

Utilizing Administrative Data Outside of Early Care and Education to Address ECE Policy Questions

CCEEPRC
April 18, 2019



Child Care Administrative Data Analysis Center

- CCADAC is supported through the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF) , with funds set aside for research in the Child Care and Development Block Grant Act and managed through the Child Care and Early Education Policy Analysis (CCEEPRA) contract with Child Trends.
 - Ivelisse Martinez-Beck, CCEEPRA Project Officer, OPRE
- The primary purpose of the CCADAC is to support the use of administrative data to address policy-relevant early care and education research questions for state child care administrators and their research partners.
 - Kathleen Dwyer, and Jenessa Malin, OPRE leads



Terminology

- Administrative Data
 - Information about children, families, or service providers that is collected and maintained as part of regular program administration
- Integrated Data System
 - A system that combines administrative data across multiple programs and over time



Panelists

Katherine Barghaus

*Executive Director, Penn Child Research Center and
Senior Researcher, Actionable Intelligence for Social
Policy at the University of Pennsylvania*

Roland Estrella

*Senior Analyst and Research Contract Manager,
Department of Health Outcomes and Policy,
University of Florida*

Kelly Maxwell

*Co-Director of Early Childhood Research,
Child Trends*

CCADAC Resources

<https://www.acf.hhs.gov/opre/resource/supporting-use-administrative-data-early-care-education-research-resource-series>

1. Developing Collaborative Partnerships with State Agencies
2. Determining the Feasibility of Using Administrative Data
3. Considerations in Preparing to Analyze Administrative Data
4. Early Childhood Data Definitions: A Guide for Researchers Using Administrative Data
5. Opportunities through State Agency Research Partnerships for Using Administrative Data to Support Early Care and Education
6. Guidelines for Developing Data Sharing Agreements to Use State Administrative Data for Early Care and Education Research

Examples of Administrative Data Outside of ECE

Health

- Food and Nutrition Services
- Children's Health Insurance Program (CHIP) and Medicaid

Child Welfare, Public Assistance, and Human Services

- Temporary Assistance for Needy Families (TANF)
- Home Visiting
- Homelessness

Employment

- Unemployment Insurance

Examples of Research Questions

- What is the availability of high-quality ECE programs in counties that have high CHIP enrollments?
- Are there differences in the rates of child abuse and neglect incidents between subsidy-receiving children who attend licensed care and license-exempt care?
- Does parental employment stabilize after receiving child care subsidies?

CHILD CARE AND EARLY EDUCATION POLICY RESEARCH CONSORTIUM

2019 ANNUAL MEETING

FLORIDA EARLY CHILDHOOD AND HEALTH DATA REPOSITORY

Improving Services with Birth to Five Data

Presented by The University of Florida Family Data Center
and The University of Florida Anita Zucker Center for
Excellence in Early Childhood Studies



PRESENTATION OUTLINE

- **Building an infrastructure for restricted data**
Develop and architect data infrastructure that meets Federal Information Security standards
- **Structuring communication, partnerships, and data sharing agreements**
Meet regulatory requirements individually by agency (data owner organization), and collectively as a central repository of shared data
- **Presenting and disseminating data**
 - Implement a data integration framework
 - Use web technology to present information that is actionable to stakeholders at all levels (local, regional, state, national)
Integrated data use case: The Florida Index of Child Care Access (FLICCA)
Integrated data use case: Florida Medicaid Maternal and Child Health Status



Risk Management Framework

Starting Point

CATEGORIZE Information System

Define criticality/sensitivity of information system according to potential worst-case, adverse impact to mission/business.

SELECT Security Controls

Select baseline security controls; apply tailoring guidance and supplement controls as needed based on risk assessment.

IMPLEMENT Security Controls

Implement security controls within enterprise architecture using sound systems engineering practices; apply security configuration settings.

ASSESS Security Controls

Determine security control effectiveness (i.e., controls implemented correctly, operating as intended, meeting security requirements for information system).

MONITOR Security State

Continuously track changes to the information system that may affect security controls and reassess control effectiveness.

AUTHORIZE Information System

Determine risk to organizational operations and assets, individuals, other organizations, and the Nation; if acceptable, authorize operation.

Security Life Cycle

NIST NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Federal Information Security Modernization Act (FISMA) Implementation Project

<https://csrc.nist.gov/projects/risk-management>

Key Standards and Guidelines

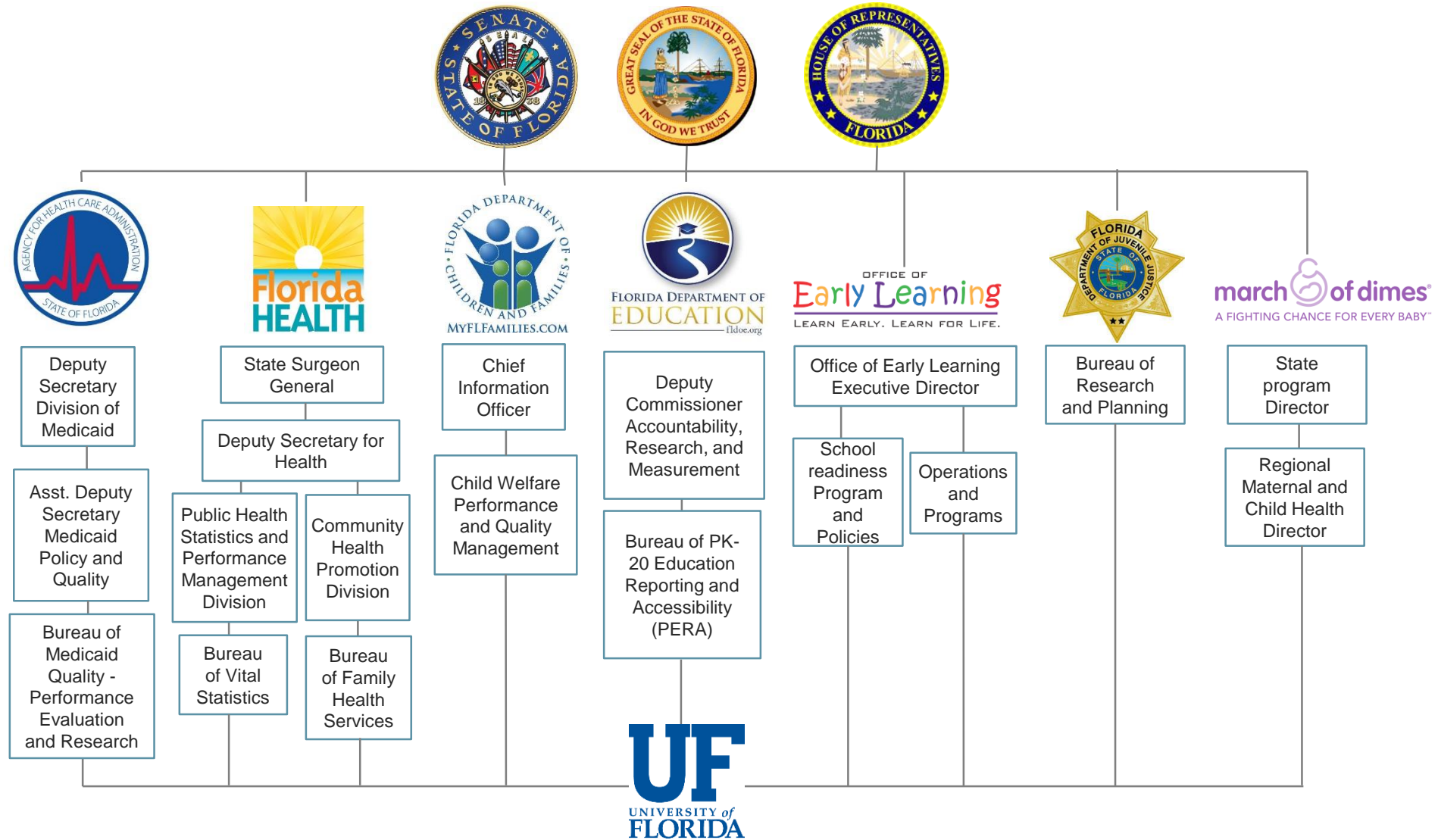
- FIPS Publication 199 (Security Categorization)
- FIPS Publication 200 (Minimum Security Controls)
- NIST Special Publication 800-18 (Security Planning)
- NIST Special Publication 800-30 (Risk Assessment)
- NIST Special Publication 800-37 (System Risk Management Framework)
- NIST Special Publication 800-39 (Enterprise-Wide Risk Management)
- NIST Special Publication 800-53 (Recommended Security Controls)
- NIST Special Publication 800-53A (Security Control Assessment)
- NIST Special Publication 800-59 (National Security Systems)
- NIST Special Publication 800-60 (Security Category Mapping)

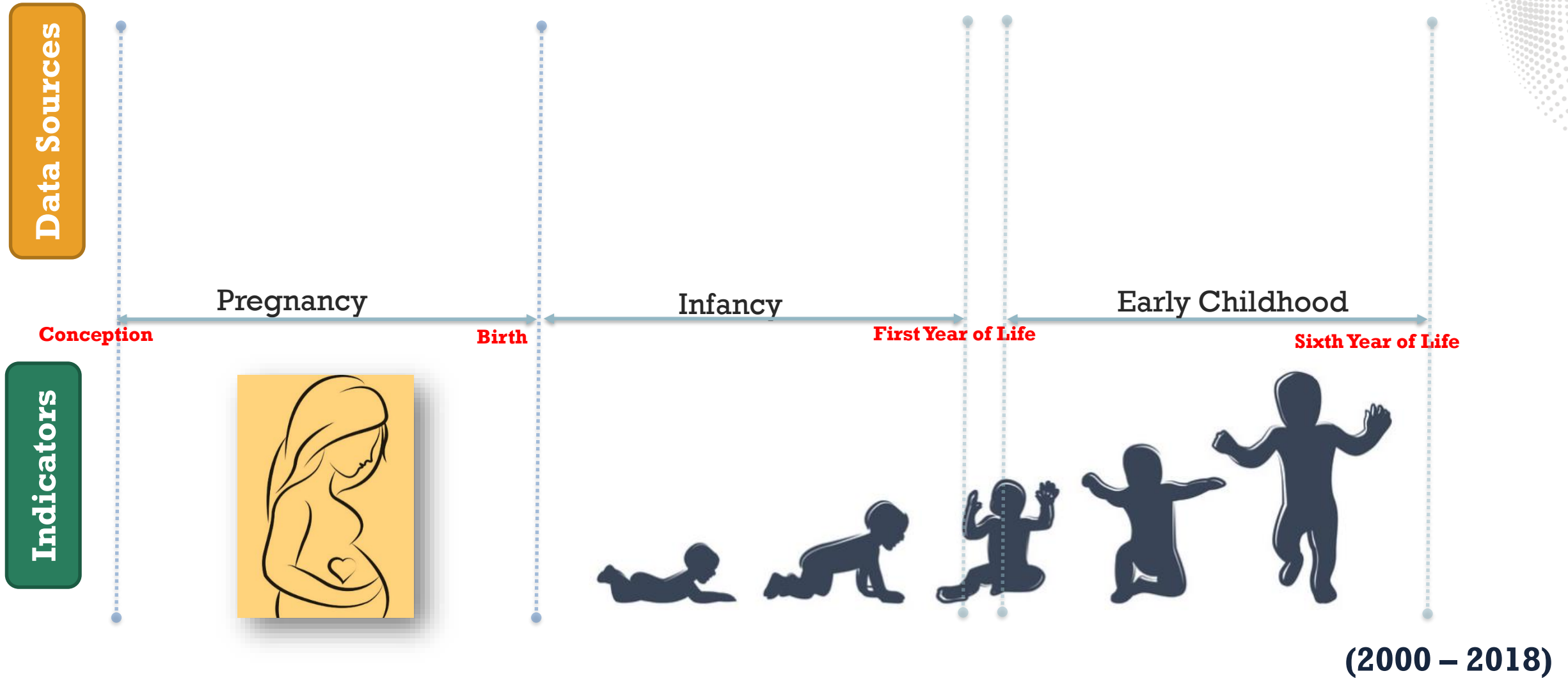
Many other FIPS and NIST Special Publications provide security standards and guidance supporting the FISMA legislation...

NIST NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

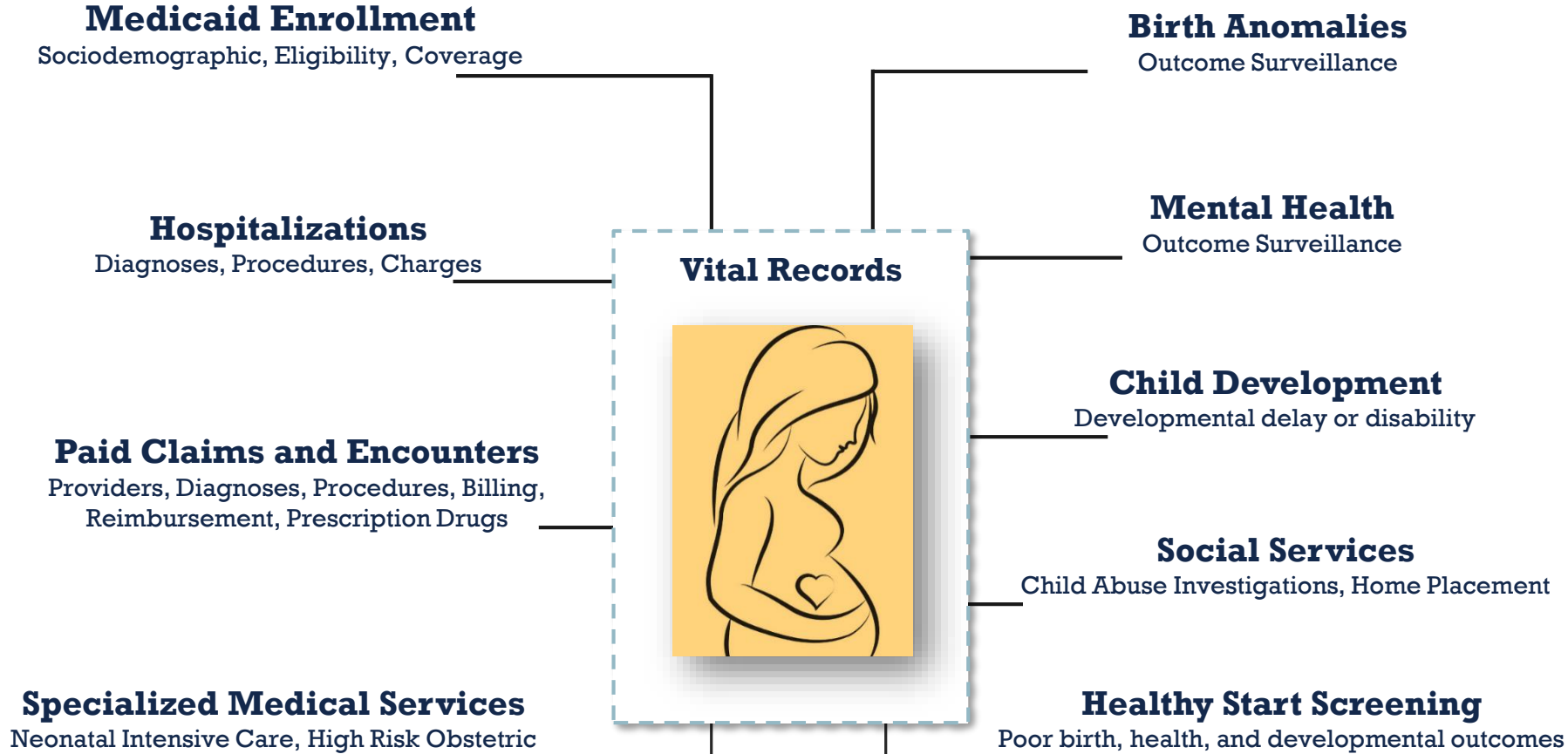


Structuring communication, partnerships, and data sharing agreements





Maternal and Child Health



Early Childhood Education

- Child Care Providers**
Capacity, Enrollment, Accreditation
- Children with Disabilities**
Education services
- Homeless Children**
Education services
- Subsidized Child Care**
Early Head Start and Head Start

Maternal and Child Health

Medicaid Enrollment

Sociodemographic, Eligibility, Coverage

Women
Children

Hospitalizations

Diagnoses, Procedures, Charges

Inpatient Visits
Outpatient Visits
Emergency Room Visits

Paid Claims and Encounters

Providers, Diagnoses, Procedures, Billing,
Reimbursement, Prescription Drugs

Female Claims and encounters
Children Claims and encounters

Specialized Medical Services

Neonatal Intensive Care, High Risk Obstetric

Neonatal Intensive Care Patients
High Risk Obstetrical patients

Vital Records

Live Births

Fetal Deaths

Infant Deaths

Mothers

Deaths to Women
of
Reproductive Age

Birth Anomalies

Outcome Surveillance

119 Major Congenital Birth Anomalies
401 Non-Major Birth Anomalies

Mental Health

Outcome Surveillance

9 Psychotic disorders
16 Non-Psychotic mental disorders
3 Mental Retardation disorders

Child Development

Developmental delay or disability

Florida's Early Intervention Program
Participants

Social Services

Child Abuse Investigations, Home Placement

Child Maltreatment investigations
Home Placement Services

Healthy Start Screening

Poor birth, health, and developmental outcomes

Prenatal Risk Screens
Infant Risk Screens

Early Childhood Education

Child Care Providers

Capacity, Enrollment, Accreditation

Capacity, Quality, ages served, SR
status, VPK status.

Children with Disabilities

Education services

Individualized education plan

Homeless Children

Education services

Enrollment, Housing status

Subsidized Child Care

Early Head Start and Head Start

Enrollment

(2000 – 2018)

Data Sources

Healthy Start Risk Screen

Birth Certificates

Early Intervention Program

Dept. Children and Families

CMS Subspecialty Clinics

Family Planning

Death Records

Women and Children Hospital Records and Medicaid Claims

Mother's Medicaid Eligibility, Medicaid Plan Assignment

Socio-Demographic

- OEL
- DOE
- DOH
- AHCA
- DCF
- Census Bureau
- ESRI

Risk Factors

Educational Progress

Pregnancy

Infancy

Early Childhood

Conception

Birth

First Year of Life

Sixth Year of Life

Indicators

Fetal deaths

Adequate prenatal care

Mother & child birth outcomes, birth defects

Developmental delay and disability

Foster care, maltreatment

Birth Anomalies

Interbirth Interval, Contraceptives

Infant and maternal deaths

Physical & Mental Illness, Costs

Access to Health Care and Social Services

Vital statistics of parents and children

Neighborhood characteristics

Social

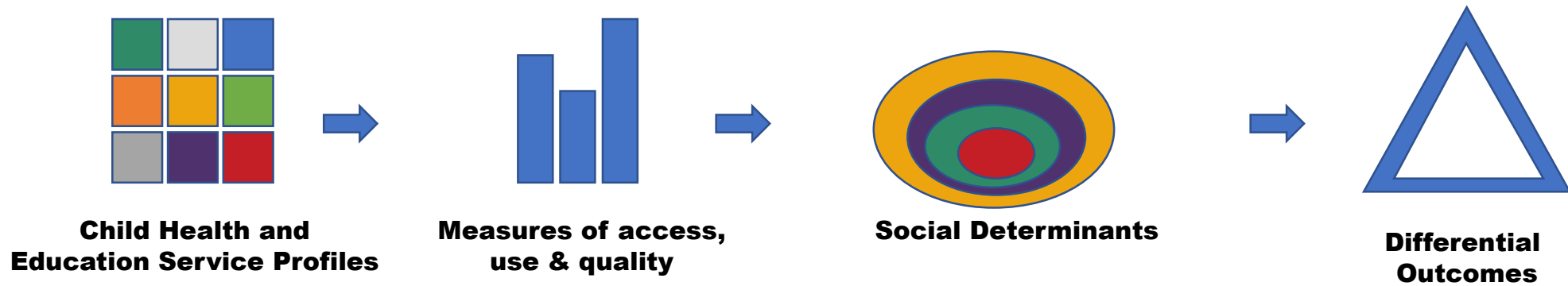
Services

Birth and infant conditions/services

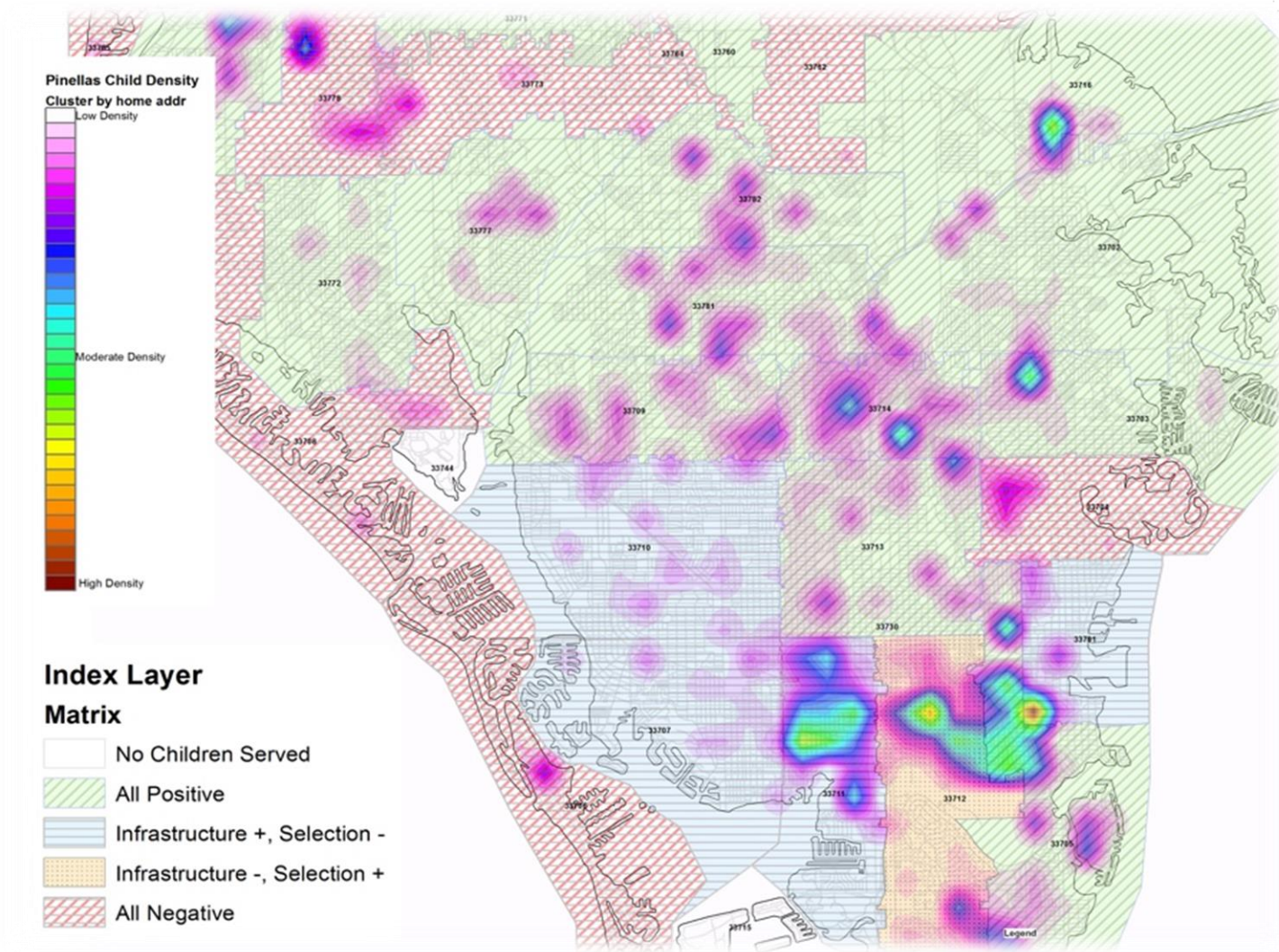
FSA, Early Care Capacity & Quality, Readiness at Kindergarten, High School Dropout



HEALTH, EDUCATION, AND LIFE COURSE DEVELOPMENT



Integrated Data Use case: The Florida Index of Child Care Access (FLICCA)



Integrated data use case: Florida Medicaid Maternal and Child Health Status Indicators

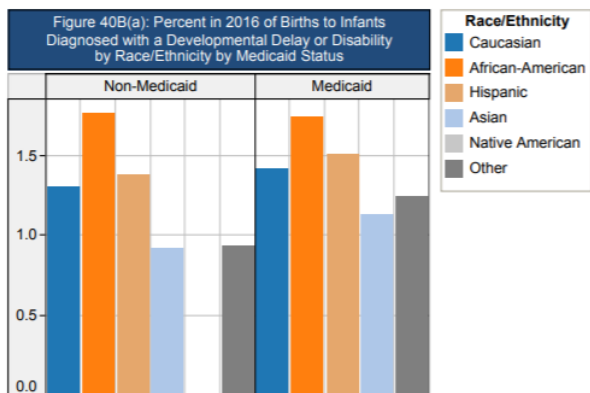
Florida Medicaid Maternal & Child Health Status Indicators | 2012-2016 Birth Cohorts

Indicator 40: Infants Diagnosed with a Developmental Delay or Disability

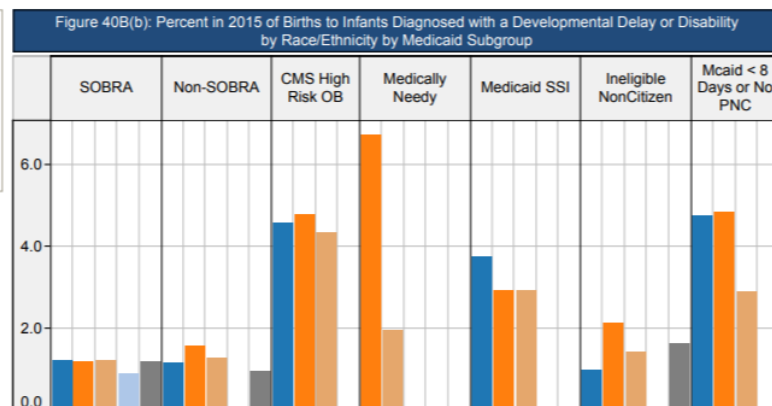
Table 40B: Number and Percent in 2016 of Births to Infants Diagnosed with a Developmental Delay or Disability by Race/Ethnicity by Medicaid Status/Subgroup

Medicaid Status	Subgroup	Caucasian		African-American		Hispanic		Asian		Native American		Other		Grand Total	
		Number	Percent / Rate	Number	Percent / Rate	Number	Percent / Rate	Number	Percent / Rate	Number	Percent / Rate	Number	Percent / Rate	Number	Percent / Rate
Non-Medicaid	Non-Medicaid	666	1.3%	119	1.8%	282	1.4%	41	0.9%	0		22	1.0%	1,130	1.3%
	Temporarily Eligible*	7	1.6%			22	1.1%	0		0		0		29	1.1%
	Total	673	1.3%	119	1.8%	304	1.4%	41	0.9%	0		22	0.9%	1,159	1.3%
Medicaid	SOBRA	402	1.2%	218	1.2%	334	1.2%	10	0.9%			22	1.2%	986	1.2%
	Non-SOBRA	109	1.2%	147	1.6%	100	1.3%			0		5	1.0%	361	1.3%
	CMS High Risk OB	55	4.6%	97	4.8%	131	4.3%			0				283	4.5%
	Medically Needy			7	6.7%	5	2.0%	0		0		0		12	3.1%
	Medicaid SSI	29	3.8%	42	2.9%	15	2.9%	0		0				86	3.1%
	Ineligible NonCitizen	8	1.0%	14	2.1%	150	1.4%			0		5	1.6%	177	1.4%
	Mcaid < 8 Days or No PNC	60	4.7%	40	4.8%	20	2.9%			0				120	4.3%
	Total	663	1.4%	565	1.7%	755	1.5%	10	0.9%	0		32	1.2%	2,025	1.5%
Grand Total		1,336	1.4%	684	1.8%	1,059	1.5%	51	0.9%	0		54	1.1%	3,184	1.4%

Notes: Caution must be exercised in interpreting high percentages where denominators are small. Percent/Rate is the percent of the Indicator's births for each Medicaid Status/Subgroup and Race/Ethnicity category (numerator) from the total births for that Medicaid Status/Subgroup and Race/Ethnicity category (denominator - Table 33B). Results are suppressed for non-zero cells (blank cells in the table) where the case count is under 5. The numbers in the Grand Total column can vary from their respective Medicaid Status/Subgroup totals on table 40A because the empty cells reflect the data suppression and because this table further stratifies the Indicator by Race/Ethnicity within each Medicaid Status/Subgroup (see Appendix 1 - Methodology, Data Suppression).



Notes: Caution must be exercised in interpreting high percentages where denominators are small. Results are suppressed for non-zero cells where the case count is under 5, (see Appendix 1 - Data Suppression).



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Integrated data use case: Florida Medicaid Maternal and Child Health Status Indicators

Medicaid Status	Subgroup	2012			2013			2014			2015		
		Percent Linked	Mean Length Of Stay	Mean Total Hosp. Charges	Percent Linked	Mean Length Of Stay	Mean Total Hosp. Charges	Percent Linked	Mean Length Of Stay	Mean Total Hosp. Charges	Percent Linked	Mean Length Of Stay	Mean Total Hosp. Charges
Non-Medicaid	Non-Medicaid	94%	30	\$181.3K	95%	27	\$183.0K	92%	30	\$208.3K	90%	26	\$183.0K
	Temporarily Eligible*	89%	9	\$31.9K	86%	7	\$37.0K	86%	30	\$176.1K	75%	19	\$99.3K
	Total	94%	29	\$178.2K	95%	27	\$180.2K	92%	30	\$207.3K	90%	25	\$181.1K
Medicaid	SOBRA	94%	28	\$181.7K	93%	26	\$169.0K	94%	28	\$193.0K	95%	25	\$185.5K
	Non-SOBRA	94%	31	\$152.3K	93%	24	\$156.6K	94%	24	\$163.1K	92%	26	\$185.8K
	CMS High Risk OB	86%	50	\$248.6K	84%	50	\$303.4K	85%	43	\$264.0K	80%	45	\$288.1K
	Medically Needy				95%	45	\$311.1K	94%	30	\$190.4K	87%	43	\$296.4K
	Medicaid SSI	91%	22	\$112.3K	85%	22	\$127.5K	99%	21	\$124.5K	93%	15	\$87.3K
	Ineligible NonCitizen	85%	22	\$96.8K	80%	23	\$134.6K	85%	19	\$125.5K	75%	17	\$91.9K
	Mcaid < 8 Days or No PNC	96%	52	\$317.0K	93%	33	\$182.6K	90%	41	\$308.9K	86%	42	\$341.6K
	Total	92%	33	\$184.0K	90%	31	\$193.1K	92%	29	\$196.2K	90%	28	\$196.9K
Grand Total		92%	32	\$181.9K	92%	29	\$188.3K	92%	30	\$200.0K	90%	27	\$191.2K

Notes: Birth Percent Linked refers to the proportion of all of the indicator's Births that were linked to their birth inpatient hospitalization discharge record. Caution must be exercised in interpreting high percentages where denominators are small.

Subgroup	2012		2013		2014		2015	
	Percent Linked	Mean Total Claims/ Encounters Amount	Percent Linked	Mean Total Claims/ Encounters Amount	Percent Linked	Mean Total Claims/ Encounters Amount	Percent Linked	Mean Total Claims/ Encounters Amount
SOBRA	88%	\$54.2K	93%	\$55.8K	93%	\$62.5K	95%	\$48.2K
Non-SOBRA	86%	\$53.1K	81%	\$63.1K	88%	\$53.1K	93%	\$55.4K
CMS High Risk OB	94%	\$101.5K	93%	\$109.0K	90%	\$87.0K	95%	\$102.2K
Medically Needy			85%	\$56.3K	63%	\$75.3K	80%	\$102.7K
Medicaid SSI	84%	\$58.0K	83%	\$57.3K	85%	\$41.0K	95%	\$43.1K
Ineligible NonCitizen	96%	\$43.9K	92%	\$51.4K	95%	\$52.4K	92%	\$39.9K
Mcaid < 8 Days or No PNC	85%	\$74.8K	90%	\$61.7K	89%	\$71.0K	89%	\$76.1K
Grand Total	89%	\$64.3K	91%	\$68.2K	91%	\$63.9K	94%	\$58.1K

Notes: Percent Linked refers to the proportion of all of the indicator's births that were linked to both, the Birth Inpatient Hospitalization discharge Record and at least one Infant Medicaid Claims record with a date of service within the birth hospitalization length of stay or at least one Infant MMA special feed encounter record with a date of service within the birth hospitalization length of stay.

Caution must be exercised in interpreting high percentages where denominators are small.

*Medicaid reimbursement amount includes the amount for both FFS claims and MMA Encounters.

CONTACT

The University of Florida Family Data Center and The University of Florida Anita Zucker Center for Excellence in Early Childhood Studies

Mildred Maldonado-Molina, Ph.D., M.S.

Associate Professor
Family Data Center
Institute for child health policy
Phone: (352) 294-5797
Email: mmm@ufl.edu

Roland Estrella, M.S, M.B.A.

Research Manager
Family Data Center
Institute for child health policy
Phone: (352) 294-8421
Email: Estrella@health.ufl.edu

Herman Knopf, Ph.D.

Research Scientist
Anita Zucker Center for Excellence in
Early Childhood Studies
Phone: (352) 273-4284
Email: hknopf@coe.ufl.edu

Lindsey Varner, M.S.

Project Manager
Anita Zucker Center for Excellence in
Early Childhood Studies
Phone: (352) 294-8424
Email: lvarner@ufl.edu



The Application of Integrated Data to Expand Access to Quality Pre-K

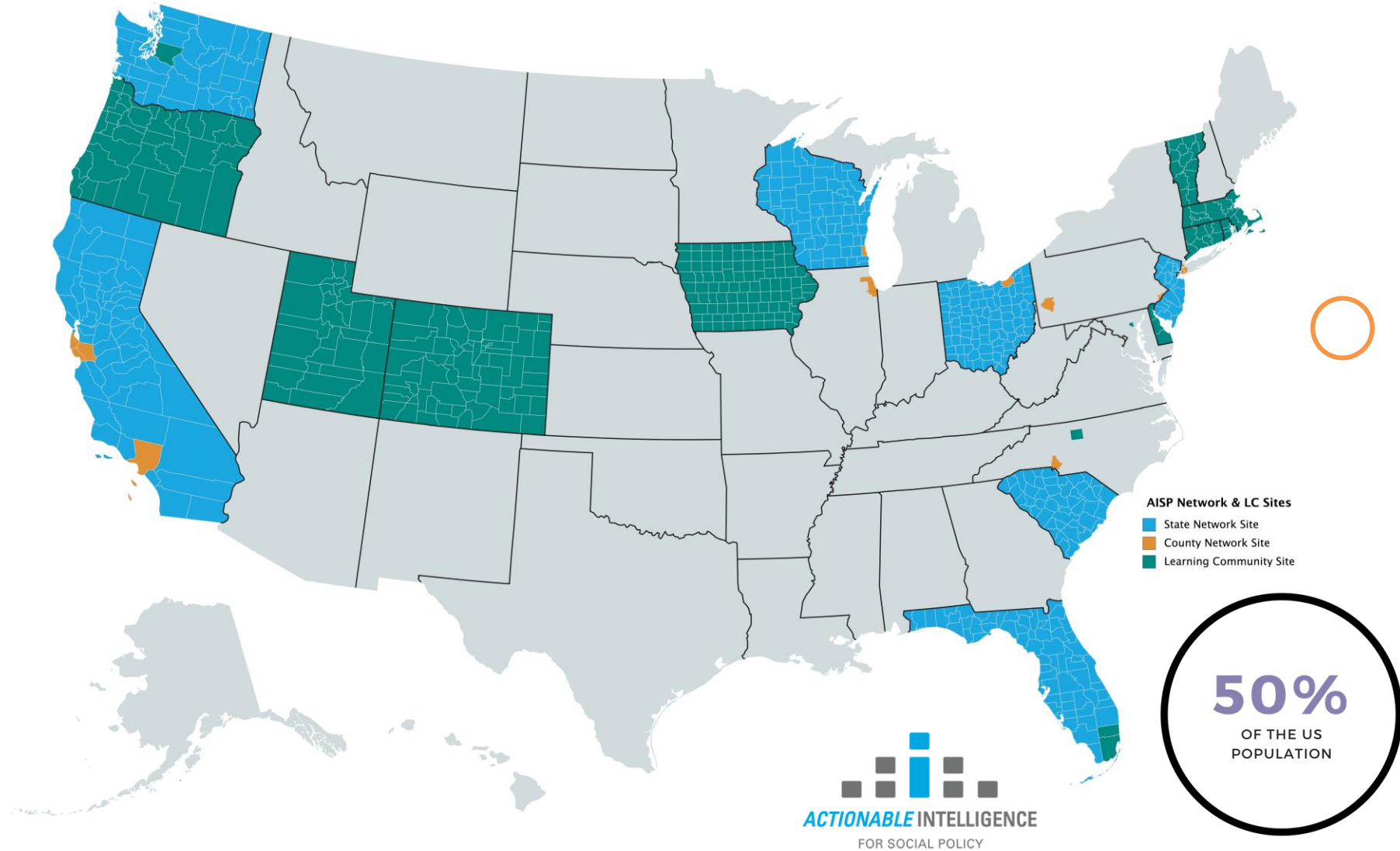
Katherine Barghaus, PhD

Executive Director, Penn Child Research Center

Senior Researcher, Actionable Intelligence for Social Policy



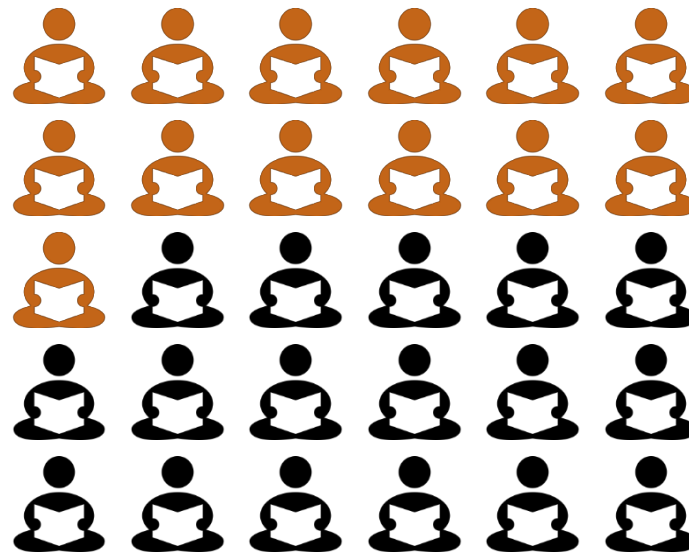
AISP INTEGRATED DATA NETWORK





PRE-K EXPANSION IN PHILADELPHIA

- Mayor's priority issue
- Budget - \$60 million annually



RESEARCH QUESTIONS

1

What is the geographic distribution of 3- and 4-year old children with **multiple early risks**?

2

What is the geographic distribution of **high-quality pre-k** slots?

3

Where is the **greatest need for high-quality pre-k** slots?

DATA SOURCES: EARLY RISKS

Institutionalized School Readiness Data Model Built from Integrated Data

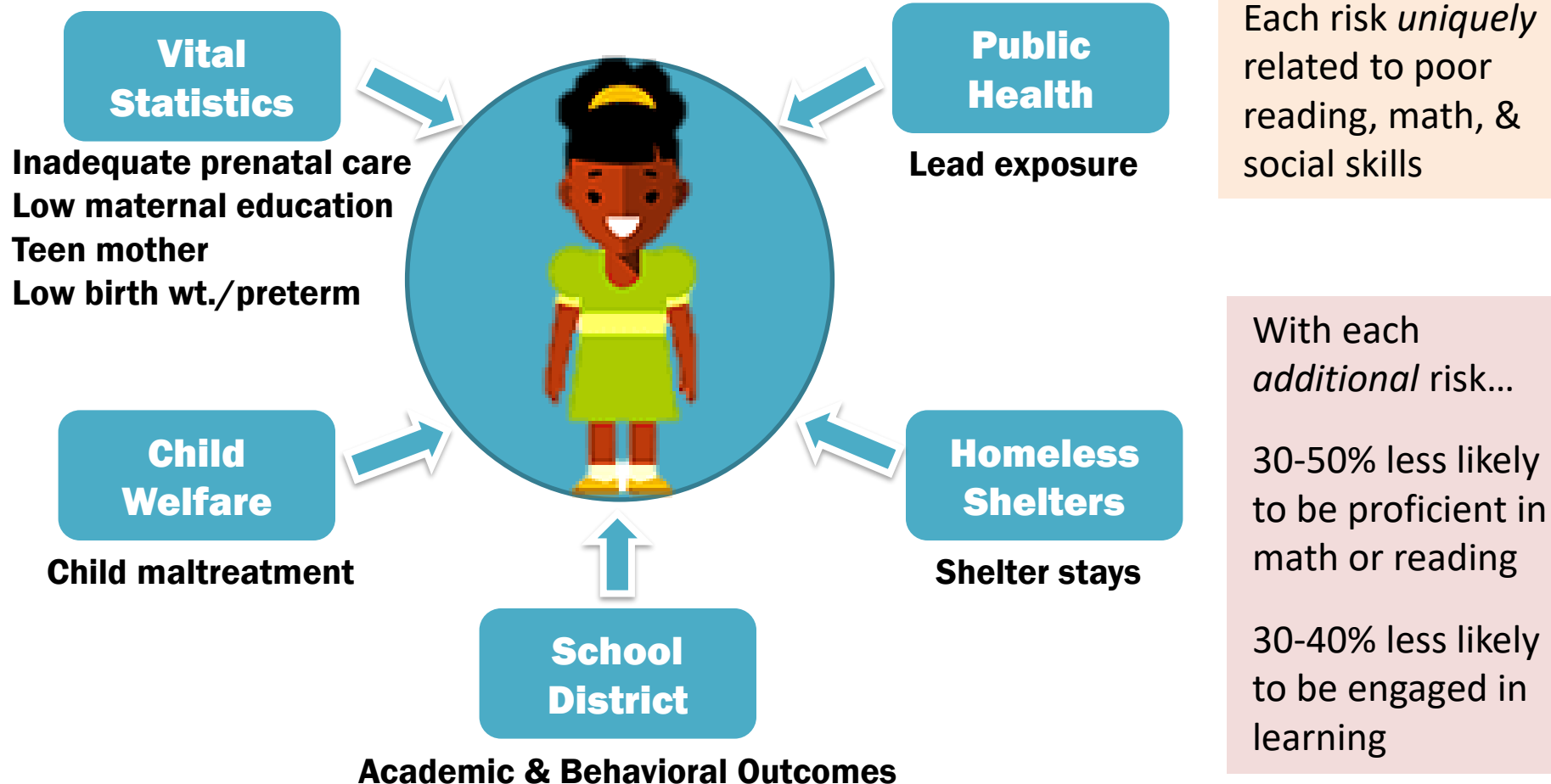


Ready-to-use, longitudinal, population-based data model consisting of relevant data elements that are reviewed for quality and related to important outcomes.



DATA SOURCES: EARLY RISKS

Institutionalized School Readiness Data Model Built from Integrated Data

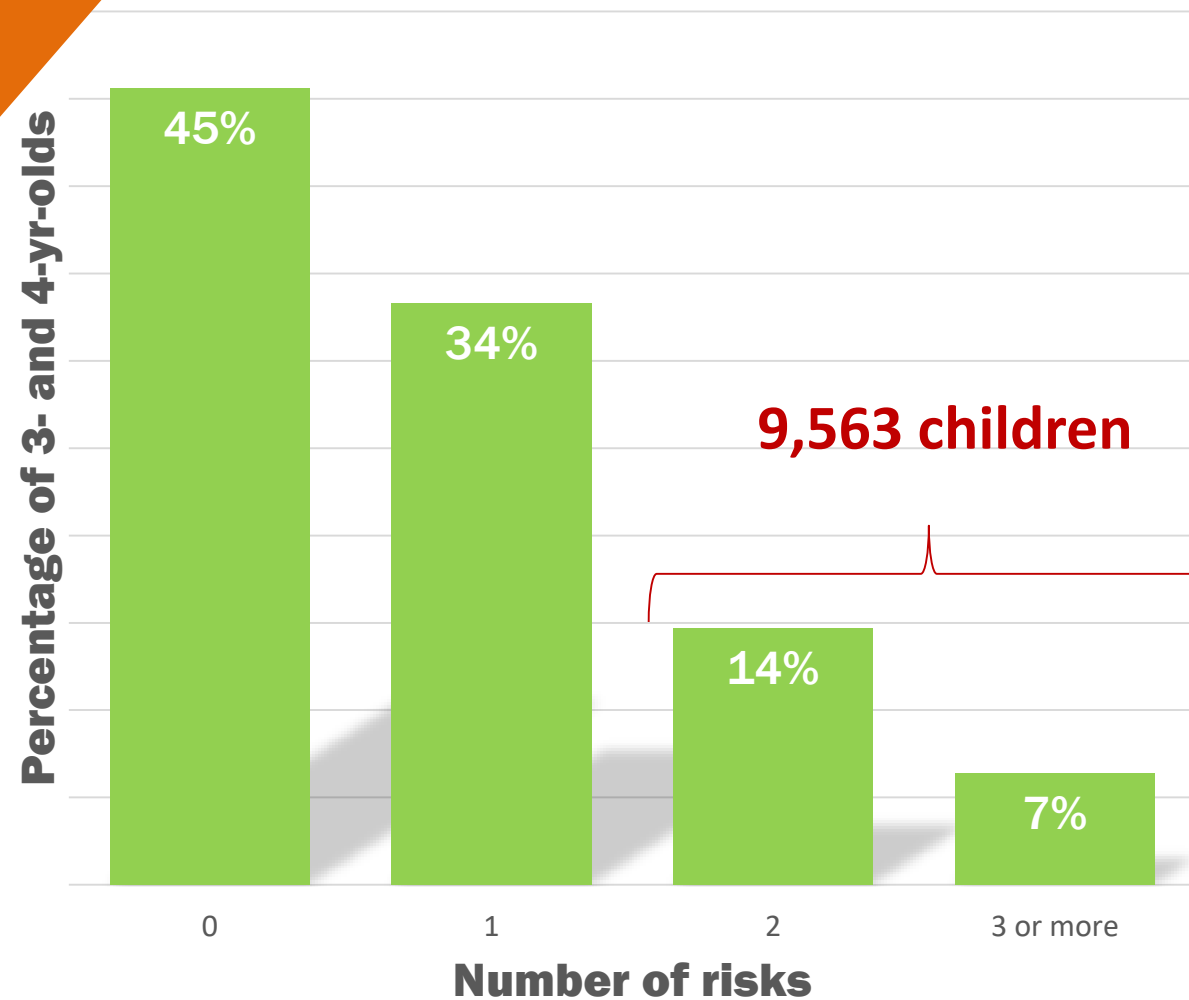


DATA SOURCES: HIGH-QUALITY PRE-K

State data on providers including geography, capacity, and quality

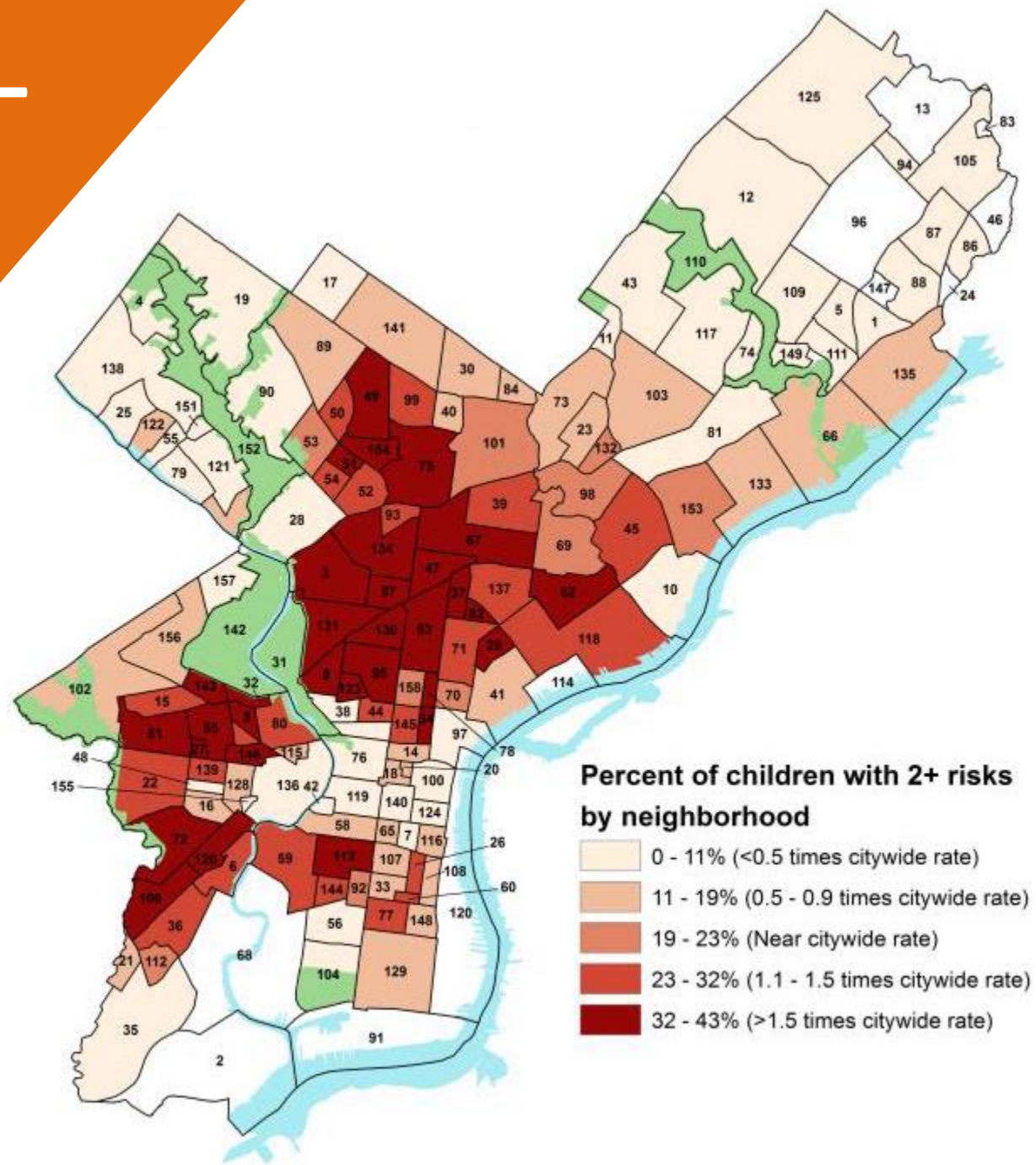


FINDINGS – RISKS

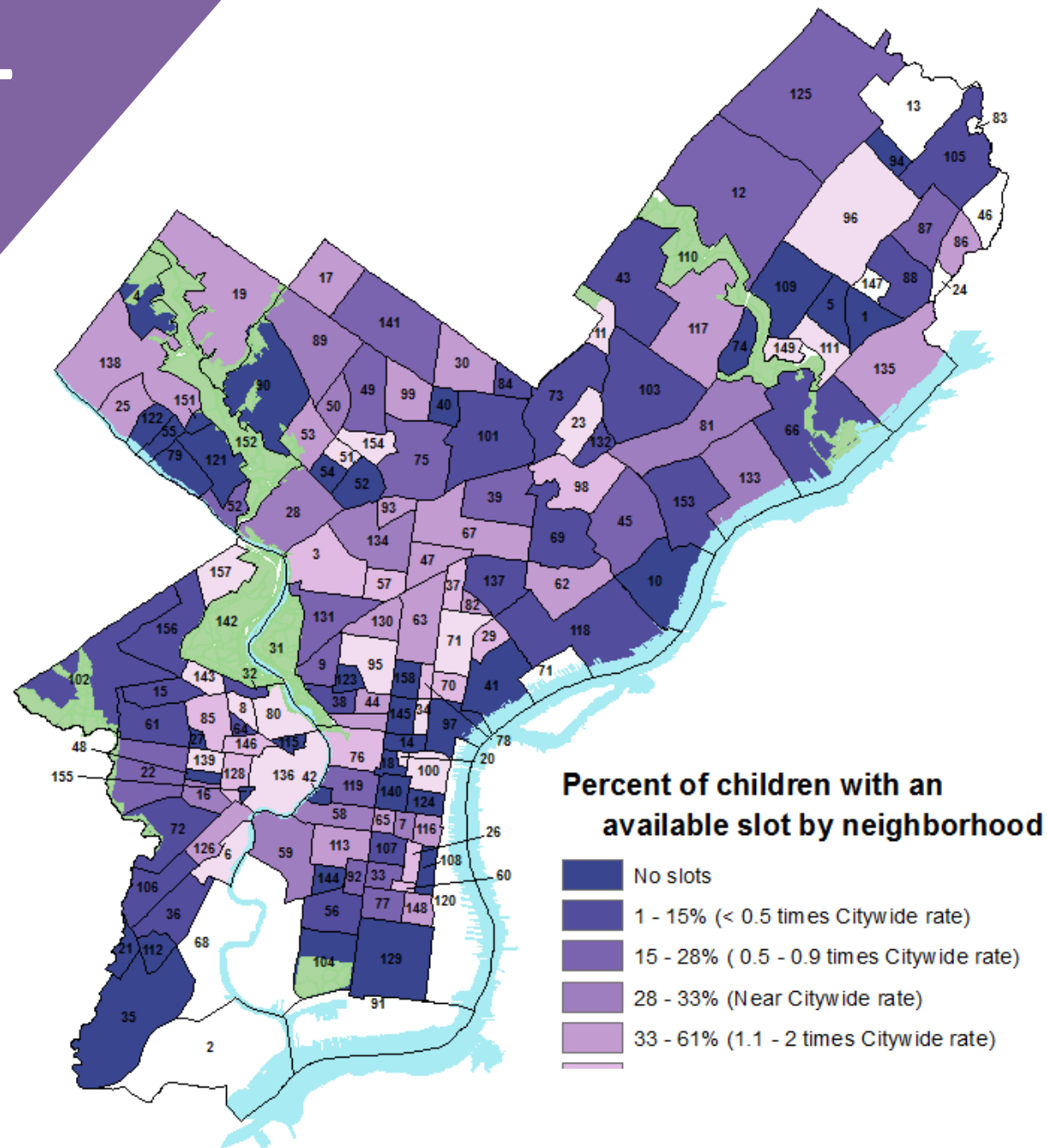


n = 44,724 children

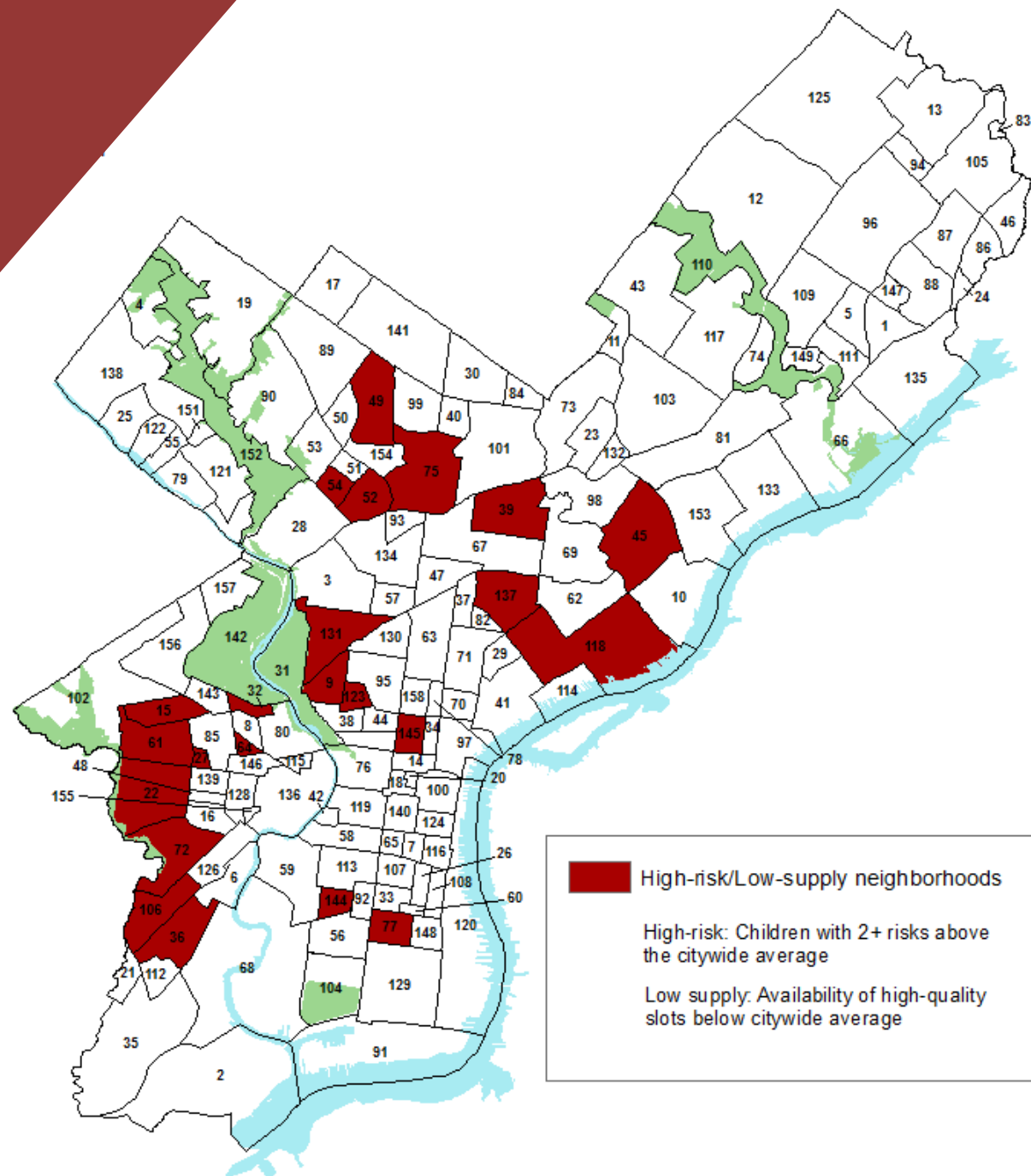
FINDINGS – RISKS



FINDINGS – QUALITY PREK



FINDINGS – PREK DESERTS



POLICY AND PRACITCE IMPLICATIONS

Planning

Information used to inform process for selecting providers applying for pre-k expansion funding

Practice

Information used for outreach efforts in areas with higher concentrations of risks to help ensure children who could benefit most would fill new Pre-K seats



QUESTIONS & COMMENTS



Administrative Data Discussion Forum

Link to join the discussion forum on
Basecamp:

<https://3.basecamp.com/3709297/join/ASGxxNYuqV4g>