

# THE ROLE OF ADMINISTRATIVE DATA WITHIN ECONOMIC EVALUATION

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# ROADMAP

- Economic Evaluation
- Administrative Data for Economic Evaluation
- Example: Mapping Public Investment, Evaluating Program Impact and Preparing for Performance-based Financing
- Resources for Economic Evaluation

# ECONOMIC EVALUATION

## Cost Analysis

Estimating the  
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Estimating the budgetary impact (fiscal/financial) of a program in monetary terms

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## Benefit-Cost Analysis

Estimating the societal impact of a program in monetary terms

{ \$ Saved to Society }

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**Admin Records:**

**Site  
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**Personnel  
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**Service  
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**In-Kind  
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**Academic**

**Arrest, Sentencing,  
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**Social Service**

**Workforce  
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Medicaid/Medicare Reimbursements  
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Uncompensated Care

SPED, Attendance, Discipline

Federal, State, Local Law Enforcement,  
Court and Detention  
Operating Cost Data

Agency Operating Budgets  
Programmatic Budgets

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Asset Records

## Benefit-Cost Analysis

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# RWJF: BUILDING THE SCIENCE OF EARLY CHILDHOOD INVESTMENT

- Aim 1: Map Investments in Birth-Five Childhood Development across a Community Population
- Aim 2: Evaluate the Economic Return of a Program for Coordinating Investment in Early Childhood
- Aim 3: Develop Investment Strategies for Constructing Efficient Early-Childhood Prevention Portfolios



# AIM 1: MAP INVESTMENTS IN BIRTH-FIVE CHILDHOOD DEVELOPMENT ACROSS A COMMUNITY POPULATION

- Track internal and external resources available to the community for investment in children
- Identifying resources of public and private service providers
- Linking investments to the actual beneficiaries
  - What children consume which resources and how those resources can be more efficiently deployed..

# LOCAL ADMINISTRATIVE DATA

Service Provider/Record Source	Contact	Agreed to Universal Consent	Require Individual Consent
Durham Social Services	✓	✓	
Durham Public Instruction	✓	✓	
Durham Public Health (DCHD)	✓		✓
CCSA (Child Care Service Association)	✓	✓	
Welcome Baby	✓	✓	
CSC (Child Service Coordination)	✓	✓	
Lincoln Community Health Centers	✓		✓
Strong Couples	✓	✓	
Early Head Start/Head Start	✓	✓	
El Futuro	✓		

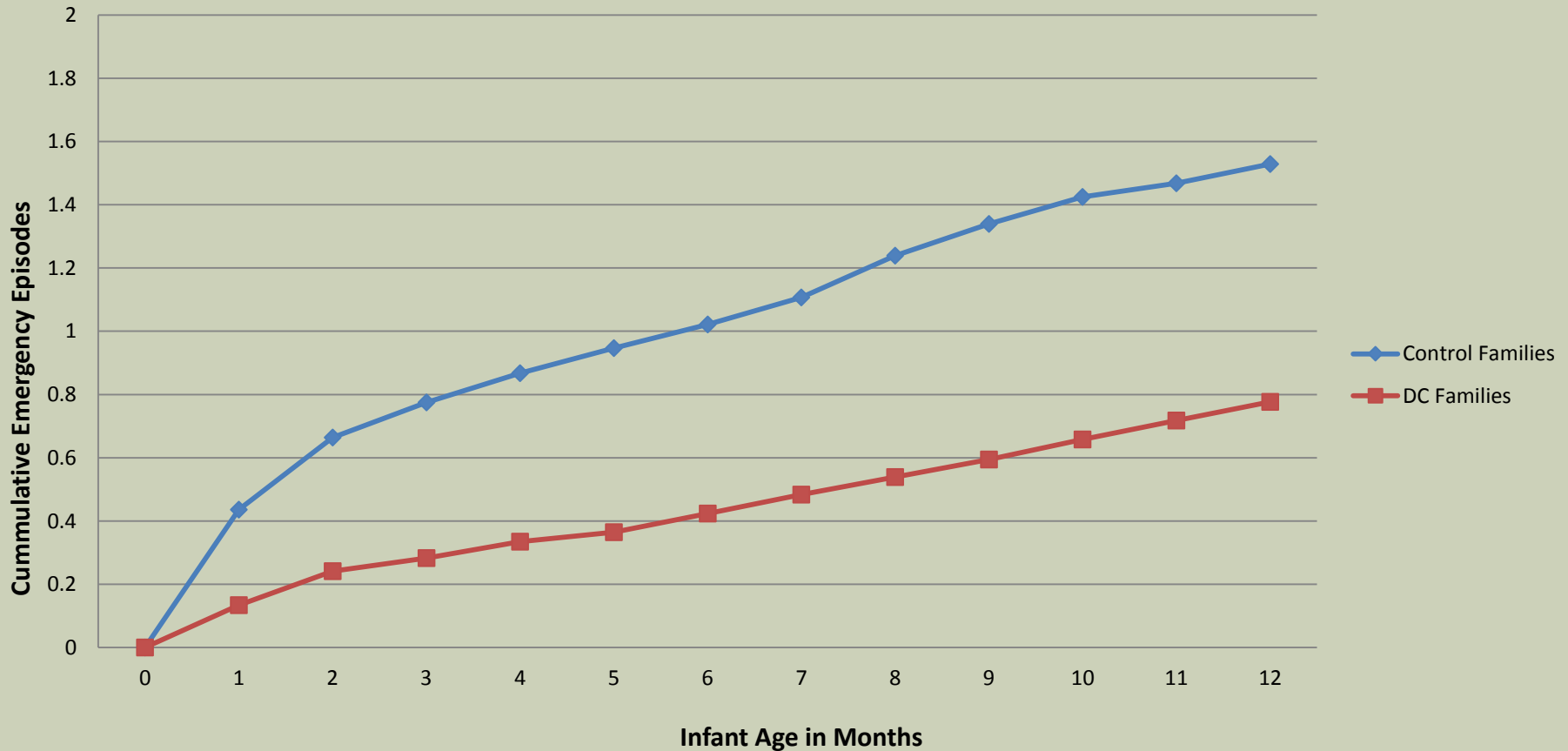
# AIM 2: EVALUATE THE ECONOMIC RETURN OF A PROGRAM FOR COORDINATING INVESTMENT IN EARLY CHILDHOOD

- Benefit-cost analysis of the Durham Connects program
- How investments are differentially allocated to those participating in the program
- The return on this investment through follow-up into late childhood
  - Prevention of downstream costs to public health care, criminal justice, welfare, and education systems



# DC IMPACT AT AGE 12-MONTHS

## Mean Cumulative Number of ED Care Episodes through Age 12 months



# INITIAL COST SAVINGS

- Durham Connects cost \$700 to serve a family
- Hospital administrative records at infant age 12-months indicate that Durham Connects families had 50% less total emergency medical care utilization
  - (ER visits + hospital overnights) across the first 12 months of life.
- Suggests for every 1 spent on Durham Connect leads to \$3.02 in averted health expenditures



**Dodge et al, 2103; 2014;**

# AIM 3: DEVELOP INVESTMENT STRATEGIES FOR CONSTRUCTING EFFICIENT EARLY-CHILDHOOD PREVENTION PORTFOLIOS

- Fiscal analysis of Durham Connects' impact on community's early childhood investment infrastructure
- Modeling payment schedule options to determine optimal investment approaches in DC
  - The minimum performance threshold for payment, the range of payments that can be received with better performance, the payment cap for top performance



### Constituents



#### Remedial Programs

North Carolina currently relies heavily on burdensome entitlement services (Medicaid) and remedial programs to respond to child maltreatment



#### Durham Connects

Durham Connects receives funding to understand families needs and improve the efficiency of early childhood investment



Government contracts with an intermediary to improve constituent lives, reducing demand for costly maltreatment and health services



Intermediary raises capital from investors, manages nonprofit service provider, retains evaluation adviser and selects independent assessor



### Government



### Intermediary



### Nonprofit Service Provider



Investors provide up-front capital to intermediary to pay for Durham Connects. Investors are repaid their capital plus a return only if DC meets predetermined performance targets



Evaluation adviser monitors ongoing progress of Durham Connects. Working with the intermediary and service provider to refine program based on interim results.



### Investors



### Valuation Advisor



An independent assessor determines if predetermined performance targets are met. If targets are achieved, government repays investors and pays a success bonus to intermediary and service provider



### Independent Assessor

# ADMINISTRATIVE DATA FOR ACCELERATING PREVENTION TRIALS (ADAPT)

- Track participants of past and new prevention trials into administrative data records
  - Rapidly estimate fiscal and economic costs
  - Key outcomes of interest to policymakers
- Healthcare Criminal, & Public Record Data Backbone
  - CMS Virtual Research Data Center
  - Truven Health Marketscan® Data
  - Criminal & Public Record Data
- Areas for Growth
  - State Social Service and Child Welfare System
  - State Longitudinal Education Data Systems
  - Income Records



# THANK YOU!!

## PEPR | PREVENTION ECONOMICS PLANNING AND RESEARCH NETWORK



## PennState



*James B. Duke*

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THE DUKE ENDOWMENT

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