data Sources for Child Health Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|-------------------------|--|---|
| Avruch & Cackley, 1995 | Hospitalization | Maryland Hospital Cost Review Commission |
| Ball & Wright, 1999 | Antibiotic use for otitis media | Thomas-Davis Medical Centers |
| Ball & Wright, 1999 | Pediatric/office visits | Thomas-Davis Medical Centers and Regional Health Plan Database |
| Ball & Wright, 1999 | Hospitalization | Thomas-Davis Medical Centers and Regional Health Plan Database |
| Glazner et al., 2004 | Medicaid/health care | State Medicaid data |
| Green et al., 2016 | Medical claims | Oregon Health Authority's Division of Medical Assistance Programs |
| Peters et al., 2015 | Preterm birth rate | Healthcare Cost and Utilization Project State Inpatient Databases, Michigan Health & Hospital Association |
| Pugh et al., 2002 | Estimated mother's income (cost of time to feed infant) | National Compensation Survey |
| Stankaitis et al., 2005 | Neonatal intensive care unit admission rate | Monroe Plan for Medical Care administrative records |
| Stankaitis et al., 2005 | Birth administrative costs | Monroe Plan for Medical Care administrative records |
| WSIPP, 2019 | Health care associated with low birth weight births | Washington State Hospital data |
| WSIPP, 2019 | Health care associated with very low birth weight births | Washington State Hospital data |

Note: Outcomes are listed as defined by each study.

Exhibit 3. Administrative and Government Cost Data Sources for Family Economic Self-Sufficiency Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|--------------------------|----------------------------------|---|
| Earnings | | |
| French et al., 2018 | Wages | U.S. Department of Labor, Bureau of Labor Statistics, State Occupational Employment and Wage Estimates U.S. General Services Administration, Privately Owned Vehicle Mileage Reimbursement Rates |
| Green et al., 2016 | Employment Assistance | Oregon Department of Human Services, <i>Annual Report to the Oregon Legislative Assembly and Department of Human Services JOBS Plus Program</i> |
| WSIPP, 2019 | Earnings | U.S. Census Bureau's March Supplement to the Current Population Survey and U.S. Implicit Price Deflator for Personal Consumption Expenditures from the U.S. Department of Commerce |
| Public Assistance | | |
| Bhandari & Nepal, 2014 | WIC food packages | New Mexico WIC office Bureau of Business & Economic Research |
| DuMont et al., 2010 | Food Stamps | New York State Office of Temporary and Disability Assistance |
| DuMont et al., 2010 | Public assistance | New York State Office of Temporary and Disability Assistance |
| Glazner et al., 2004 | Public assistance | State administrative data |
| Green et al., 2016 | Childcare subsidies | Oregon Department of Human Services, Licensed Rate Maximum |
| Green et al., 2016 | SNAP/Food Stamps | Oregon Department of Human Services, SNAP Allotments |
| Green et al., 2016 | TANF | Oregon Department of Human Services, <i>Annual Report to the Oregon Legislative Assembly and Department of Human Services JOBS Plus Program</i> |
| Green et al., 2016 | Publicly funded health insurance | Oregon Health Plan website |
| WSIPP, 2019 | Public assistance | Washington State Department of Social and Health Services, Economic Services Administration |
| WSIPP, 2019 | Food assistance | Washington State Department of Social and Health Services, Economic Services Administration |

Note: Outcomes are listed as defined by each study.

Exhibit 4. Administrative and Government Cost Data Sources for Maternal Health Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|------------------------|--|---|
| WSIPP, 2019 | Health care associated with major depression | Medical Expenditure Panel Survey |
| Wilkinson et al., 2017 | Screening for postpartum depression | North Carolina Department of Health and Human Services, NC Medicaid Division of Health Benefits, Fee schedule |

Note: Outcomes are listed as defined by each study.

Exhibit 5. Administrative and Government Cost Data Sources for Reductions in Child Maltreatment Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|---------------------------|---|---|
| Child Maltreatment | | |
| DuMont et al., 2010 | Foster care | New York State age-adjusted foster care per diem rates |
| DuMont et al., 2010 | Child welfare prevention and support services | New York State Child Care Review Services administrative database |
| DuMont et al., 2010 | Child Protective Service investigations | New York State Statewide Automated Child Welfare Information System, CONNECTIONS |
| Glazner et al., 2004 | Child abuse and neglect | State administrative data |
| Green et al., 2016 | Substantiated child abuse report | Oregon Department of Human Services, Staffing Survey |
| Green et al., 2016 | Foster care | Oregon Department of Human Services, Children and Families Foster Care Program website |
| Noor & Caldwell, 2005 | Hospitalization as a result of child abuse | Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project |
| WSIPP, 2019 | Cost per investigation | Washington State Department of Social and Health Services, Children's Administration data |
| WSIPP, 2019 | Court involvement | Washington Administrative Office of the Courts dockets |
| WSIPP, 2019 | In-home services | Washington State Department of Social and Health Services, Executive Management Information System |
| WSIPP, 2019 | New foster care placement | Washington State Department of Social and Health Services, Children's Administration data |
| WSIPP, 2019 | Adoption | Washington State Department of Social and Health Services adoption data and Interstate Compact on the Placement of Children |
| WSIPP, 2019 | Out-of-home placement | Washington State Department of Social and Health Services, Executive Management Information System |
| Injury | | |
| Green et al., 2016 | Emergency room visit | Oregon Health Authority's Division of Medical Assistance Programs |

| | | |
|--------------|-------------------------------------|--|
| Karoly, 2017 | Emergency room visit | Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey |
| WSIPP, 2019 | Emergency room visit, general user | Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey |
| WSIPP, 2019 | Emergency room visit, frequent user | Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey |

Note: Outcomes are listed as defined by each study.

Exhibit 6. Administrative and Government Cost Data Sources for Reductions in Juvenile Delinquency, Crime, and Family Violence Outcomes

Used in ROI studies

| Study | Study-Defined Monetized Outcome | Administrative or Government Cost Data Source |
|------------------------------|---------------------------------|---|
| Crime | | |
| WSIPP, 2019 | Police costs | Washington State Auditor |
| WSIPP, 2019 | Juvenile local detention | Washington State Auditor and Washington State Governor's Juvenile Justice Advisory Committee |
| WSIPP, 2019 | Juvenile local supervision | Washington State Auditor and Administrative Office of the Courts |
| WSIPP, 2019 | Juvenile state institution | Washington Legislative Evaluation and Accountability Program and Washington State Caseload Forecast Council |
| WSIPP, 2019 | Juvenile state parole | Juvenile Rehabilitation Administration's Executive Management Information System |
| WSIPP, 2019 | Adult jail | Washington State Auditor |
| WSIPP, 2019 | Adult local supervision | Washington Legislative Evaluation and Accountability Program |
| WSIPP, 2019 | Adult state prison | Washington Department of Corrections |
| WSIPP, 2019 | Adult post-prison supervision | Washington Legislative Evaluation and Accountability Program |
| WSIPP, 2019 | Court costs | Washington State Auditor and Administrative Office of the Courts |
| Youth Substance Abuse | | |
| Green et al., 2016 | Substance abuse treatment | Oregon Health Plan's Fee Schedule for Fee-for-Service Providers |

Note: Outcomes are listed as defined by each study.

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