USING ADMINISTRATIVE DATA TO EXAMINE WORKFORCE DYNAMICS IN MICHIGAN, ILLINOIS, AND LOUISIANA

Public Policy Associates

Chapin Hall

University of Virginia

CCEEPRC Conference

Thursday, June 29, 2023

AGENDA

- **Presentation 1:** Interdependence Between Staff Turnover and Child Care Quality Improvement in Michigan
  - Rebecca Frausel, Public Policy Associates
- **Presentation 2:** CCEE Workforce Retention and Turnover Trajectories in Illinois
  - Hyein Kang, Chapin Hall at the University of Chicago
- **Presentation 3:** Early Child Care and Education Workforce Turnover in Education Settings in Louisiana
  - Daphna Bassok, University of Virginia
- **Discussion/Q&A**

SESSION OBJECTIVES

- Increase awareness of how administrative datasets can be used to develop evidence and inform strategies to support the early child care and education workforce
- Share our experiences gaining access to and bridging across administrative datasets to answer novel research questions about child care policy
- Discuss advantages and limitations of using administrative data for research

TERMINOLOGY

- **Administrative Data:**
  - Data collected and maintained by federal, state, and local government agencies as part of program management and operations, e.g.,
    - Quality Rating and Improvement System
    - Workforce registry
    - Unemployment insurance

The Interdependence Between Staff Turnover and Child Care Quality Improvement in Michigan

Rebecca Frausel, Nathan Burroughs, Colleen Graber, Dirk Zuschlag, & Craig Van Vleet

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Acknowledgement

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Evaluating Michigan's Provider-Driven QRIS

- **Goals:** Greater participation, equitable access
- Changes to QRIS as of February 1, 2023
  - Reduced emphasis on credentials
  - Focus on improvement/program support
- Our study's focus:
  - Implementation/impacts of innovations in QRIS design
  - Mediating role of staff turnover on provider quality improvement

https://greatstarttoquality.org/quality-improvement-process/

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(Markowitz, et al., 2020; Cannon, et al., 2017)

Michigan Partners

- Michigan Department of Education's Office of Great Start (MDE/OGS)
  - CCDF lead agency for Michigan
- Early Childhood Investment Corporation (ECIC)
  - With MDE/OGS, supports implementation of Michigan's QRIS, Great Start to Quality

miregistry

- Employment, education, and training history
- Register for professional development opportunities
- Allows organizations to access staff learning records

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The MiRegistry-Great Start to Quality CONNECTION

For licensed child care programs to participate in Great Start to Quality and receive a Quality Level, each program must have an Organization Profile, and qualification information for each educator (staff member) must be in MiRegistry.

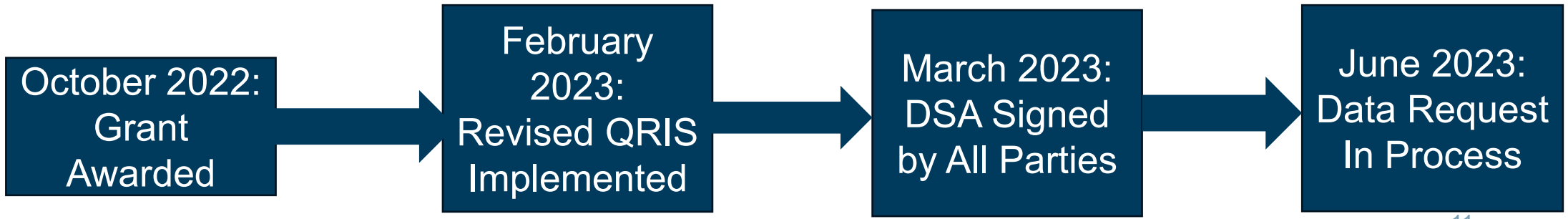
Staff Turnover and Quality Improvement

- Staff turnover may impact provider's efforts to improve and maintain quality
- MiRegistry allows for extension of research to include HBCCs

(Doromal et al. 2021, Bassok et al. 2021; Cassidy et al. 2011)

Steps for Administrative Data Access

1. Develop collaborative partnerships with state agencies
2. Determine feasibility of administrative data to answer research questions
   a. Codebook/fields
   b. Date range
3. Work together to create a data share agreement
4. Plan for contingencies



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Integrating Data

MiRegistry Provider Profile
- Provider ID
- Unique ID for staff
  - Start/end dates, role

MiRegistry Employee Profile
- Unique ID for staff
- Education, certification, training information

Data Range: 2022-2026

GSQ/QRIS Data (Providers)
- Provider ID
- Provider star rating/quality level
  - Date published/expires
  - Classroom observation
  - Sub/domain scores

Data Range: 2014-2022 (previous system), 2023-2026 (revised system)

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Advantages

- Large sample size allows for group comparison (child care center vs. family home vs. group home)
  - QRIS changes
  - Impacts of turnover on QRIS participation and improvement

Limitations

- Observation period limited by administrative data
  - Limited ability to examine turnover before 2022
  - Must wait for more time to pass before examining effects of revised QRIS

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Other research activities

- Primary data
  - Provider interviews and surveys
  - Parent interviews
  - GSQ resource center focus groups

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Questions?

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CCEE WORKFORCE RETENTION AND TURNOVER TRAJECTORIES IN ILLINOIS

JUNE 29, 2023

Emily Wiegand, Robert Goerge, **Hyein Kang** (presenting author), David McQuown

Acknowledgments

- BASE Project is funded by the Office of Planning, Research, and Evaluation within the Administration for Children and Families at the U.S. Department of Health and Human Services

- Project Officer Team:
  - Ann Rivera
  - Krystal Bichay-Awadalla,
  - Dianna Tran
  - Brian Tchen

- Collaborators:
  - MDRC (prime)
  - Butler Institute for Families
  - Chapin Hall at the University of Chicago
  - Decision Information Resources, Inc.
  - Erikson Institute
  - MEF Associates

- Expert Advisors:
  - Daphna Bassok
  - Juliet Bromer
  - Debra Pacchiano
  - Aisha Ray
  - Amy Roberts
  - Diana Schaack

BASE PROJECT

Building and Sustaining the Child Care and Early Education Workforce

Early Project Activities

- Literature review
- Environmental scan
- Data scan

Data Assessed in Data Scan

- IL UI wage data
- MT Workforce registry
- CO LINC

Designed to increase knowledge and understanding about child care and early education (CCEE) by documenting factors that drive turnover in the field and by building evidence on current initiatives to recruit, advance, and retain a stable and qualified CCEE workforce.

IDENTIFIED KNOWLEDGE GAPS

- Longitudinal data to track workers over time
- Variation of workforce dynamics by role and setting type
- The effect of multi-level factors (at the teacher, provider, policy, and community level) on workforce dynamics
- Psychological well-being of the workforce and how it is affected by multi-level factors
- The effects of existing strategies, such as wage supplements or scholarships, on workforce dynamics
- Take up of existing strategies and their reach into the workforce

DATA SOURCE AND METHODS

Unemployment Insurance (UI) Wage Data from Illinois

Source: Illinois Department of Employment Security (IDES), via the Coleridge Initiative's Administrative Data Research Facility (ADRF)

Calendar years: 2005-2021

DATA CONTENTS

- Employer information: name, ID, industry code (NAICS), number of employees, employer primary address, total wages paid
- Employee information: SSN (hashed), total wages earned by job
- Not included: hours worked, full time/part time status, role or occupation information, work site address, worker demographic data

"CHILD CARE WORKFORCE" BY NAICS CODE

	Included	Excluded
Overall	Individuals working for day care centers, preschools, and family child care homes*	Individuals working outside the state providing the UI wage data
By provider type	Public and privately funded child care centers, including centers funded through school districts	Employers classified as elementary or secondary schools Family child care homes operating as sole proprietors with no employees
By employment status	Part-time and full-time workers**	Individuals who are paid informally
By role	All employees, including teachers, administrators, and support staff (such as kitchen staff, bus drivers, and janitors); classroom staff cannot be distinguished from support staff	Nannies, babysitters, or other household employees

*Employer type cannot be distinguished in more detail, although we can use employer size to roughly distinguish larger centers from smaller establishments and family child care homes.

**Employment level cannot be distinguished using quarterly wage data. Only the total wages earned in a quarter are available for each worker.

RESEARCH QUESTIONS FOR THIS ANALYSIS

Earnings

- What wages are child care workers earning according to UI wage data?
- How do these reported numbers compare to other estimates of the wages in the child care workforce?

Recruitment

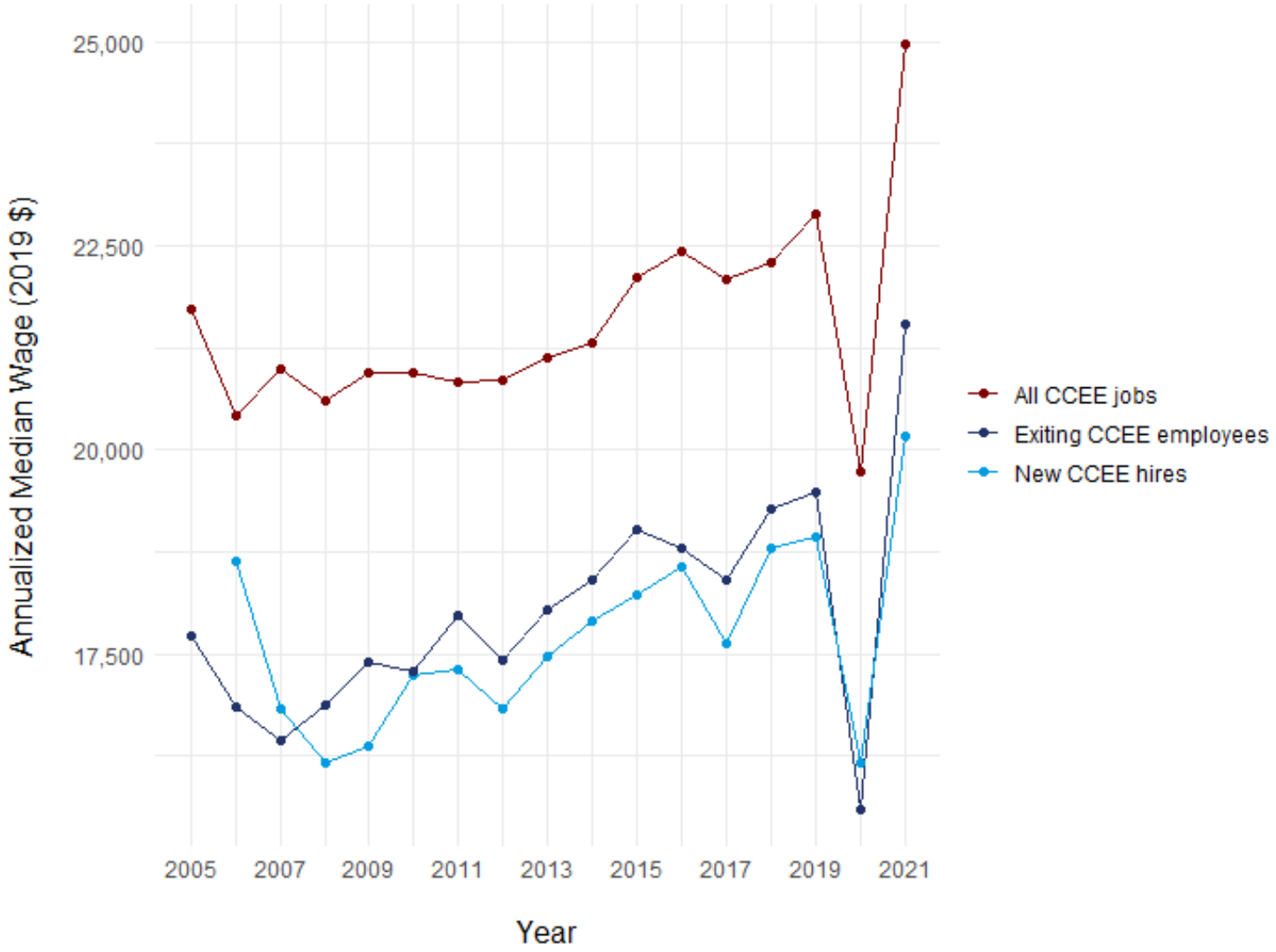
- What industries do individuals work in before they start in child care?
- What do they earn, and how do these wages compare to their initial child care wages?

Retention and Advancement

- How long do new workers stay in the child care industry after they start?
- How do wages change over time for workers who stay continuously employed in child care?
- What industries do they work in after leaving the child care industry?
- How do their wages in these industries compare to the wage before leaving child care?

FINDINGS

MEDIAN WAGES, CCEE JOBS (2019 $)



How do these estimates compare to other research?

2012 NSECE: $24,068 (compared to $20,802 in wage data)

BLS is 5-10% higher each year than UI wage data

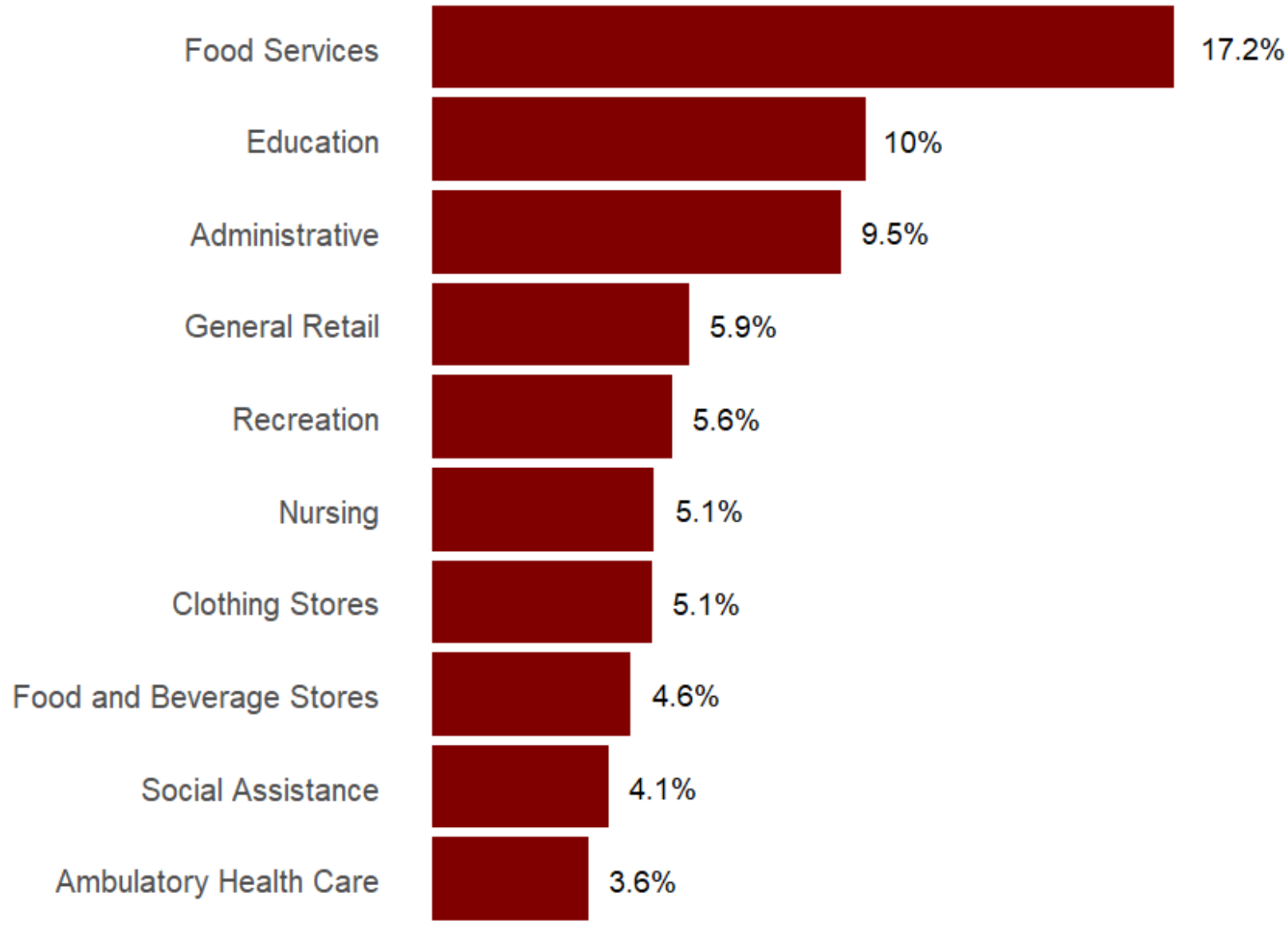
Potential differences:

- Workforce coverage (roles)
- Gaps between estimated wages based on hourly rate and actual wages paid (if hours worked are less than 40/week)

NEW WORKERS

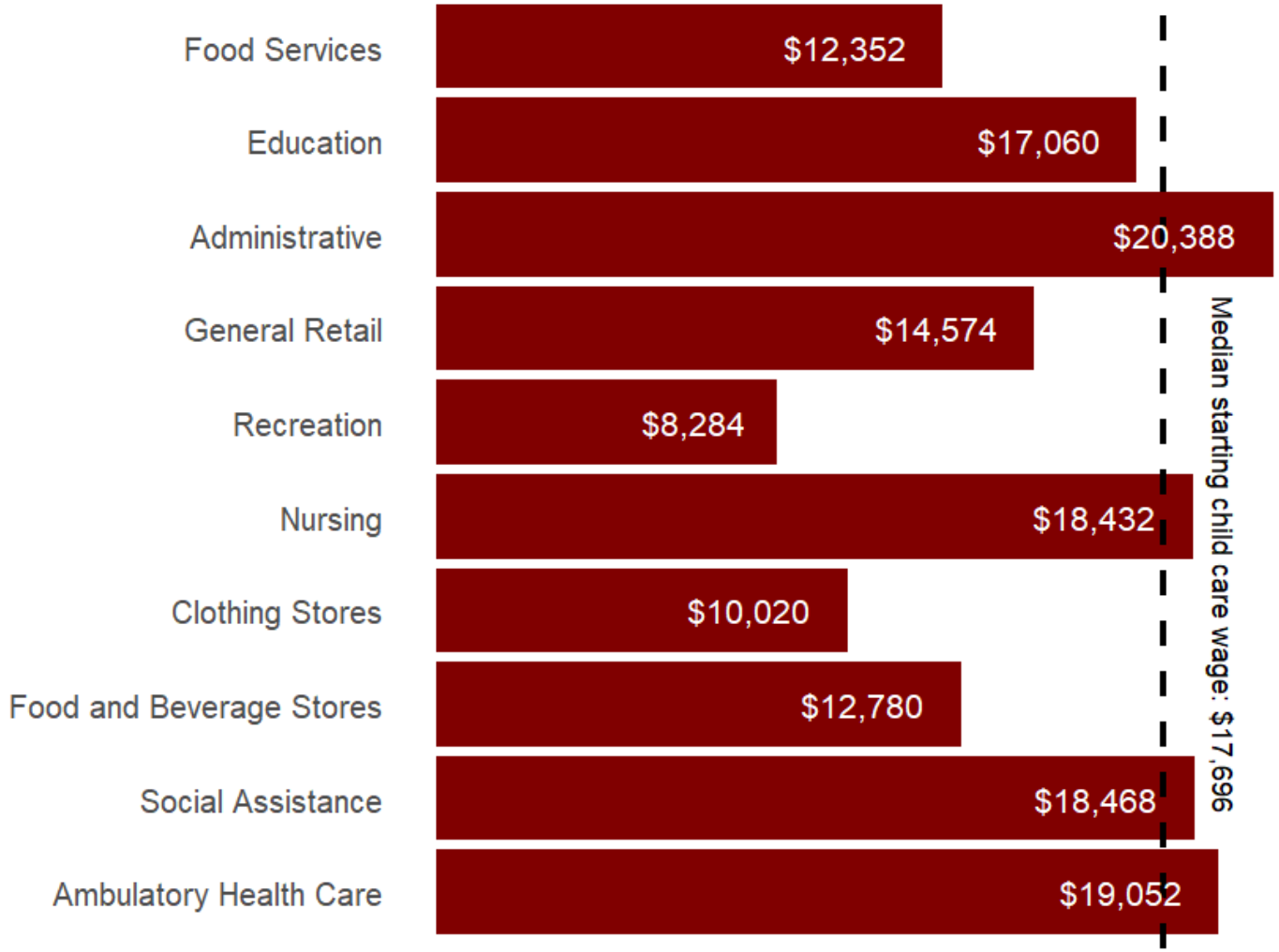
1 in 5 new child care workers had no employment in other industries in prior 5 years

Figure 3. Most Common Industries Where New Child Care Workers Worked in the Year Prior to Starting in Child Care in 2019



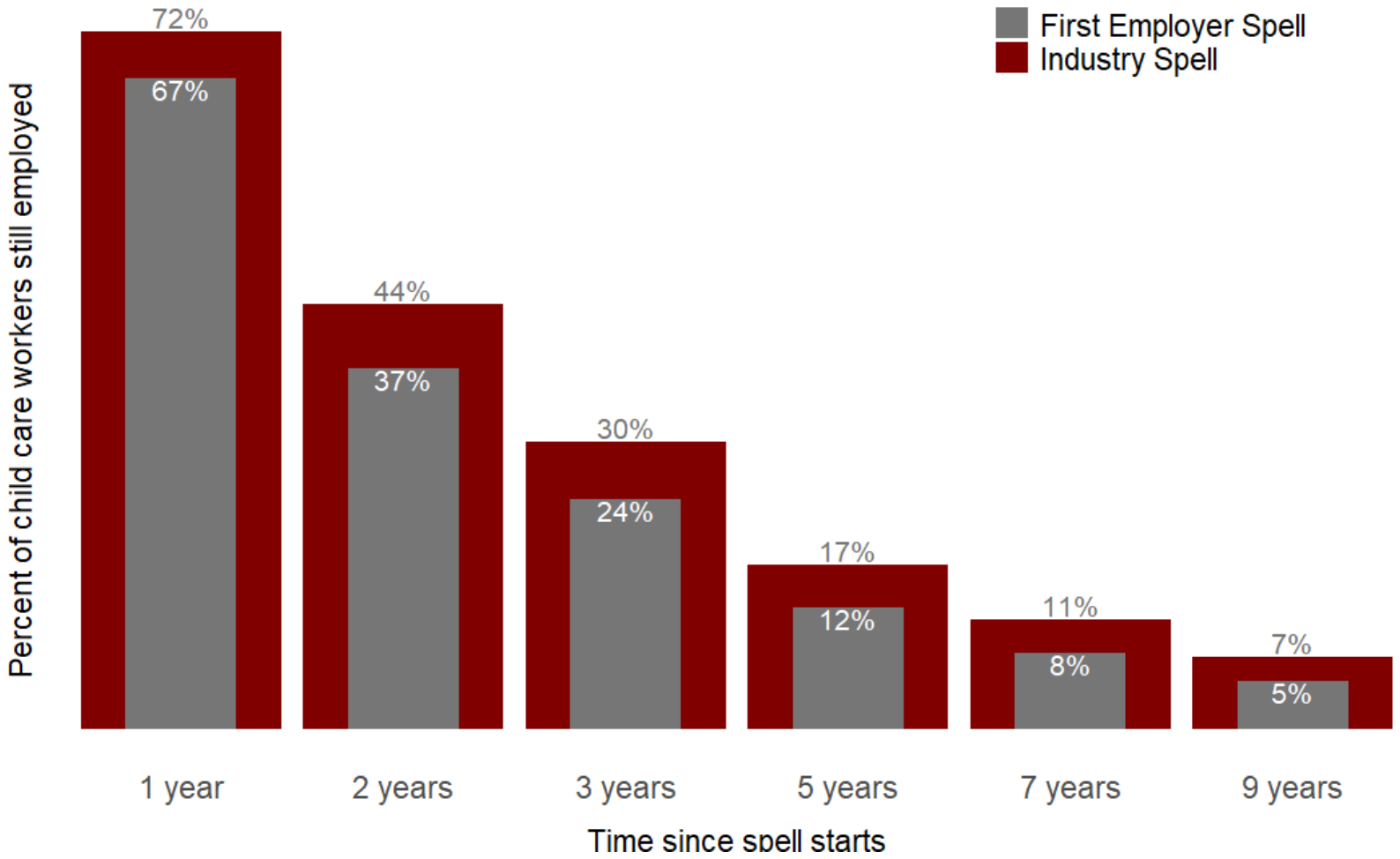
NEW WORKERS: PRIOR WAGES

Figure 4. Median Annualized Wage Earned by Industry in the Year before Child Care Employment, among workers first employed in CCEE in 2019



RETENTION

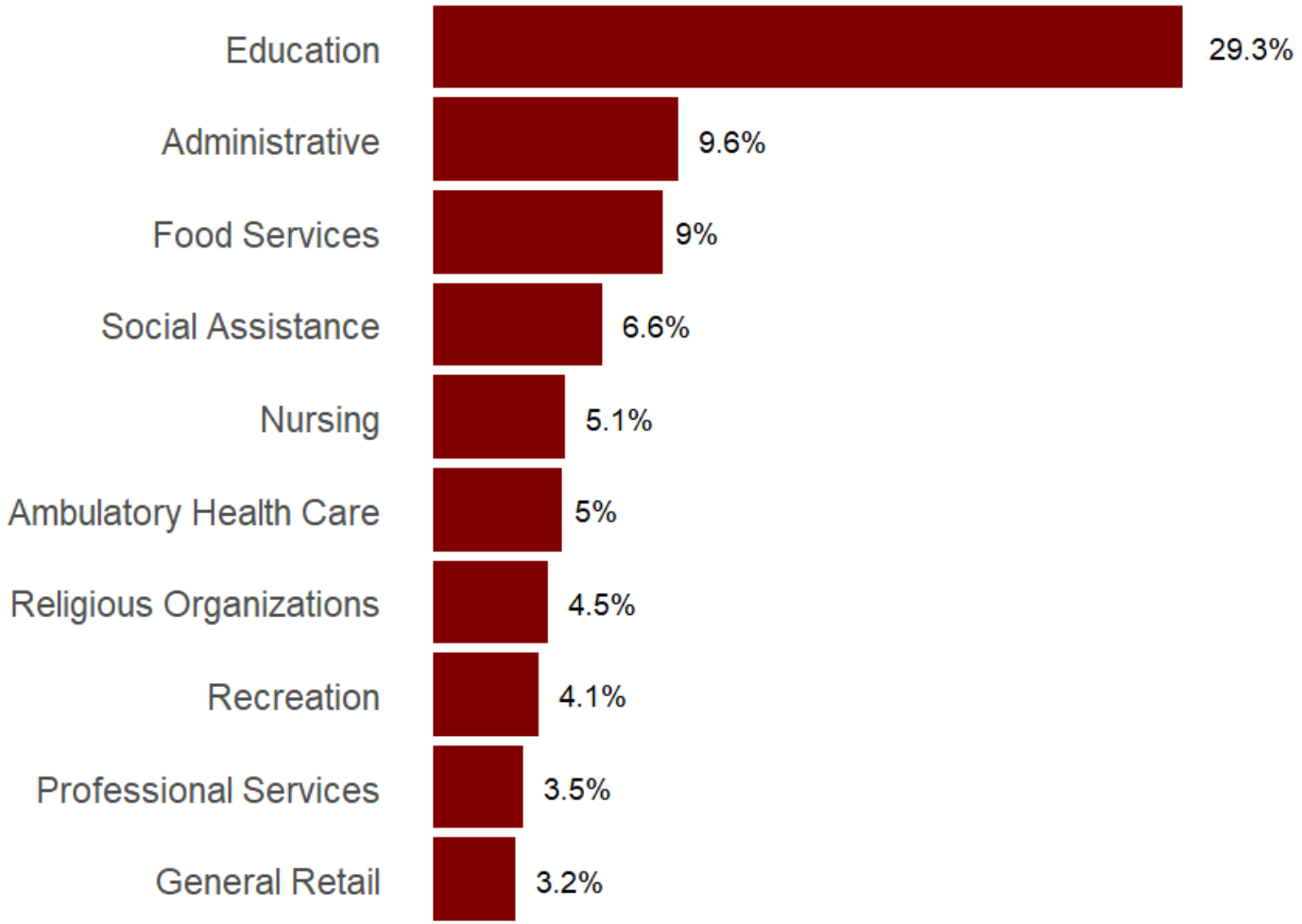
Figure 5. Percent of New Child Care Workers in 2010-2011 Continuously Employed in the Child Care Industry or with the Same Employer over Time



- About 72% of the 2010-2011 entry cohort stayed in the industry after 1 year of childcare employment
- Half of the workers left the industry after 2 years of childcare employment
- About 7% of the cohort stayed in the childcare industry after 9 years of childcare experience

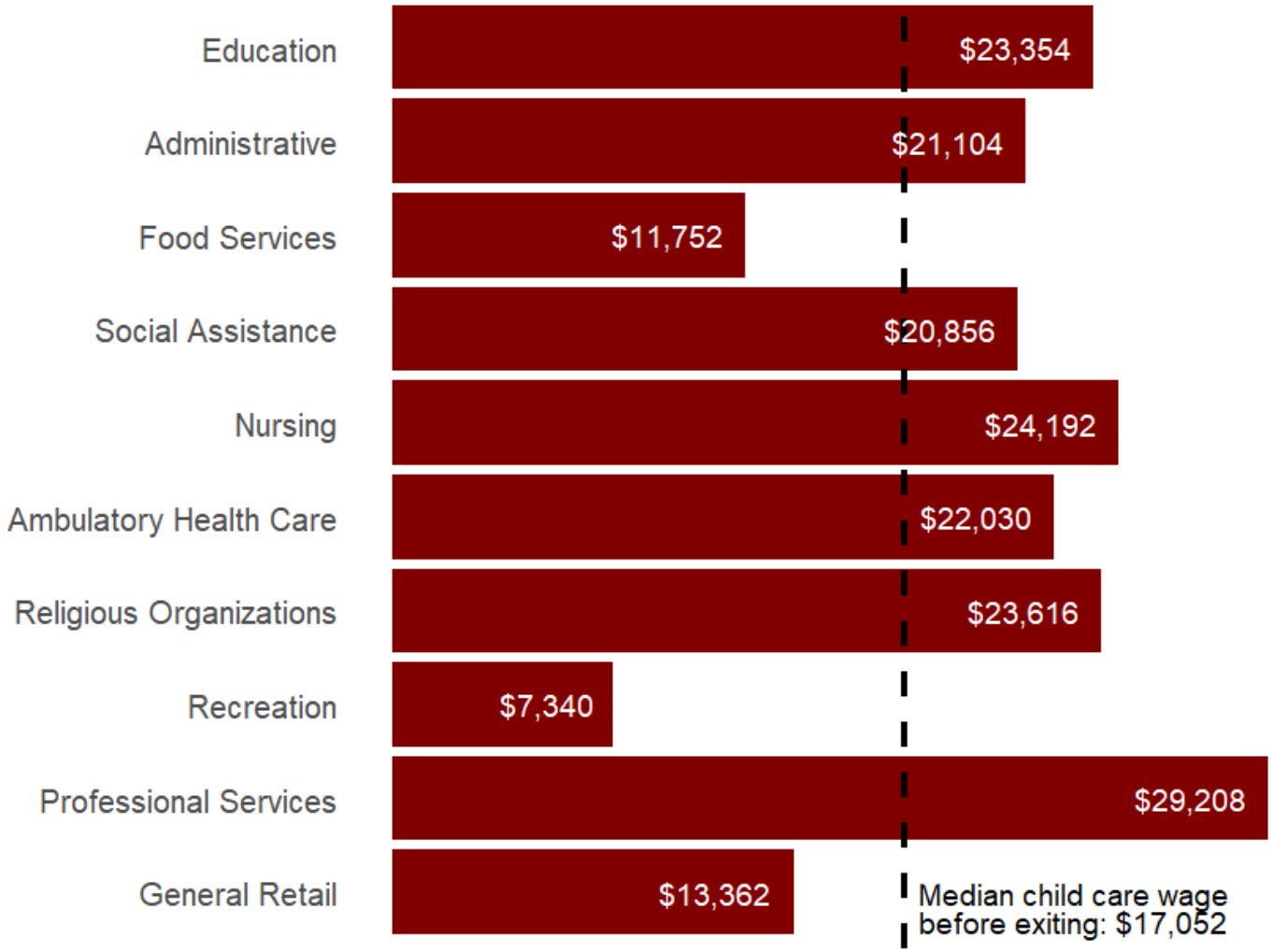
EXITING EMPLOYEES: SUBSEQUENT EMPLOYMENT

Figure 7. Most Common Industries of Employment for New Child Care Workers in 2010-2011 in their First Quarter after Leaving Child Care



EXITING EMPLOYEES: SUBSEQUENT WAGES

Figure 8. Median Annualized Wage Earned by Industry in the Year after Leaving Child Care, among workers first employed in CCEE in 2010-2011



TAKEAWAYS

What can we learn about the CCEE workforce from UI wage data?

- Movement into and out of other industries
  - Most common industries of past employment: Food Services
  - Most common industries after leaving childcare: Education
- Retention
  - Ability to track individuals over time
  - Half of new childcare workers left the industry after 2 years
- But very limited ability to understand subpopulations or unpack trends without linking to other data sources

Building and Sustaining the Child Care and Early Education Workforce

OPRE project page for BASE
https://www.acf.hhs.gov/opre/project/building-and-sustaining-early-care-and-education-workforce-base

FORTHCOMING BRIEFS

- Results of BASE project knowledge review: literature review, environmental scan, data scan
- Results of Illinois wage data analysis
- Methods brief describing how workforce dynamics measurements may be operationalized in state UI wage data
- Results of other secondary data analyses

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Thank you

APPENDIX ON COHORT SELECTION

ENTRY COHORT

- Individuals who begin jobs in the industry during a given period
- To understand tenure and advancement within a job
- 2019 entry cohort
  - New CCEE workers started in 2019 who had not previously worked in CCEE for as far back as 2005
  - Used in prior industry experience and prior wage analysis
- 2010-2011 entry cohort
  - New CCEE workers started in 2010-2011 who had not worked in CCEE in the 2 years before their start
  - Used in retention analysis

STABLE EMPLOYMENT

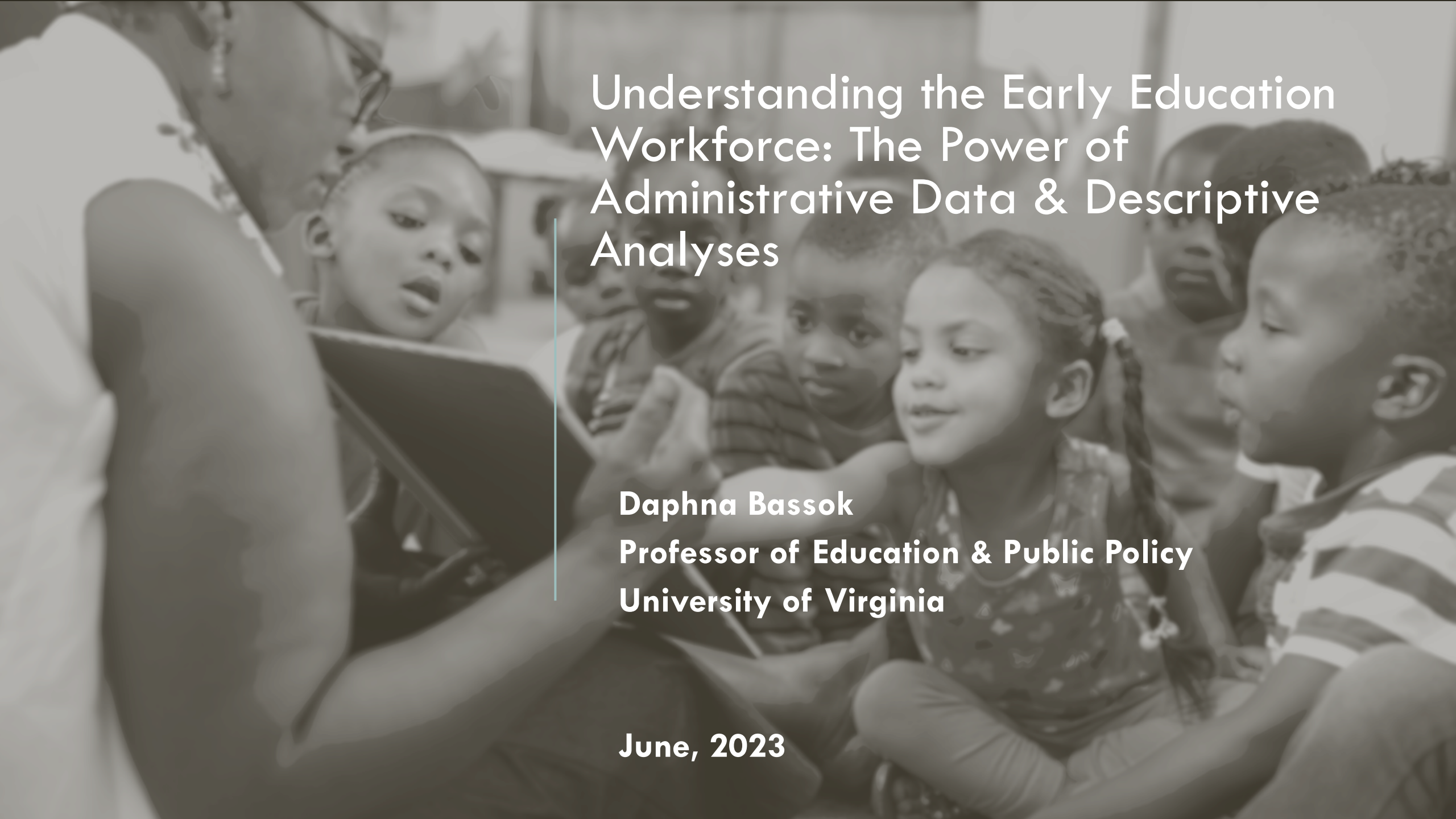
- Workers with wages in at least 3 consecutive quarters

Measures	-5	-4	-3	-2	-1	***t***	+1	+2	+3	+4	+5
Beginning-of-Quarter					■	■					
End-of-Quarter						■	■				
Full-Quarter					■	■	■				
Full-Quarter, *Previous Quarter*				■	■	■					
Reference Quarter						■					

Note: *t* indicates the focal quarter for which the defined measure (beginning-of-quarter employment, end-of-quarter employment, full-quarter employment, etc.) is true.

Source: https://lehd.ces.census.gov/doc/QWI_101.pdf (p.16)

- Useful for analysis using quarterly wage data
- Entry cohorts limited to individuals reached stable employment
- Removes seasonal, temporary, or other impermanent employment from analyses



Understanding the Early Education Workforce: The Power of Administrative Data & Descriptive Analyses

Daphna Bassok
Professor of Education & Public Policy
University of Virginia

June, 2023

PARTNERS & COLLABORATORS

PARTNERS & COLLABORATORS

DEPARTMENT of EDUCATION
Louisiana Believes

STUDY OF EARLY EDUCATION THROUGH PARTNERSHIPS

Anna J. Markowitz
Laura Bellows
Kate Miller-Bains

OUR RESEARCH

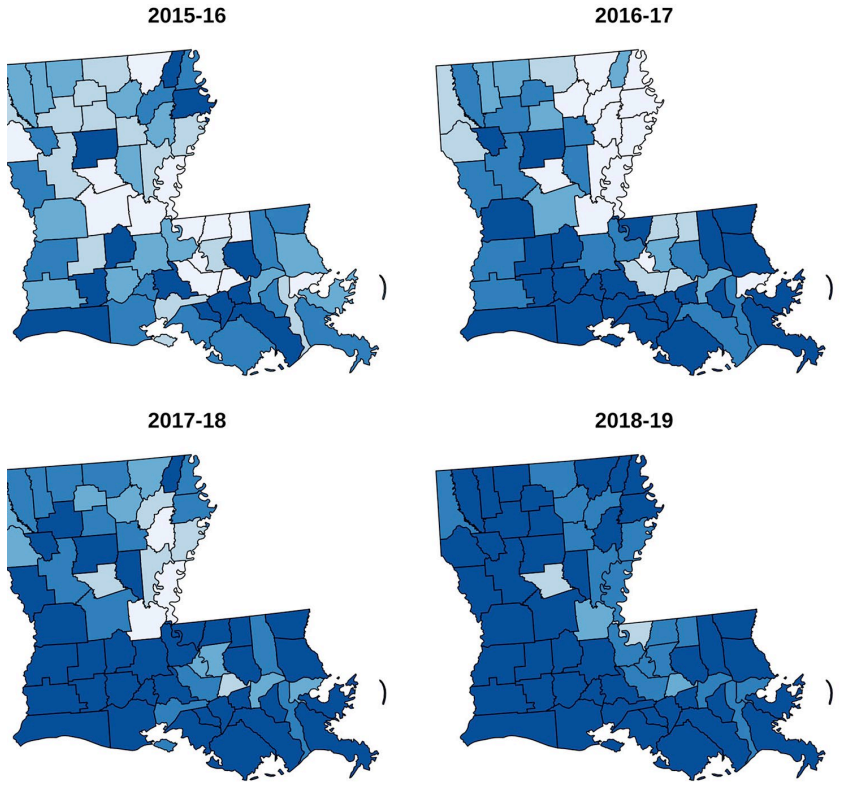
- Better understanding the nature of early childhood workforce challenges.
  - Building the data systems needed to understand basic ECE workforce questions.
- Evaluate the impact of policies aimed at improving early education systems, especially those aimed at supporting the workforce.

TURNOVER IN EARLY CHILDHOOD SETTINGS

- Teacher turnover creates instability for children & undermines investments in quality improvement
- However, estimating ECE teacher turnover is difficult due to data limitations
  - Very rarely have statewide data on ECE teachers
  - Even more rarely have comparable data across all sectors
  - Extremely uncommon to have data about turnover rates over time
- Many basic questions about turnover left unanswered (or answered anecdotally)

A UNIQUE OPPORTUNITY TO LEARN

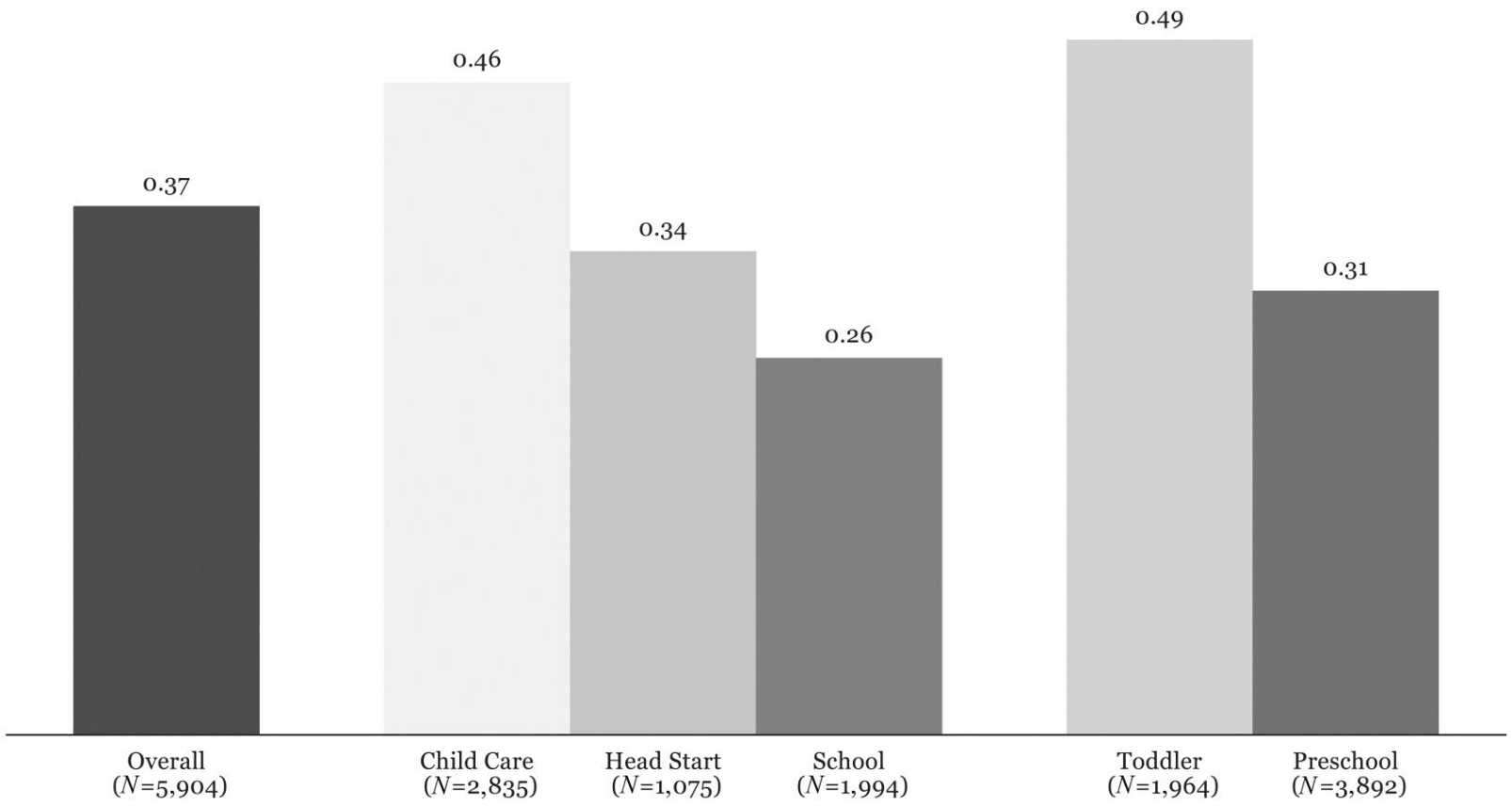
- Louisiana has a very unique Quality Rating & Improvement System (QRIS) (or ECE accountability system)
- All lead teachers across all publicly funded child care, Head Start, or school-based pre-k are observed at least once a semester
- This accountability system has allowed for an unprecedented look at ECE quality over time



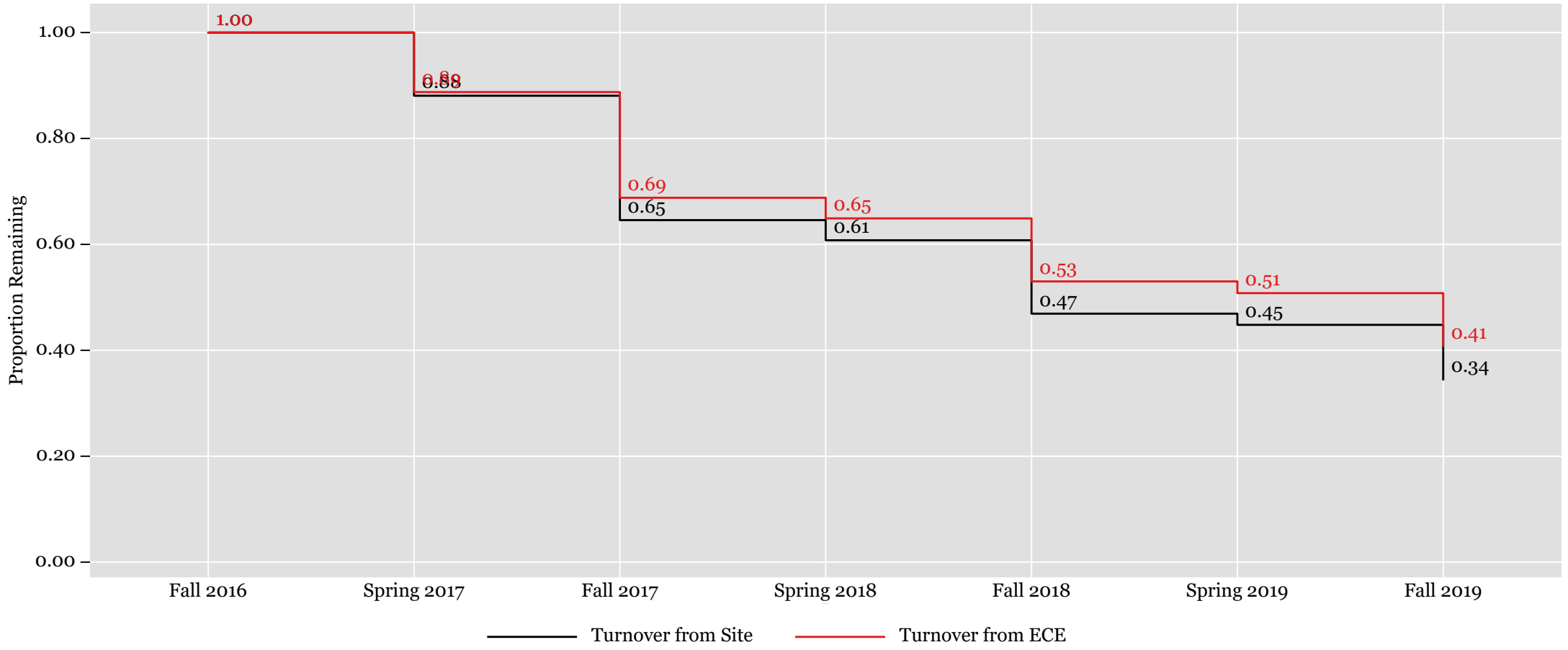
THE QRIS ALSO PROVIDED AN UNPRECEDENTED STATEWIDE LOOK AT THE WORKFORCE

- Since all classrooms were observed twice a year, we realized we could use the data to track statewide turnover.
- The first longitudinal dataset tracking all lead teachers in publicly funded ECE in a state
- Allowed us to explore novel questions:
  - What percentage of the ECE lead teachers leave from one year to the next?
  - How much does this vary across sectors?
  - What about turnover across multiple years? (or within years?)

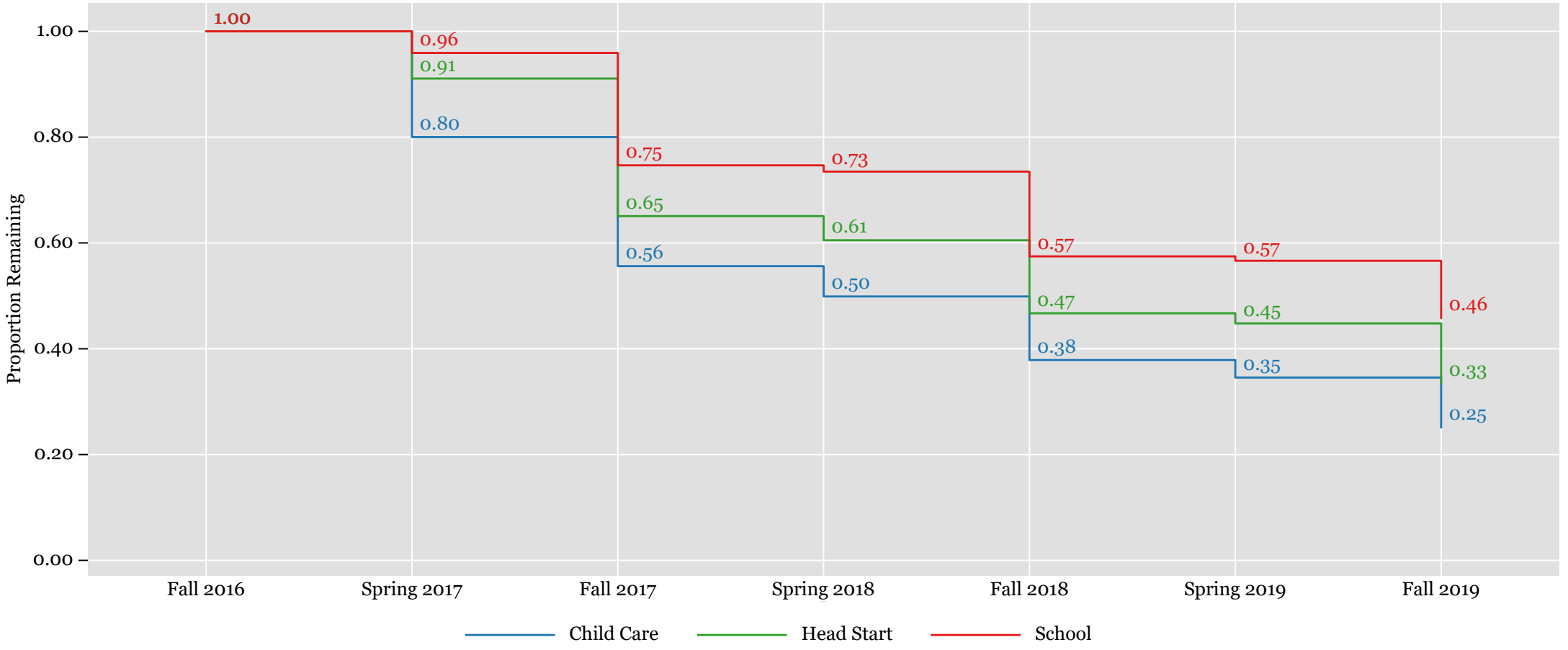
VERY HIGH TURNOVER RATES, ESPECIALLY IN CHILD CARE



MANY TEACHERS LEAVE BETWEEN THE FALL AND SPRING; TWO IN THREE LEAVE OVER A THREE YEAR PERIOD



OVERALL ECE TEACHER TURNOVER MASKS HUGE AMOUNTS OF VARIATION ACROSS SECTOR



KEY FINDINGS

- Extremely high turnover in early childhood settings
  - Nearly all job exits leave ECE altogether
- Particularly pronounced among child care teachers
  - 1 in 5 child care lead teachers in fall 2016 were no longer there by the spring
  - Three years out, 75% of child care teachers no longer at their site

- This level of instability has negative implications for children
- Heightened interest in better understanding the drivers of turnover, and the impacts of strategies to reduce turnover.

FURTHER DESCRIPTIVE EXPLORATIONS

- Which teachers are turning over?
  - What fraction of teachers who leave are new to the field?
  - How do teachers who leave differ from those who stay with respect to quality
- Do teachers who stay improve over time?
- Do all centers have high turnover or does it vary?

DATA CHALLENGES

No teacher identifiers- (fuzzy matching based on names)

Broad but imperfect coverage

- About 70% of providers statewide are subsidized
- Only lead teachers must be included in observation system
- Important information about teacher or site characteristics isn't included

Too reliant on observation system

When COVID hit, observations stalled, right when data on turnover would be most useful)

LESSONS

- Workforce challenges pose profound challenges for ECE access and quality
- But we lack the data essential to characterize the problem, or track progress.
- States collect a lot of routine data! -- close relationships and regularly scheduled meetings can open the door for new opportunities
  - While imperfect, existing data can provide key insights, and motivate larger-scale efforts
- Building ECE data systems is critical (and challenging!)
  - Virginia's LinkB-5

THANK YOU!

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To learn more:

www.see-partnerships.com