Thank you for your interest in today’s program, Data-driven Change at the Community Level: Emerging Research on Urban Child Health.

The program will begin at approximately 1:00pm ET.

Audio will be available through your computer speakers, or you may dial in to listen to the event:

Dial: 1-877-407-9036

(Note: Your line will be muted upon entry and you will hear hold music until the program starts.)
DataSpeak

Data-driven Change at the Community Level: Emerging Research on Urban Child Health.

July 24, 2017
Today’s Presenters

- **Renee D. Boynton-Jarrett, MD, ScD**, associate professor of pediatrics at the Boston University School of Medicine and founding director of the Vital Village Community Engagement Network, will showcase the development and community-focused uses of the Vital Village data dashboard.

- **Claudia J. Coulton, PhD**, Distinguished University Professor at Case Western Reserve University and founder and Co-Director of the Center on Urban Poverty and Community Development, will present on how the Child Longitudinal Data System was developed and how it has been used to explore the links between housing quality, the foreclosure crisis, and elevated blood lead levels.

- **Lisa M. Sontag-Padilla, PhD**, behavioral and social scientist at the RAND Corporation, will discuss the development of a databook on child socio-emotional health using data from the CANDLE (Conditions Affecting Neurocognitive Development and Learning in Early childhood) study and other data sets on families in Memphis and Shelby counties.
Previous Events

Click here to access archives:

2016 Series:

- Utilizing the Title V Information System Data and the Federally Available Data Resource Document
- Disparities in the Health and Well-Being of Children and Youth in Rural Areas of the United States
How To Ask A Question

• To ask a question **on the Web**: 
  – Enter your question in the field at the bottom of the “QUESTIONS” box at the bottom of your screen and hit enter. Your question will be sent directly to the moderator.
Boston Medical Center

Vital Village Network

Renée Boynton-Jarrett, MD, ScD
Associate Professor of Pediatrics
Founding Director, Vital Village Network

With generous funding from the Doris Duke Charitable Foundation
Objectives

- Leveraging existing data for child wellbeing
- Adjacent possibilities and partnerships
- Community engagement
  - data and design process
- Village Vital Signs
  - publically accessible data dashboard
Boston Medical Center

- Boston Medical Center (BMC) is the largest safety net hospital in New England
- 8 BMC-affiliated Federally Qualified Community Health Centers
- Electronic Health Record (EMR) from 1999
- MA Health Disparities Repository (MHDR)

www.vitalvillage.org
Establish a platform for tracking benchmarks of child wellbeing.

Village Vital Signs: longitudinal, geocoded data

- MA Clinical Data Repository
- Child Opportunity Index
- Early Intervention
- Dept. Transitional Assistance
- Public Health Commission
- Boston Housing Authority
- Dept. Children and Families
- Boston Public Schools
- Boston Police Department

Shared Data Warehouse: Publicly Accessible

- Caregivers can obtain information
- Service Providers
- Agencies, Schools, Clinics

Communities can ask new questions

www.vitalvillage.org
Establish a platform for tracking benchmarks of child wellbeing.

www.vitalvillage.org
Vital Village Partnership with BPI

1. • Develop shared indicators of child well-being
   • Child health, educational outcomes, and developmental outcomes

2. • Integrate important contextual data on opportunities for children
   • Boston Metro Child Opportunity Index
   • Boston crime data (Boston Police Dept.)

3. • Work together to track neighborhood improvements, regional patterns, better understand community assets and challenge
   • Inform programming and policy

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Opportunity Varies across Boston Neighborhoods

Boston Metro Area

- Boston is among the most inequitable metro areas in neighborhood opportunities for Hispanic and Black children.
  - 6 in 10 Hispanic children and over half of Black children live in very low opportunity neighborhoods in Boston.
Opportunity Varies across Boston Neighborhoods

**Child Opportunity Index**

**Educational Opportunity**
- Student poverty rates in local schools
- Neighborhood schools’ student proficiency in ELA
- Neighborhood schools’ student proficiency in Math
- Proximity to early childhood education (ECE) centers
- Proximity to quality early childhood education (ECE) centers
- Early childhood education participation rates
- High school graduation rates
- Adult educational attainment

**Health & Environmental Opportunity**
- Proximity to health facilities
- Retail healthy food environment
- Proximity to toxic waste and release sites
- Volume of nearby toxic release
- Proximity to parks and open spaces
- Housing vacancy rates

**Social & Economic Opportunity**
- Foreclosure rate
- Poverty rate
- Unemployment rate
- Public assistance rate
- Proximity to employment
Opportunity Varies across Boston Neighborhoods

**Violent Crime Rate**

- Childhood adversities affect chronic disease risk.

- High violent crime rate is associated with very low Child Opportunity
  - 2009 Boston Police Department violent incidents (robbery, assault, murder)
  - Aggregated census-tract level crime rates as incidents per square mile.

[Image of map showing the distribution of Child Opportunity Index and Violent Crime Rate across Boston neighborhoods.]

www.vitalvillage.org
Opportunity Varies across Boston Neighborhoods

Clustering of Violent Crime

- Patterning of risk for low opportunity and crime is regional

- Clustering of census tracts with high violent crime rates (green highlight) overlaid clustering of very low Child Opportunity

Child Opportunity Index and High Violent Crime Clusters

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Child Opportunity Index & Obesity Rate

• BMC aggregate EMR data on obesity for children ages 3-18 years old.

• Rates of obesity correlate with very low opportunity (COI), but outliers are present.

• Census tract violent crime is significantly associated with rates of childhood obesity.
## Multivariable Poisson models for childhood obesity rate by Boston census tract

<table>
<thead>
<tr>
<th>Obesity</th>
<th>Neighborhood FE - IRR</th>
<th>Neighborhood FE - Robust SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>15.49**</td>
<td>3.52</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1.04**</td>
<td>0.04</td>
</tr>
<tr>
<td>Proportion black</td>
<td>1.32*</td>
<td>0.15</td>
</tr>
<tr>
<td>Proportion female</td>
<td>1.01</td>
<td>0.26</td>
</tr>
<tr>
<td>Average age</td>
<td>1.00</td>
<td>0.19</td>
</tr>
<tr>
<td>Median income</td>
<td>0.99**</td>
<td>0.00</td>
</tr>
<tr>
<td>Opportunity index</td>
<td>0.73**</td>
<td>0.05</td>
</tr>
<tr>
<td>Violent Incidents/mi²</td>
<td>1.01**</td>
<td>0.00</td>
</tr>
<tr>
<td>Spatial Lag (Rho)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AIC</td>
<td>551.238</td>
<td></td>
</tr>
<tr>
<td>Global Moran’s I p-value</td>
<td>0.394</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05
**p<0.001

IRR: Incidence Rate Ratio
FE: Fixed Effects
COI & Hypertension Rate among Children in MHDR

• BMC aggregate EMR data on hypertension for children 3-18 years old.

• Hypertension for children associated with COI.

• Clusters of high crime census tracts are significantly associated with high rates of hypertension

www.vitalvillage.org
Multivariable Poisson models for child hypertension rate by Boston census tract

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>Neighborhood FE - IRR</th>
<th>Neighborhood FE - Robust SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>11.80**</td>
<td>5.30</td>
</tr>
<tr>
<td>Obesity</td>
<td>1.01**</td>
<td>0.00</td>
</tr>
<tr>
<td>Proportion black</td>
<td>2.35*</td>
<td>0.84</td>
</tr>
<tr>
<td>Proportion female</td>
<td>1.67</td>
<td>1.12</td>
</tr>
<tr>
<td>Average age</td>
<td>1.53</td>
<td>1.07</td>
</tr>
<tr>
<td>Median income</td>
<td>0.99**</td>
<td>0.00</td>
</tr>
<tr>
<td>Opportunity index</td>
<td>1.31</td>
<td>0.28</td>
</tr>
<tr>
<td>Violent Incidents/mi^2</td>
<td>1.00</td>
<td>0.01</td>
</tr>
<tr>
<td>Spatial Lag (Rho)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AIC</td>
<td>173.433</td>
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<tr>
<td>Global Moran’s I p-value</td>
<td>0.267</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

**p<0.001

IRR: Incidence Rate Ratio
FE: Fixed Effects
Spatial Analysis

Violent Crime Rate

Child Obesity Crime Rate

Child Hypertension Rate

Local Moran’s I Spatial analysis with False Discovery Rate adjustment
Adjacent Possibilities

Vital Village Network and Boston Promise Initiative Partnership to share data, resources, and accountability
## Child Opportunity Index and School Climate

<table>
<thead>
<tr>
<th>Measure</th>
<th>Census Tract 902 (Burke &amp; Dearborn)</th>
<th>Census Tract 801 (Orchard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPD Violent Crime Rate</td>
<td>8.4</td>
<td>4.6</td>
</tr>
<tr>
<td>(incidents per sq mile in 2009)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Travel to School</td>
<td>14.25</td>
<td>9.43</td>
</tr>
<tr>
<td>(% strongly disagree/ disagree)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Safety</td>
<td>19.62</td>
<td>7.55</td>
</tr>
<tr>
<td>(% strongly disagree/disagree)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Physical Activity</td>
<td>32.78</td>
<td>26.47</td>
</tr>
<tr>
<td>(% ≤2 days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will be Successful</td>
<td>5.0</td>
<td>3.92</td>
</tr>
<tr>
<td>(% definitely or probably not)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Map showing COI and school climate measures](image)
“I guess like the more people around my neighborhood get hurt and it comes closer to home. Not literally but emotionally. One by one as more get hurt. And then it will be someone close to me.”

Danielle, age 14

From mixed-methods study involving 40 caregiver-child dyads
The Geography of Opportunity

• Child Opportunity Index allows exploration of:
  – Multiple neighborhood-level factors
  – Adjacent geographic regional context

• Identification of positive deviance and outliers

• Enhanced opportunity for:
  – Comprehensive metrics and evaluation tools within place-based efforts
  – Comparison across place-based efforts
  – Population-level change surveillance model

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Implications

• High crime rates are associated with very low child opportunity and both associated with poorer school climate.

• Both crime and child opportunity index are associated with early predictors of cardiovascular health risk: obesity and hypertension.

• Policy makers may use this information to consider the population health benefit of crime reduction and building community assets.
Community Engagement with Data
Village Vital Signs Design Process
Vital Village is a network of residents and agencies committed to maximizing child, family, and community wellbeing.
Vital Village Network

- Building community capacity to promote healthy social and emotional development in early childhood.
- Integrating a trauma-informed framework for preventing childhood adversity into the context of existing systems and community-based efforts for early childhood health and education.

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Vital Village Network Theory of Change

- Vital Village Network
  - Build Institutional Capacity
    - Enhanced Community Resources
    - Efficient Cross Sector Synergy
    - Civic Participation
    - Enhanced Social Networks
  - Community Engagement
    - Increase Protective Factors at Family & Community Level
      - Prevent Child Abuse & Neglect
      - Improve Child Wellbeing

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1. Catalyze collaborations between community institutions and agencies and residents.

2. Lead by listening. Listen and respond to community needs, assets, and community driven solutions.

3. Foster cross-sector, collective actions to promote equity and enhance existing efforts with innovations.

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A participatory model to drive the design and dissemination process for Vital Village Signs, including:

- determining indicators
- sharing findings
- formulating action plans
- highlighting community assets and resources
Idea behind the Postcard
Social Cohesion

Neighborhood Engagement & Connectivity

The majority of community members surveyed agreed that people around their neighborhoods are willing to help each other.

- None: 41%
- 1 or 2: 41%
- 3 or 4: 9%
- 5 or more: 9%

Number of neighbors that community members said they could ask for help with childcare:

Why This Matters

1. People who report knowing and trusting their neighbors are also more likely to report higher rates of health and well-being. *

Parents and caregivers in “close-knit” neighborhoods are more likely to exchange information, support one another, and work together to achieve common goals. **

Call to Action

- Volunteer in your local community
- Greet those you pass in your neighborhood with a friendly hello, or a smile
- Join the PTA at your child’s school


** Commission to Build a Healthier America
Objective: Enhance qualitative data with human narrative

- Invited feedback from the network
- Selected content and designed layout

Shared postcard at the bWell Center

- Discussed responses
- Reviewed feedback form

Shared revised postcard
### The Iterative Process

#### Receptiveness Feedback Form

<table>
<thead>
<tr>
<th>Parent</th>
<th>Date</th>
<th>Parent Gender</th>
<th>Child’s Estimated Age</th>
<th>Estimated Duration of Conversation</th>
<th>Receptive body language [smiled, turned body towards us, nodded] (X)</th>
<th>Did they find the information useful? (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>2/24/16</td>
<td>F</td>
<td>7 + 12</td>
<td>3 min</td>
<td>Happy, receptive</td>
<td>Maybe</td>
</tr>
<tr>
<td>31</td>
<td>2/24/16</td>
<td>F</td>
<td>3 mo</td>
<td>10 min</td>
<td>Warm, welcoming, chatty</td>
<td>Maybe</td>
</tr>
<tr>
<td>32</td>
<td>2/24/16</td>
<td>F + M</td>
<td>9 mo</td>
<td>5 min</td>
<td>Nice, receptive</td>
<td>Maybe</td>
</tr>
<tr>
<td>33</td>
<td>2/24/16</td>
<td>F + M</td>
<td>4</td>
<td>5 min</td>
<td>Nice, receptive</td>
<td>Maybe</td>
</tr>
<tr>
<td>34</td>
<td>2/24/16</td>
<td>M</td>
<td>3 + 7</td>
<td>5 min</td>
<td>Nice, receptive</td>
<td>Yes</td>
</tr>
<tr>
<td>35</td>
<td>2/24/16</td>
<td>F + M</td>
<td>7 + 10</td>
<td>10 min</td>
<td>Nice, receptive</td>
<td>Yes</td>
</tr>
<tr>
<td>36</td>
<td>2/25/16</td>
<td>F</td>
<td>10 yrs</td>
<td>2 min</td>
<td>Not receptive</td>
<td>No, not from neighborhood</td>
</tr>
<tr>
<td>38</td>
<td>2/25/16</td>
<td>F</td>
<td>9, 10, 12</td>
<td>4 mins</td>
<td>Receptive, chatty</td>
<td>Yes</td>
</tr>
<tr>
<td>39</td>
<td>2/25/16</td>
<td>F + M</td>
<td>11 yrs</td>
<td>3 mins</td>
<td>Receptive</td>
<td>Yes</td>
</tr>
<tr>
<td>40</td>
<td>2/25/16</td>
<td>F</td>
<td>5 mos</td>
<td>3 mins</td>
<td>Receptive</td>
<td>Yes</td>
</tr>
<tr>
<td>41</td>
<td>2/25/16</td>
<td>M</td>
<td>~6 mos</td>
<td>5 mins</td>
<td>Receptive</td>
<td>Yes</td>
</tr>
<tr>
<td>42</td>
<td>2/25/16</td>
<td>F</td>
<td>~7 mos</td>
<td>4 mins</td>
<td>Receptive</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Village Vital Signs
Empowering Communities through Shared Data
**Goals**

- To serve as a resource for residents to obtain useful information on local community resources and child outcomes

- To provide a tool to track benchmarks for child well-being and to evaluate progress of the network and of resource management

- To allow cyclical flow of information between community residents and the data system, in order to ask new questions
Early Childhood Education Neighborhood Participation Patterns

**Definition:** Ratio of number of children (3 years and older) attending preschool or nursery school in the block group to total number of children < 5 years old in the block group.

**Participation rate classification**

- **Rate = 0**
  - Extremely low: either do not have children < 5 yo or no participation in the pre-K education
  - Rate < 0.18

- **Very low:** very little neighborhoods actively send their children less than 5 yo to the pre-K program
  - Rate < 0.28
  - Low: Median, but below average participation patterns
  - Rate < 0.38
  - Moderate: On average, block-group level participation rate is 0.31 in the Boston metro
  - Rate < 0.52
  - Very high: over half of the neighborhoods send their children under 5 yo to the pre-K program. 0.49 is the 3rd quantile.
  - Rate < 0.75
  - High: 50% to 70% of the neighborhoods with children under 5 yo are actively participated in the pre-K program
  - Rate < or = 1
  - Extremely high: almost all the neighborhoods with children under 5 yo in the block group participated in the pre-K program.

https://vitalvillage.carto.com/builder/0ed772d4-a851-11e6-9c20-0e8c56e2ffdb/embed
Early Childhood Education Neighborhood Participation Patterns (cont)

• **Quick Facts**
  - Average ratio of early child education participation in **Boston metro** is 0.32, 6% higher than Boston city.
  - Boston city neighborhoods generally have a lower early childhood education participation rates compared to the Boston Metro area.
  - Block groups which have higher participation rates often have higher Child Opportunity Index (COI) scores.
Boston city neighborhoods generally have a lower early childhood education participation rates compared to the Boston Metro area.
Defined geographic area and population

Investment by and in community

Multi-sector partnerships and funding

Multi-faceted, community-level interventions
Strategic focus on key aspects of community capacity building:

- Mobilizing broader community engagement
- Evaluating, measuring, and using data to monitor work
- Effectively communicating and sharing knowledge with public stakeholders and policy makers

www.vitalvillage.org
Acknowledgements

Futu Chen, MPH,
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William Adams, MD, MPH
Anthony Braga, PhD
Sheena Collier
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www.vitalvillage.org
@vital_village
@The_BMC
Exploring the link between housing conditions, lead exposure, and kindergarten readiness using IDS

Claudia J. Coulton, Ph.D., Professor

Center on Urban Poverty and Community Development
Agenda

• Report highlights of a recent study that examined the link between housing, lead exposure and kindergarten readiness.


  *Funded by John D. and Catherine T. MacArthur Foundation*

• Demonstrate the use of an Integrated Data Systems

• Map the clusters of children testing positive for lead and along with historical forces affecting housing
Motivation for the study

• Cleveland has gone through a housing crisis, but we don’t know the impact on children.
• Cleveland has a disproportionate number of children that test positive for lead and are behind when they enter kindergarten.
• Raises question of how do housing problems affect child development.
• Community concerned about these problems, but lack concerted action.
Housing, Lead and Kg. Readiness: Birth to 6 study of children in Cleveland

• Sampling criteria
  o All children that entered CMSD kindergarten for the first time in AY 2007-2010 (N=13,762)

• Research design
  o Retrospective longitudinal study of family/child risk factors, housing and neighborhood exposures, elevated lead and KRA-L
  o Monthly data on housing and risk factors from birth to Kg.
  o Dynamic selection models--examine cumulative effects of these exposures on Lead levels and KRA-L, controlling for family/child characteristics and housing and neighborhood selection
Study Data: Linked records from IDS with neighborhood and housing information via address/parcel history

CHILD system

NEO CANDO
Property and neighborhood data system

ChildHood Integrated Longitudinal Data (CHILD) System

Public Assistance and Employment Services

Health & Mental Health

Education

Justice System

Parcel

Census Tract
Key variables—descriptive statistics

**Kg Readiness literacy**

15.8 (Lower 1/3 of distribution)

Average KRA-L score (0-29)

**Housing Quality**

- Poor condition: 36%
- Low value: 59%
- Public/subsidized: 18%

**Housing mkt distress**

- Tax delinquency: 50%
- Foreclosure: 50%
- Owned by speculator: 50%

**Neighborhood distress**

- Concentrated disadvantage (>70p): 0.66
- Mean share of time

**Elevated lead level**

39%

Tested positive (>5 μg/dL)

**Child maltreatment investigation**

40%

Percent ever

**Residential mobility**

- Concentrated disadvantage (>70p): 3.3
  - Average # of moves
Summary of results

- Cumulative exposure to bad housing and market distress
- Residential Instability
- Elevated Lead Level
- Child Maltreatment
- Kindergarten Readiness

(+): Positive correlation
(-): Negative correlation
Probabilities of a positive lead test for levels of housing and neighborhood distress
Conclusions and implications

• **Lead exposure** is a major contributor to low KRA-L scores.
• The **state of repair** of families’ housing has direct effects on KRA-L and indirect effects through elevated lead levels.
• **Housing market forces such as foreclosure** exacerbate housing problems and their effects on children.
• **Interventions** that reduce chance of living in or near problematic **housing** could **prevent lead exposure** and improve kindergarten readiness.
• Focus prevention on **chronically hard hit areas** of city
• Mobilize city building department, health department and community groups to act together
Children Testing Positive for Lead (>5 ug/dL), 2010-12 Birth Cohorts (as of 2014)

Density of EBLL

1
2
3
4
5
6
7

City of Cleveland

5 Miles
Percent of Toxic Home Purchase Loans from 2004-08

% Toxic Loans by Census Tract
- 10.0 - 19.9
- 20.0 - 24.9
- 25.0 - 58.4
- City of Cleveland

Miles

5
Areas Redlined as Class "D" In Cleveland, Ohio, 1936-40

- Redlined Class D*
- City of Cleveland

* Redlined areas are from the Home Owners Loan Corporation (HOLC) Residential Security Redlining Map, Cuyahoga County, Ohio.
How can we overcome the durable geography of racial inequity?
Link to summary of study


Contact Information

• Claudia J. Coulton, Ph.D. (claudia.coulton@case.edu)

Resources

• Center on Urban Poverty & Community Development: http://povertycenter.case.edu/
• NEO CANDO: http://neocando.case.edu/
Using Data to Drive Discussions on Urban Child Health

Lisa Sontag-Padilla, Ph.D.

The RAND Corporation

DataSpeak Webinar Series

July 24, 2017
Overview

• Background
  – RAND and The Urban Child Institute
  – Focus on ages 0 to 3 years

• Data Book: Off to a Good Start
  – Data Highlight: The CANDLE Study
  – Making Data Accessible and Relevant
  – Data Challenges and Future Directions
The RAND Corporation and The Urban Child Institute

• The RAND Corporation (www.rand.org)
  – Nonprofit institution that helps improve policy and decisionmaking through research and analysis.
  – RAND research on children covers prenatal period up to age 18, includes child health and the role of the family unit, neighborhoods, and community influence on child well-being

• The Urban Child Institute (www.urbanchildinstitute.org/)
  – Promotes health and well-being of children ages 0 to 3 in Memphis and Shelby County, TN
  – Conducts research, advocates for public policy, launches early intervention programs and prevention-based strategies
  – Serves as a trusted community expert
The UCI and RAND Collaboration

• From 2011 to 2016, RAND partnered with UCI to develop and execute a new strategic vision for the organization focused on social and emotional development of young children.

• As part of this collaborative, RAND developed a new report on child social and emotional health using data from the CANDLE study and other data sets on families in Memphis and Shelby county, TN.
Why Focus on Ages 0 to 3?

- Intervening with very young children at higher risk of social and emotional difficulties produces the largest gains in terms of skill development over time.

- This approach ends up costing communities or the larger society less money in the long run

SOURCE: Adapted from http://heckmanequation.org/heckman-equation
DataBook: Off to a Good Start

- UCI partnered with RAND to explore social and emotional well-being of children in Memphis and Shelby County, TN
- Draws on national, state, and local data
- Highlights essential factors in home, child care setting, and community
- Vehicle to engage academics, practitioners, grant-making agencies, and public policy entities
Off to a Good Start: Data Sources

- Combination of urban child health studies, public data banks, federally funded national studies, and privately operated data collection efforts

<table>
<thead>
<tr>
<th>Data Sources</th>
<th>Level of Information Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CANDLE Study</td>
<td>County/city</td>
</tr>
<tr>
<td>U.S. Census Bureau, American Community Survey (1-Year estimates 2013 and 5-Year estimates 2008-2012)</td>
<td>National, County/city</td>
</tr>
<tr>
<td>Tennessee Child Care Management System for September 2014, provided by Child Care Resource and Referral (LeBonheur Community Health and Well Being Division)</td>
<td>National, County/city</td>
</tr>
<tr>
<td>Childcare Capacity numbers provided through Department of Human Services Child-Care Providers Zip Code List—Shelby County</td>
<td>National, County/city</td>
</tr>
<tr>
<td>NAEYC Accredited Program Search</td>
<td>National, county/city</td>
</tr>
<tr>
<td>Early Childhood Longitudinal Study</td>
<td>National</td>
</tr>
<tr>
<td>Early Head Start Family and Child Experiences (Baby FACES)</td>
<td>National</td>
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<td>National Household Education Surveys Program, Early Childhood Surveys</td>
<td>National, regional</td>
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<tr>
<td>Study of Early Child Care and Youth Development</td>
<td>National</td>
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Data Highlight: CANDLE Study

• The Conditions Affecting Neurocognitive Development and Learning in Early Childhood (CANDLE) Study

• UCI developed and provided funding to University of Tennessee Dept of Preventive Medicine to launch CANDLE in 2006

• CANDLE to support collection of prenatal and early-childhood data on a healthy and ethnically diverse sample.
CANDLE Study Goals

• Investigate separate and combined effects of:
  – Mother’s prenatal experiences
  – Child’s home environment and early childhood experiences
  – Child’s exposure to potentially harmful toxins
  – Genetic makeup

• Long-term objective:
  – Inform improvements in the health, development, and well-being of children in Shelby County, Tennessee through interventions and policy enforcement or development.
CANDLE Data Collection

• Roughly 1,500 pregnant women enrolled beginning in 2006 through 2011.

• Data collection began during the second trimester and continued until child’s 3rd birthday.

• 8 in-person data-collection points per family:
  – 2 prenatal clinic visits
  – 1 hospital visit at delivery
  – 3 annual clinic visits
  – 2 home visits

• 9 phone-based assessments occurred every 3 months starting at 3 months old
CANDLE Study Information

• For the full report on CANDLE, go to: https://www.rand.org/pubs/research_reports/RR1336.html

• For additional information about CANDLE, go to: http://www.candlestudy.org/
Making Data Accessible and Relevant

• Use variety of tactics to make information relevant, relatable and easily usable for practitioners, grant-making agencies, policy-makers, etc.
How Much Maternal Education
Percentage of new mothers in Shelby County

Model of Child Development
Making Data Accessible and Relevant - 3

Did you know?

- If a child is living with only one parent, it is more common for him/her to live with his/her mother, but many children live only with their father (Figure 2.11).

- Areas where more than 10 percent of children live only with their father include: 38114 (19 percent), 38122 (13 percent), 38106 (12 percent), 38119 (12 percent), 38134 (12 percent), 38107 (11 percent), and 38053 (11 percent).

SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates 2008-2012, Table B09002

HOW YOU CAN help

Create or support opportunities where single parents (including single fathers) can come together and support one another.

Strengthen fatherhood initiatives and support father involvement in child rearing.

Consider whether your program addresses the unique needs of single parents or grandparents raising their grandchildren, and whether these services could be expanded into new geographic areas of high need.
What do we know about the health of newborn children?

In 2013, approximately 13,760 babies were born in Shelby County. While most are born healthy, many are born too early or too small. Infants born preterm (less than 37 weeks gestation) and at low birth weight (less than 2,500 grams or 5.5 pounds) are at greater risk for physical and developmental health problems, from poor lung functioning and language delays to infant death (death occurring in the first year of life).

Preterm birth can affect development.

In addition to physical problems, children born early tend to have more behavioral and social difficulties in the first few years of life [14]. Early birth affects the structure of the brain. When a baby is born early, the parts of the brain that receive, transfer, and store information have not had time to fully develop [15]. Why? At 34 weeks gestation, a baby’s brain is only about 65 percent of the weight it would be if the baby were full-term (40 weeks). Preterm birth can also make child-parent bonding difficult because children born early often spend their first days, weeks, or months in the hospital, separated from their parents [15].

DATA FACTS:

- In 2013, 13 percent of babies born in Shelby County were preterm (1,790). While this percentage has remained relatively stable over time, it consistently hovers above the national figure of 12 percent.

- More black babies in Shelby County are born preterm (15 percent) than white babies (9 percent).

SOURCE: Tennessee Department of Health, Division of Policy, Planning and Assessment, Office of Health Statistics. Number of live births with number and percentage preterm, by race of mother and county of residence of mother, Tennessee, 2013

Low birth weight remains high in Shelby County.
Making Data Accessible and Relevant - 5

• Highlight community assets and not just deficits

• Synthesize multiple sources of information
Community Assets
Areas with community assets such as libraries, zoos, museums, parks, playgrounds, and community gardens

Areas of Higher Risk
Young children at higher risk for poorer social and emotional outcomes
Data Challenges and Future Directions

- With the exception of CANDLE, little information was available at a local level to inform decisionmaking in the community.

- Need for central data repository for agencies/organizations/decision-makers to access standardized, reliable data.

- Facilitation of conversations among key decision-makers AND academics/researchers within the community.
For follow-up questions or additional information, contact Dr. Lisa Sontag-Padilla at lsontag@rand.org
Question & Answer Period

• To ask a question **on the Web**: 
  – Enter your question in the field at the bottom of the “QUESTIONS” box at the bottom of your screen and hit enter. Your question will be sent directly to the moderator.

• To ask a question **via phone**: 
  – Press *1 to indicate that you have a question.
Additional Questions

• If you have any additional questions, you can email them to:

  dataspeak@altarum.org
Thank you for participating. Please click on this link to complete feedback on today’s program.

(the link will open in a new window)