



National Survey of **Early Care & Education**

# NSECE Webinar: Levels of Geography in the NSECE

# Webinar Logistics

- Participant phone lines are muted.
- To ask a question:
  - Use the chat function in the lower right hand corner
  - From the menu at the top of the chat box on the right, select “chat with presenter”
  - Type your question and hit enter
- We will break periodically to answer questions.



# Main question for today

- What geographic analyses are possible with the NSECE data?
- It depends...
  - Do the data exist at all?
  - Are the data adequate (sample sizes, precision, variation)?
  - What permissions and resources are required?
  - What disclosure is permitted for reporting?



# Today's Objectives

- Describe levels of geography as used in sampling, analysis, linkage, and reporting
- Provide an example of analyses and data linkages that are feasible to carry out using NSECE
- Highlight resources available for users interested in using geographic data in the NSECE



# Overview of Webinar

- Quick overview of NSECE sample design
- Geography in **sampling** design
- Geography available for data **analysis**
- Geography available for **linking** NSECE to other data sources
- Other geography-related constructs
- **Reporting** NSECE estimates by geography
- An example: multi-level geographic data
- Concluding remarks



# 2012 National Survey of Early Care and Education (NSECE)

Sponsored by Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

*OPRE: Ivelisse Martinez-Beck (Federal Project Officer), Ann Rivera*

*Project Director: A Rupa Datta*

*Principal Investigator: Robert Goerge*

*Co-Principal Investigators: A Witte, L Gennetian, R Brandon*

*Data files and documentation team researchers from:*

NORC, led by Jill Connelly and Carolina Milesi

Chapin Hall, led by Wladimir Zanoni

Child Trends, led by Lina Guzman and Nicole Forry

IMPAQ, led by Yasuyo Abe



# Hypothetical example # 1

- Research question: What is the average listed price for infant care and does the listed price vary between low and high income communities?
  - **Sampling** : National sample
  - **Analysis**: National, disaggregated by community characteristics
  - **Linkage**: None
  - **Reporting guidelines**: No specific NSECE guidelines for public-use data



# Hypothetical example # 2

- Research question: What is the average listed price for infant care and does the listed price vary across states?
  - **Sampling:** Which states have adequate sample sizes of centers providing infant care to estimate a price?
  - **Analysis:** State-level analysis
  - **Linkage:** None
  - **Reporting:** State-level guidelines to minimize disclosure



# Hypothetical example # 3

- Research question: What is the average listed price for infant care and does the listed price vary by state-level regulations on child-staff ratios?
  - **Sampling:** All 50 states and DC
  - **Analysis:** National, groups of states, or state-specific
  - **Linkage:** Data on state-level regulations
  - **Reporting:** Could be national, by regulation type, by state, or by groups of states





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# NSECE Sampling Design

# 2012 National Survey of Early Care and Education

- An integrated set of surveys conducted in 2012 with
  - Households with children under 13
  - Home-based providers regularly providing early care and education to children under 13
  - Center-based programs providing early care and education to children not yet in kindergarten
  - Center-based classroom-assigned staff



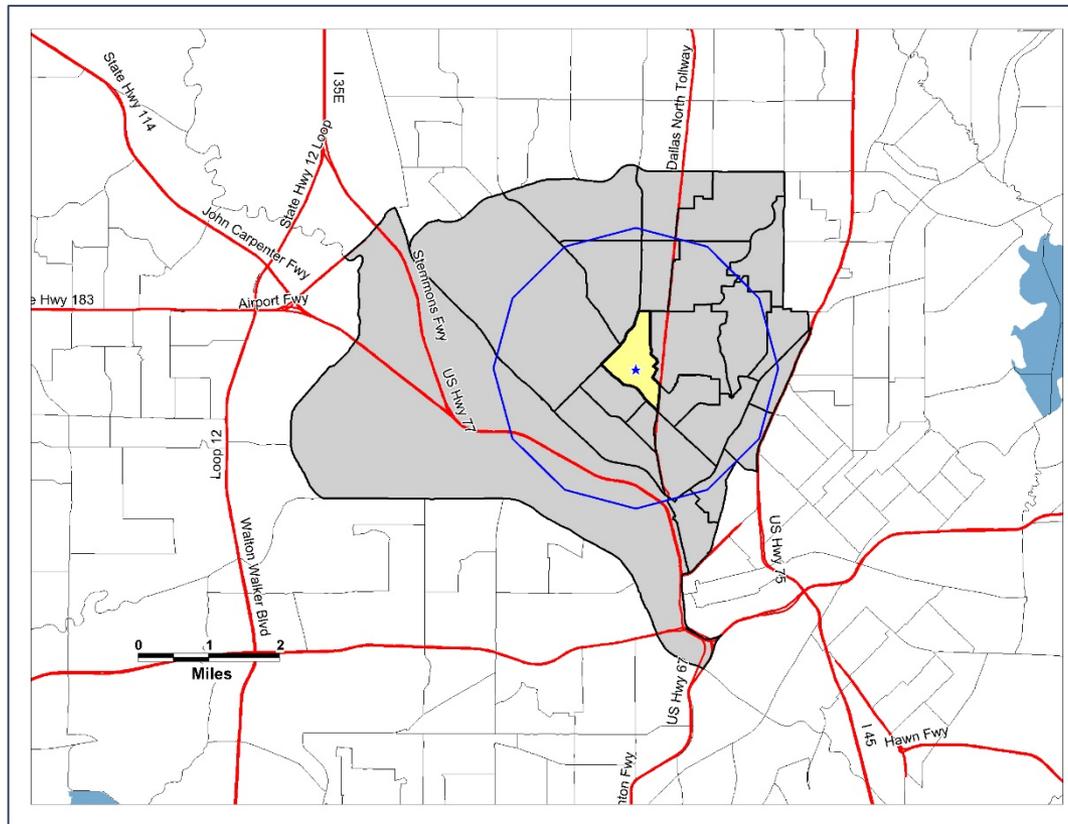
# Key geographic elements

- National scope
  - Data collected across all 50 states and DC
- Place-based aspects of child care provision
  - Survey of households and ECE providers in same locale
- Oversample of low-income communities



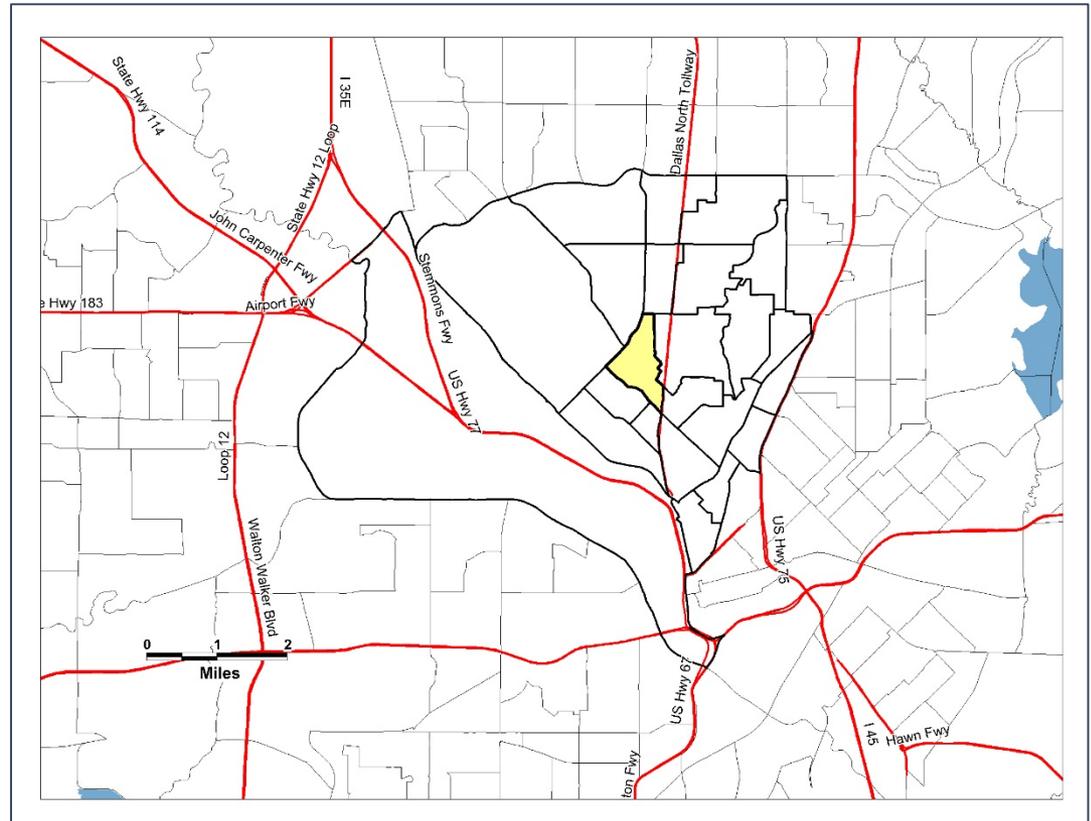
# NSECE Provider Cluster

## Supports National and Local Analyses



# Hypothetical Provider Cluster

- Yellow
  - anchor tract selected for Household survey

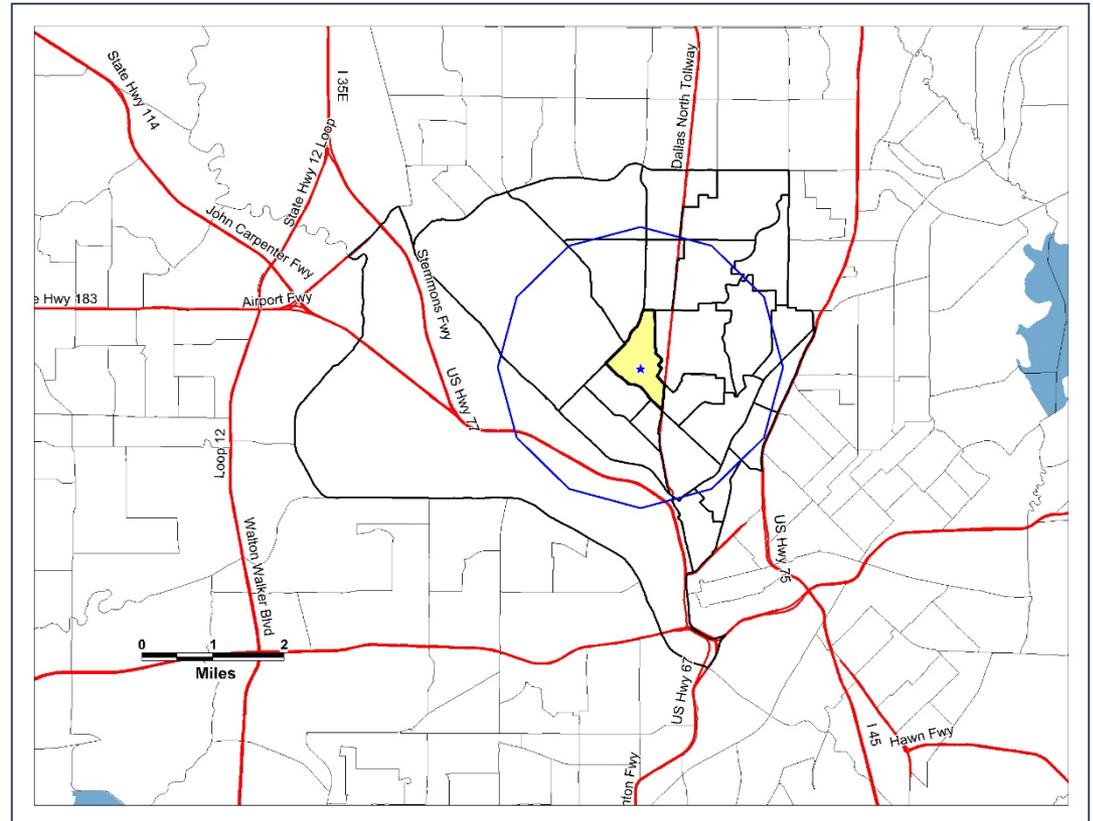


Dallas County 0006.01



# Hypothetical Provider Cluster

- Yellow
  - anchor tract selected for Household survey
- Blue star
  - population centroid
- Blue circle
  - a radius of 2 miles

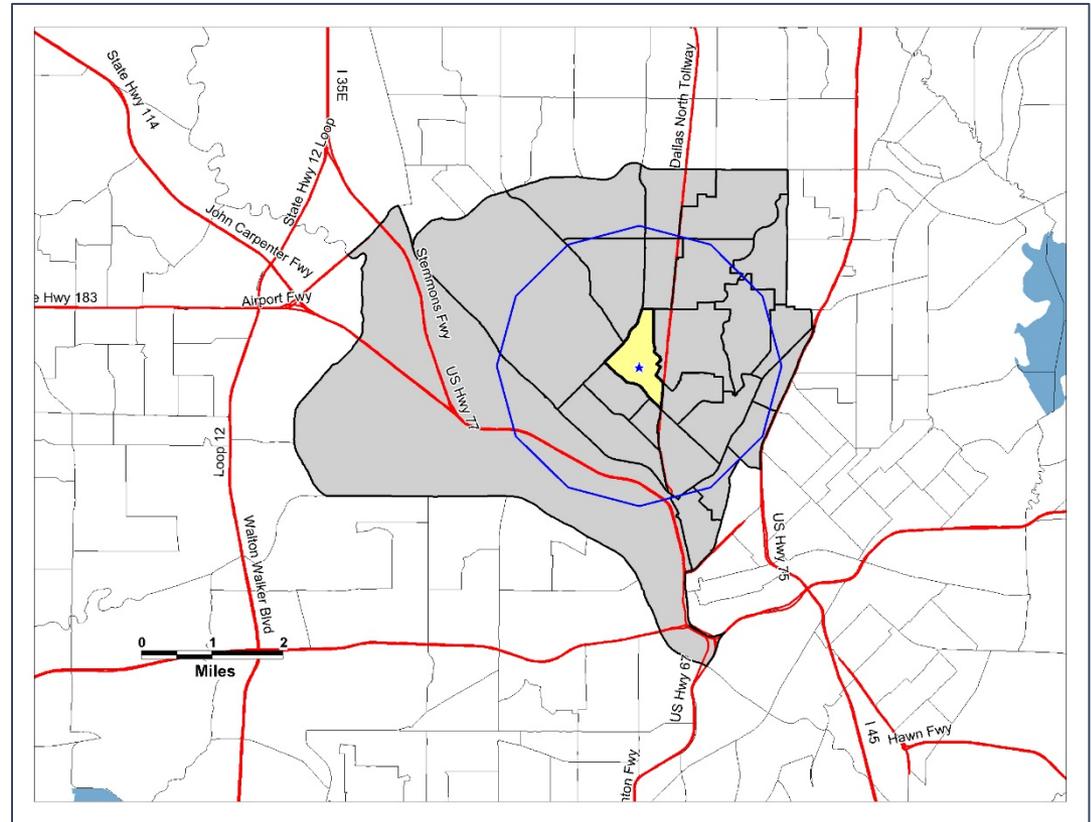


Dallas County 0006.01



# Hypothetical Provider Cluster

- Yellow
  - anchor tract selected for Household survey
- Blue star
  - population centroid
- Blue circle
  - a radius of 2 miles
- Grey
  - intersecting “scatter” tracts



Dallas County 0006.01



# Counting Levels

- States
  - All 50 states plus DC
- Counties/County Clusters
  - 219 total, with at least 2 per state
- Provider Clusters
  - 755 total, with at least 2 low-income and 1 non-low-income per county/county cluster





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# Analysis of various levels of geography in NSECE data

# NSECE supports analysis at multiple levels of geography

- National
- Community characteristics where households and providers are located
- State
  - Single state or subgroups of states
- County
- Provider cluster
  - Supply and demand of ECE



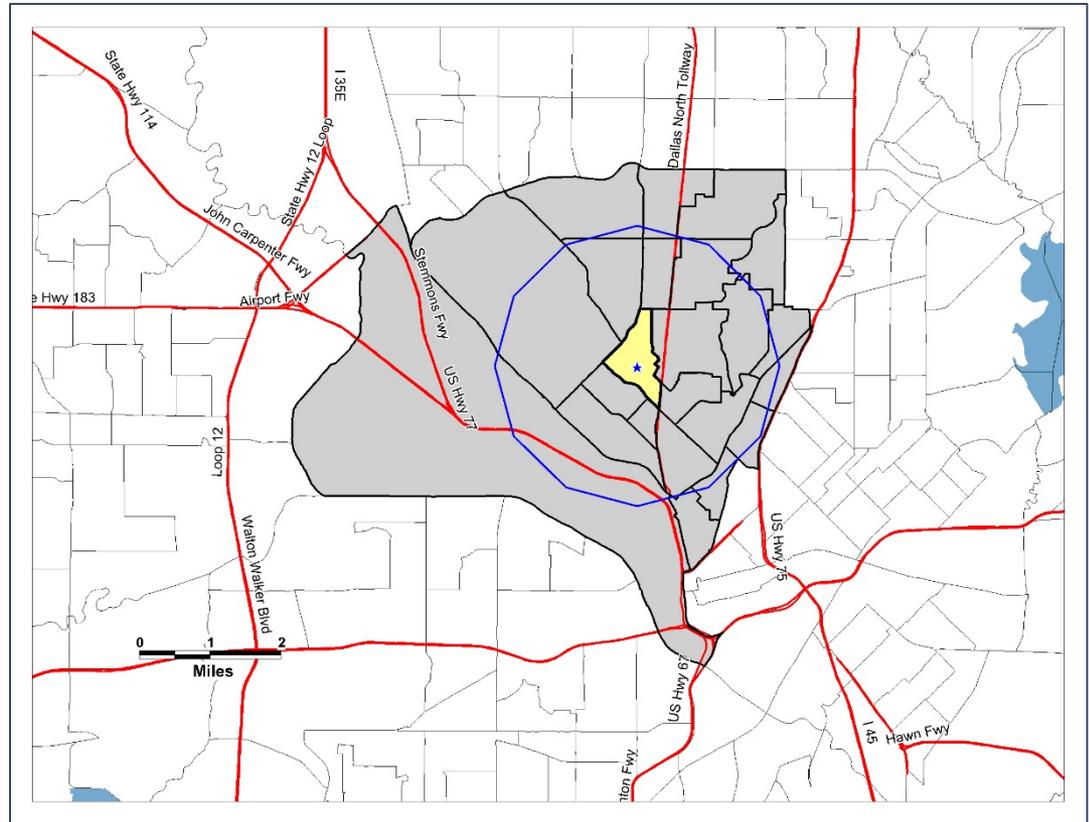
# Community Characteristics

- Cluster

- Anchor tract: Responding unit (HH, CB, HB)
- Population centroid, a radius of 2 miles, intersecting "scatter" tracts

- Characteristic

- Adjusted mean of tract-level ACS data
- Adjust by # of children < 18 years and (inverse) distance from anchor tract



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# Linkage

# Linkage of NSECE to non-NSECE data sources

- Linkage may be done at various levels
  - State level
  - County level
  - Address level
- Due to disclosure restrictions, some linkages must be done by the NSECE team.





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# Reporting guidelines

# Why do we care about disclosure?

- IRB and Certificate of Confidentiality require NORC and OPRE to protect the identity and data of all respondents who participated in NSECE
- This includes not only protecting from against disclosure to third parties, or outside intruders
- But also against respondents identifying themselves or others in the data
- Damages respondent trust of NORC and OPRE and future NSECE data collection



# Disclosure risk varies across NSECE files

- Disclosure risk of center-based providers is greatest
  - Sampling frame constructed from publically available administrative lists
  - Relatively small sampling frame, ~100K
  - High sampling rate
  - Many attributes that are on public data files or easily known
- Even though disclosure risks of HHs and HB are lower than centers, linkages between providers and households need to be carefully considered



# Reduction of disclosure risk via availability of geography data

- Suppress geographic variables such as:
  - No information on distance from HH to work in public-use or restricted Level-1 files
  - No identification of state in public-use or restricted Level-1 files
  - No identification of sub-state units in Level-2 files
- Coarsen geography: Provide less specific geographic data where risk is high, such as:
  - Categorical version of distance from HH to providers in public-use files versus continuous version in Level-2 files
  - “Fake” cluster IDs in Level-2 files



# Reduction of disclosure risk via reporting guidelines

- Three basic criteria
  - Suppression of cells with small unweighted Ns
  - Rounding of unweighted counts and weighted estimates
  - Number of significant digits displayed in tables and graphs
- Because disclosure risk varies across files, thresholds used in guidelines also vary across files
  - Details in NSECE Level-1 and Level-2 disclosure guidelines





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# Research Example



# **Child Care Choices of Immigrant Families with Young Children:**

## **Use of Multiple Geographies for Analysis**

Julia Gelatt, Migration Policy Institute  
Heather Sandstrom, Urban Institute

NSECE Webinar  
February 22, 2018

# Acknowledgements

Funded by a Secondary Analyses of Data on Early Care and Education (SADECE) Grant from the Office of Planning, Research and Evaluation in the Administration for Children and Families, US Department of Health and Human Services

Award Number 90YE0171-01-00

Project Officer: Nina Philipsen Hetzner, Ph.D.

# Relevant research questions of our project

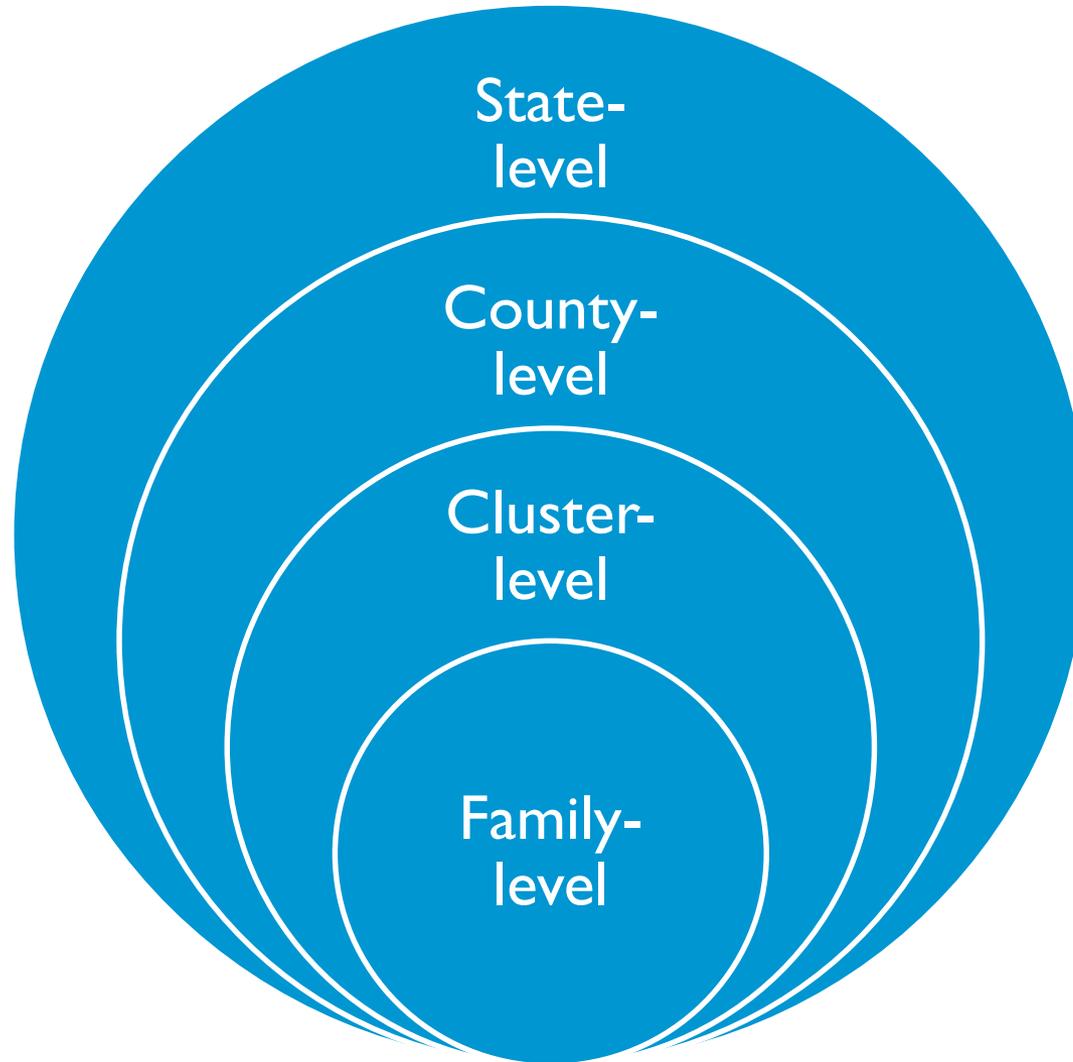
1. What child care settings do immigrant parents use, and how do they differ from those used by families headed by US-born parents?
2. What factors are associated with using center-based care, e.g. parental preferences, family demographics, parental employment, community demographic characteristics, and local child care market characteristics?
3. Among low-income families, what state subsidy policies are associated with higher subsidy uptake and greater use of center-based care?

# Data Sources

# Data sources used

- NSECE household survey
- NSECE household calendar file
- NSECE center-based provider survey
- CCDF Policies Database, maintained by the Urban Institute
- 2012 American Community Survey
- Original coding of state policies toward immigrants (public benefits, immigration enforcement)

# Measures at multiple levels



# Household-Level Data

# Household and child-level measures

## Household data file

- Family demographic characteristics: age, gender, marital status
- Family socioeconomic status: respondent educational attainment, household income
- Parental employment characteristics
- Parental child care preferences: rating of different types of care along various dimensions of quality

## Calendar data file

- Weekly work hours for parents

# Cluster-Level Data

# Cluster-level measures

## Cluster demographics

- Population density (urban, suburban, rural), Latino population share, poverty density, local median household income

## Cluster-level supply of center-based care

- From center-based provider survey
- Cluster-level characteristics
- Number of center-based slots
- Characteristics of those slots: share funded by PreK, Head Start, subsidies; share with transportation; share with a quality rating, etc.

# Opportunities and challenges

## Opportunities

- NSECE provides a rare opportunity to look at how both demand (household characteristics & preferences) and supply (child care markets) shape family decisions and practices

## Challenges

- Dependence on the NSECE team requires building in extra time for these processes
- Masking rules limit some analysis opportunities
- Particularly if you are the first analysis team to present a certain situation: Some back and forth required

# County-Level Data

# County-level measures

## County-level child care subsidy policies

- For states with county-run subsidy programs
- Our original coding of subsidy policies: income thresholds, co-pay amounts, reimbursement rates, eligibility redetermination periods, etc.

# Opportunities and challenges

## Opportunities

- Great opportunity to connect sub-state information
- NSECE data team was very willing to work with us to determine what could be merged on, without disclosure risk

## Challenges

- We were not allowed to access county IDs, worked with NSECE team to do the merge
- In many cases, individual counties not identifiable, rather county clusters. Not all counties in a cluster.
- Lots of back and forth to determine what was feasible

# State-Level Data

# State-level measures

## State-level child care subsidy policies

- From CCDF Policies Database: income thresholds, co-pay amounts, reimbursement rates, eligibility redetermination periods, etc.

## State-level context for immigrant households

- State-level data from American Community Survey on public benefits take-up rates among low-income immigrant households
- Original coding of state policies toward immigrants, developed for a different project

# Opportunities and challenges

## Opportunities

- Easy to add state-level information: NSECE team uploaded files for us, we could merge ourselves using state FIPS codes in the data
- Allows all sorts of analysis of state-level context measures

## Challenges

- Short delay for NSECE team to upload files for you
- If your goal is to report on state-level characteristics or outcomes, need to carefully review disclosure rules

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# Concluding Comments

# Geography can affect how...

- The NSECE **sampling** design supports your work:
  - FIXED
- You **analyze** NSECE data
  - FLEXIBLE
- You can **link** NSECE data to other sources
  - FLEXIBLE
- NSECE estimates can be **reported**
  - SOMEWHAT FLEXIBLE, WITH FIXED REQUIREMENTS



# Are State-level Analyses Possible?

- In-depth analyses of only my state
  - “Among workers in state Y...”
  - Probably only for the largest 8-12 states
- High-level state-level comparisons
  - “X% of states have centers that...”
  - Possibly up to 30 states are feasible
- Incorporation of state characteristics
  - “In states that require licensing for subsidies...”
  - Definitely for 50 states + DC



# 2019 NSECE is Coming!

- Listed Home-based, Center-based and Center-based Classroom-assigned Workers
- Sample sizes will be similar to 2012
- States or other entities can provide funds to supplement sample sizes in specific locations. This can alter what is possible for a state in the 2019 data.





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# Key resources

# NSECE Resource Page

**Child Care & Early Education**  
**RESEARCH CONNECTIONS**

*Promoting high-quality research and informing policy through free access to thousands of publications and datasets*

MyData Login

Browse: [Author/Topic](#)

Search the collection

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[Find Data & Resources](#) - [Understand Research](#) - [Make Connections](#) -

## Resources from the National Survey of Early Care and Education

Questions about the data files or documentation? Email the NSECE team at [nsece@norc.org](mailto:nsece@norc.org)

OPRE is sponsoring an NSECE Users' Group to provide a forum for researchers to learn from one another and to help the NSECE team develop the most useful technical assistance materials. You can [join the mailing list for the group](#).

**About** | **The Data** | **Tutorials** | **Research Reports and Briefs** | **Instruments**

### About the NSECE

The NSECE provides a comprehensive picture of the use and availability of early care and education (ECE) across the United States. The study is funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families (ACF) and consists of a set of four integrated, nationally representative surveys conducted in 2012. There were surveys of:

1. Households with children under 13,
2. Home-based providers of ECE,
3. Center-based providers of ECE, and
4. The center-based provider workforce.

Together they characterize the supply of and demand for early care and education in America and permit better understanding of how well families' needs and preferences coordinate with providers' offerings and constraints.

For more information on the design of the NSECE, please see the [summary data collection and sampling methodology report](#).

For a more detailed picture of the NSECE sample design, please see the [NSECE sampling report](#).



# Contact us!

[nsece@norc.org](mailto:nsece@norc.org)





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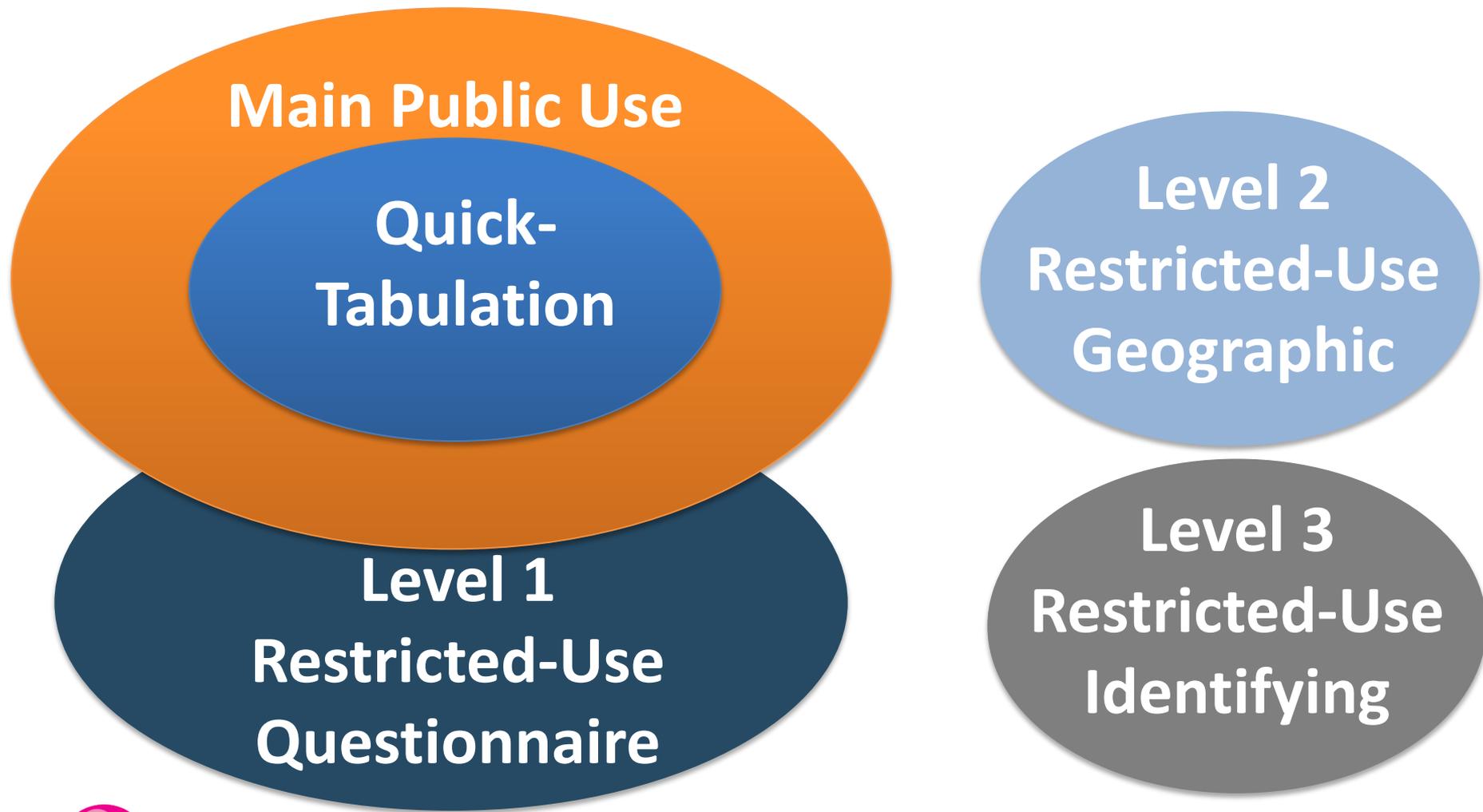
# Questions, Comments, Curiosity?



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# Access to geographic level information

# Different Types of Files



# Public Use and (Level 1) Restricted Use

- “Large” geographic areas such as region
- Limited set of community characteristics, such as urban density and poverty density
  - Categorical variables
- Distance variables in categorical form
  - HH to Provider
  - HH to Work
  - Distance for Parent not in HH (Section A)



# (Level 2) Restricted Use Geographic Files

- State name
- County or county cluster
- County-level sampling weight
- Cluster ID Cluster-level sampling weight
- Continuous version of all distance variables



# (Level 3) Restricted Use Identifying Data - Archive

- Household identifiers and consent status for merging admin data
- Provider name/location
- GIS location of household employers and providers

