



# Birth Through Eight Strategy for Tulsa (BEST) Phase II Evaluation 2021 Annual Report

DECEMBER 2021

Eboni C. Howard | Gabriele Fain | Patricia García-Arena | Stephanie  
D'Souza | Johannes Bos

MAKING RESEARCH RELEVANT

# Birth Through Eight Strategy for Tulsa (BEST) Phase II Evaluation 2021 Annual Report

DECEMBER 2021

Eboni C. Howard | Gabriele Fain | Patricia García-Arena | Stephanie  
D'Souza | Johannes Bos



1400 Crystal Drive, 10th Floor  
Arlington, VA 22202-3239  
202.403.5000  
[www.air.org](http://www.air.org)

Notice of Trademark: "American Institutes for Research" and "AIR" are registered trademarks. All other brand, product, or company names are trademarks or registered trademarks of their respective owners.

Copyright © 2021 American Institutes for Research®. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, website display, or other electronic or mechanical methods, without the prior written permission of the American Institutes for Research. For permission requests, please use the Contact Us form on [www.air.org](http://www.air.org).

## Contents

	Page
Section I: BEST Phase II Evaluation Overview—The BEST Study .....	1
Guiding Evaluation Research Questions.....	2
Study Timeline Updates.....	4
Section II: Process Study Key Activities and Findings .....	6
Organizing Listening Sessions with BEST Partners.....	6
BEST Partner Workforce Survey .....	11
Key Informant and Stakeholder Interviews.....	13
System Assessment Tool.....	15
Section III: Outcome/Impact Study Key Activities and Findings.....	19
Sample Recruitment .....	19
Developing Measures and Survey Protocols .....	23
Primary Data Collection .....	24
Extant Data Collection and Analysis .....	24
Section IV: Ethnography Key Activities .....	32
Recruitment and Sampling Approach.....	33
Developing Ethnographic Data Collection Protocols.....	33
Primary Data Collection .....	34
Conclusion.....	34
References .....	35
Appendix A. Extant Data Indicators .....	A-1
Appendix B. Supplemental Extant Data Analyses.....	B-1

## Exhibits

	Page
Exhibit 1. Overview of BEST Phase II Evaluation Timeline by Study Component [Updated 12/2021].....	5
Exhibit 2. BEST Draft System Assessment Tool: System Domains.....	16
Exhibit 3. Recruitment Update and Strategies .....	20
Exhibit 4. Percentage of Children under Age 9 for Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, 2013–19.....	27
Exhibit 5. Percentage of Children Under Age 9 For Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19.....	27
Exhibit 6. Percentage of Children Under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, 2013–19.....	28
Exhibit 7. Percentage of Children Under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19.....	28
Exhibit 8. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool in Tulsa and Oklahoma City, 2013–19.....	29
Exhibit 9. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19.....	29
Exhibit 10. English Language Arts Proficiency ( <i>Basic</i> or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in High- and Low-Income Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19 .....	30
Exhibit 11. Mathematics Proficiency ( <i>Basic</i> or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in High- and Low-Income Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19.....	31
Exhibit 12. Ecocultural Family Interview Key Themes .....	34
Exhibit A1. Focal Extant Data Outcome Indicators.....	A-1
Exhibit B1. Percentage of Children under Age 9 for Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, by Race/Ethnicity Composition of Neighborhood, 2013–19.....	B-1
Exhibit B2. Percentage of Children under Age 9 Who Experienced Out-of-Home Placements by Race/Ethnicity in Tulsa and Oklahoma City, 2013–19.....	B-2
Exhibit B3. Percentage of Children under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, by Racial Composition of Neighborhood, 2013–19 .....	B-2

Exhibit B4. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool by Race/Ethnicity in Tulsa and Oklahoma City, 2013–19 ..... B-3

Exhibit B5. English Language Arts Proficiency (*Basic* or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students by Racial Composition of Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19 ..... B-3

Exhibit B6. Math Proficiency (*Basic* or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in Black and Brown Majority Schools and White Majority Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19 ..... B-4

## Section I: BEST Phase II Evaluation Overview—The BEST Study

The purpose of this annual report is to summarize Birth Through Eight Strategy for Tulsa (BEST) Study activities, challenges, findings, and expected next steps for the forthcoming year. The report covers the BEST Study from January 1 to December 31, 2021 and is based on the original BEST Evaluation Plan (Howard et al., 2019). In this section, we summarize of the purpose of the BEST Study, including the three study components, research questions, and timeline. In Section II, we provide an update of the process study. Section III summarizes the outcome/impact study component, and Section IV summarizes the ethnographic study. For each study component, we provide an update of activities, findings, lessons learned, and next steps.

BEST provides coordinated supports in the earliest years of children’s lives to help make Tulsa a good place for all children and families to live, grow, and thrive. By convening a diverse network of several dozen partners consisting of public agencies, healthcare and women’s health organizations, childcare providers, education institutions, and other local nonprofits, BEST aims to develop a seamless multisector continuum of high-quality programs and services for children from birth through age 8 and their families.

The BEST Study occurs over a 6-year period to learn how and in what ways a comprehensive, continuous, and integrated system-change approach can build greater opportunities that will improve the lives of young children and their families in Tulsa. The central purpose of the BEST Study is to determine whether BEST creates change that leads toward four goals: (1) more children being born healthy, (2) more children on a positive developmental trajectory in the first 3 years of life, (3) more children prepared to enter kindergarten, and (4) more children achieving success by third grade. In measuring the impact of BEST at the child level, it also is valuable to track BEST processes, activities, and impact at the system level and understand how the impact of BEST is actualized in the daily lives of children and families. As such, the evaluation has three study components:

1. **A process study** that provides information about how the BEST initiative engages with, supports, and interacts with the preconception-to-age-8 service infrastructure in Tulsa.
2. **An outcome/impact study** that provides information about what it is like to be born and grow up in Tulsa or to be a parent to a child aged 0–8 from a representative Tulsa sample. It will include four cohorts of children, two followed from birth and two followed from the start of kindergarten. The outcome/impact study also includes collecting and analyzing extant administrative data to study trends over time, before and after the BEST initiative, across the Tulsa community and compared with other cities.
3. **An ethnographic study** that describes the routines and experiences of a small subset of families participating in the outcome/impact study.

These three study components work together to answer all the BEST evaluation research questions.

A technical working group (TWG) has been advising us on the components of the study and the activities summarized in this report. TWG members include Dr. Greg Duncan (Distinguished Professor, University of California at Irvine), Dr. Iheoma Iruka (Research Professor of Public Policy and Director of the Equity Research Action Coalition, Frank Porter Graham Child Development Institute at the University of North Carolina-Chapel Hill), and Dr. Marta Tienda (Maurice P. Daring '22 Professor in Demographic Studies, Professor of Sociology and Public Affairs, Princeton University). The TWG convened as a whole group on June 28, 2021, to provide feedback on recruitment strategies, especially during the COVID-19 pandemic, and the use of extant data for baseline trends and selecting comparison cities as part of the outcome/impact study.

## Guiding Evaluation Research Questions

Five overarching research questions guide the BEST Study. The first four questions capture the effects of BEST on service infrastructure, service reach, parental outcomes, and child outcomes. The fifth question captures facilitators and barriers to BEST implementation, service delivery, and the initiative's capacity to positively change the trajectory on child and family outcomes. For all research questions, it is important to explicitly probe the impact of BEST on equity in Tulsa, specifically equity as it relates to the implicit and explicit biases that differentially affect communities and people of color.

1. **How does BEST impact the implementing partners and the larger prenatal-to-age-8 service infrastructure in Tulsa?**
  - a. **Engagement.** To what extent, and in what ways, does BEST engage with prenatal-to-age-8 service providers in Tulsa?
  - b. **Structural Changes.** To what extent, and in what ways, does BEST structurally change the prenatal-to-age-8 service system infrastructure in Tulsa?
  - c. **Collaboration.** To what extent, and in what ways, does BEST change the communication, coordination, and collaboration across providers in the prenatal-to-age-8 service infrastructure in Tulsa?
  - d. **Equity.** To what extent, and in what ways, does BEST change diversity, inclusion, and equity of prenatal-to-age-8 service provision in Tulsa, including engaging parents and community stakeholders as partners in service design and delivery?
2. **How does BEST impact participation in services among Tulsa's children and families?**
  - a. **Service Reach.** To what extent, and in what ways, does BEST increase access to prenatal-to-age-8 services in Tulsa?



- b. **Service Awareness.** To what extent, and in what ways, does BEST change the awareness of parents and caregivers of the services available to them and the benefits those services could have for them?
  - c. **Service Participation.** To what extent, and in what ways, does BEST increase the use of services available to parents, caregivers, and children in Tulsa?
  - d. **Equity.** To what extent, and in what ways, has BEST changed the level of diversity, inclusion, and equity in service access to children and families in Tulsa?
3. **How does BEST impact multiple dimensions of parent well-being, child-rearing practices, family functioning, and the home environments of children birth to age 8?**
- Parent Well-Being.** To what extent, and in what ways, does BEST change parent well-being, including parenting self-efficacy, role satisfaction, and psychosocial well-being?
- Child-Rearing Practices.** To what extent, and in what ways, does BEST change child-rearing practices, including the nature of parent/child interactions, behaviors to support children’s learning and health development (including home learning activities, well-child visits, and preconception and prenatal care), and their beliefs and attitudes about parenting and early learning experiences?
- Family Functioning.** To what extent, and in what ways, does BEST change family functioning, including resilience, mobilizing resources, and social supports?
- Home Environment.** To what extent, and in what ways, does BEST change the quality of the child’s home environment, including the safety, stability, and supportiveness of their household and neighborhood?
- Equity.** To what extent does BEST change the level of equity in these parent, family, and home outcomes across racial/ethnic groups, income groups, and neighborhoods?
4. **How does BEST impact the multiple domains of children’s health and development?**
- a. **Health.** To what extent, and in what ways, does BEST change the birth outcomes and health of children in Tulsa?
  - b. **Development.** To what extent, and in what ways, does BEST change the developmental outcomes (e.g., cognitive/academic, language and literacy, and social-emotional skills) of Tulsa’s children?
  - c. **Equity.** To what extent does BEST change the level of equity in children’s outcomes across racial/ethnic groups, income groups, and neighborhoods?



5. **What are the most important facilitators for and challenges to the success and long-term potential of BEST? What changes to BEST are needed to increase its success?**
- a. What made the biggest difference in establishing and strengthening the relationships between BEST and its partners, and among the partners themselves? What barriers remain, and how could they be addressed?
  - b. What made the biggest difference in changing the trajectory on parents and the home environment? What aspects of children’s lives are more difficult to improve? What areas are ripe for additional investment and intervention?
  - c. What made the biggest difference in changing the trajectory on child outcomes? Which child outcomes are most difficult to change and why? In what child and family developmental and functional areas do family background and neighborhood characteristics influence child outcomes?

### **Study Timeline Updates**

Exhibit 1 provides an overview of activities within the three study components and their revised planned timeline. Due to the ongoing COVID-19 pandemic, recruitment for the outcome/impact study was delayed and is moving slower than expected. This means that it will take longer to recruit the first birth and kindergarten cohorts, which the study design can accommodate but which will affect the study timeline. The delay in recruitment for the outcome/impact study also has led to a delay in the ethnography study, given that the ethnography sample will be selected from families recruited for the outcome/impact study.

**Exhibit 1. Overview of BEST Phase II Evaluation Timeline by Study Component [Updated 12/2021]**

	2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Process Study</b>																								
Study design considerations	■		■		■		■		■		■		■		■		■		■		■		■	
Protocol development	■																							
Institutional Review Board (IRB) approval	■																							
Recruitment	■																							
Quarterly listening sessions		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Annual staff surveys				■				■					■							■				
Analysis		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Annual reporting				■				■					■							■				■
<b>Outcome/Impact Study</b>																								
Study design considerations	■	■			■		■		■		■		■		■		■		■		■		■	
Finalizing measures/protocols	■	■																						
IRB approval	■				■				■				■				■			■				■
Plan sample		■	■							■	■													
Recruitment					■	■	■	■					■	■	■	■								
Data collection						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Collect extant data			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Analysis			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Annual reporting				■				■					■							■				■
<b>Ethnography Study</b>																								
Study design considerations	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Protocol development	■	■																						
IRB approval		■																						
Select sample			■	■									■	■										
Recruitment of families			■	■									■	■										
Data collection			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Analysis			■	■									■	■						■	■			■
Annual reporting				■									■							■				■

## Section II: Process Study Key Activities and Findings

Activities of the process study address Research Question 1. This evaluation component describes how the BEST initiative engages with, supports, and interacts with the preconception-to-age-8 service infrastructure in Tulsa. It describes how the initiative continues to evolve in response to feedback from partners and stakeholders as well as changing priorities and needs on the ground. The most important informants for the process study are the BEST partners and the George Kaiser Family Foundation (GKFF)-BEST team. The process study also is a source of formative feedback to GKFF-BEST. Key process study activities include the following:

- Organizing listening sessions with BEST partners
- Conducting focus groups and interviews
- Developing, releasing, and analyzing data from an annual workforce survey
- Developing a system assessment tool (formally called an implementation rubric)

We summarize our work for each in the subsequent sections, concluding with lessons learned and next steps for the evaluation in 2022.

### Organizing Listening Sessions with BEST Partners

The American Institutes for Research (AIR) organized several rounds of listening sessions from December 2020 through December 2021:

- In December 2020 and January 2021, AIR conducted (a) a partner focus group and (b) stakeholder interviews. The partner focus group focused on partners whose services do not fall squarely in the early childhood sector to get their perspectives on the BEST initiative. Specially, we discussed their general experiences with BEST, alignment of their organization's goals with the initiative, and recommendations for BEST, including GKFF-BEST's anti-racism approach.
- In April 2021, additional listening sessions with a total of 14 leaders from 13 partner organizations were conducted. All of the BEST partners were invited to participate to ensure they could have the opportunity to provide feedback as part of the process study. The purpose of the listening sessions was to gather feedback from BEST partners about the current implementation status of the BEST initiative.
- Another round of listening sessions was conducted in October 2021 and was focused on ways the GKFF-BEST data team is supporting BEST partners. To understand BEST partners' experiences with Unite Us, a new service referral software platform, AIR conducted four interviews with representatives from four BEST partners that have implemented the

software system to varying levels. In addition, to learn more about one partner's experience with a data-linking project, AIR talked with three representatives from this agency who were engaged in the project.

- The last round of listening sessions was conducted in November and December 2021 and focused on the experiences of new partners to the BEST initiative. AIR conducted five interviews with a total of five partner leads.

### ***Findings: December 2020 and January 2021 Listening Sessions***

Partners suggested their alignment with BEST has improved with time but did not provide specifics regarding this shift. They also struggled to articulate concrete suggestions for further improvement of the BEST initiative, either about their respective role within BEST or for the future of the overall initiative. From these interviews, two unifying themes emerged. First, partners praised GKFF-BEST for its support in connecting partners to one another (one partner suggested GKFF-BEST could help them share information about their services more broadly within the community). Second, when asked what types of organizations GKFF-BEST should consider adding to the BEST initiative, partners pointed to a range of services needed within Tulsa. These included services related to sex education, hunger and poverty issues, financial literacy, workforce development, and emergency temporary housing for pregnant teens and teen parents.

The stakeholder interviews were designed to gather perspectives on the BEST initiative from organization representatives not directly involved in the initiative. The interviews were intended to explore topics related to these stakeholders' current understanding of BEST and its strengths, and their perception of the impact of BEST. Stakeholders understood BEST as an initiative to promote positive outcomes for young children in Tulsa, but they lacked detailed knowledge about its activities or impact. However, these stakeholders appreciated GKFF's support of children and families in Tulsa and pointed to GKFF-BEST's willingness to listen and learn from the community.

Both the BEST partners and the stakeholders were asked for recommendations to ensure BEST operates in an inclusive, anti-racist way. Respondents generally were positive about GKFF-BEST's approach to the issue. When asked how GKFF-BEST could strengthen its approach to promoting racial equity, several respondents stated that GKFF-BEST could continue to strengthen the use of data to identify and explore inequities in Tulsa, and then share this information widely in the community. A second suggestion is for GKFF-BEST to continue strategies that ensure the "voices of people who are served are at the table" and that there is shared decision-making power to ensure that services meet their needs.

### ***Findings: April 2021 Listening Sessions***

The purpose of the April 2021 listening sessions was to gather feedback from BEST partners about the current implementation status of the BEST initiative. Partners described BEST as a critically important funder, particularly in helping them respond to the needs caused by the COVID-19 pandemic. Partners also identified other ways (besides funding support) that BEST has had an impact on their work. For example, a few partners noted that participation in BEST has improved referral practices recently; these also were the first set of listening sessions in which partners referenced new developments concerning referrals. In addition, partners voiced a stronger understanding of the purpose of the BEST initiative, as a coordinated network of agencies, than they have in previous discussions. Although many partners reported challenges in feeling that their organization is part of a collective impact model, this view was not universal, with several partners expressing enthusiasm about the structure of the initiative.

In addition, during the listening sessions, partners identified several strategies that GKFF-BEST may consider as part of their continuous quality improvement efforts. These included considering ways that the BEST initiative can contribute to addressing transportation challenges in Tulsa, engaging partners in strengthening GKFF-BEST's work to address systemic racism and disparities in the community, providing more information about the progress of the BEST initiative, and other suggestions. Overall, partners continue to express a strong appreciation of the BEST initiative and the GKFF-BEST team, and they look forward to the BEST initiative's continued evolution.

### ***Findings: October 2021 Listening Sessions***

The October listening sessions were focused on two different ways that the GKFF-BEST data team is supporting BEST partners: (1) the implementation of a referral software system, and (2) a data-linking project to integrate client information across different service providers.

**Unite Us.** The GKFF-BEST data team is working with a subset of partners to implement a software system developed by Unite Us, an enterprise technology company. It is a closed-loop referral system that helps participating organizations make and track referrals, including whether clients receive services because of a referral. It can be used to both receive and/or make referrals. Using the Unite Us system, partners can refer clients to other service providers that also use the software system. Partners can then track the status of a service referral and whether it has been accepted or rejected by another service agency or if the client received services from another agency. This system reduces the need for partners to directly follow up with their clients or with other agencies to learn about the outcome of a service referral.

Although partners described the Unite Us system as fairly easy to implement and that help from the GKFF-BEST data team and the Unite Us company was readily available, most partners

indicated the system has created some challenges. Partners reported that they have struggled with duplicated data entry because the Unite Us system cannot meet all their referral tracking needs. Given that the Unite Us system is not universally used by service providers in Tulsa to make referrals, BEST partners also continue to rely on their existing client management systems to make referrals elsewhere. Most of the partners we interviewed said the need for multiple systems created a challenge in terms of duplicated data entry and tracking. Given the challenges with duplicated record keeping created by the Unite Us system, one BEST partner emphasized that it works best for agencies or programs that did not already have a systematic method for making or receiving referrals.

In general, most partners reported that it was too early to determine the actual impact of the Unite Us system for clients. One partner reflected that it may be difficult to measure impact, given the lack of historical data on referral outcomes. However, in the case of service providers that lacked strong referral systems prior to using Unite Us, several partners suggested that the Unite Us system has helped to reduce clients' wait time for services.

**Data-Linking Efforts.** GKFF-BEST works closely with several BEST partners to support their use of data to identify disparities in service participation and improve service delivery. In 2021, these efforts including collaborating with service providers to identify the percentage of parents and caregivers who are eligible for, but not enrolled in, the Women, Infants, and Children (WIC) program and in Medicaid. The Medicaid effort is particularly important, given the state's recent Medicaid expansion.<sup>1</sup> The project helped to increase partner staff's understanding of Medicaid eligibility and elevate the issue in conversations with family members. The project will be repeated in a year's time to determine whether their work has had an impact on Medicaid enrollment.

### ***Findings: November and December 2021 Listening Sessions***

The November and December 2021 listening sessions were designed to gather feedback on the experiences of partners that are new to the BEST initiative. We gathered feedback on partners' onboarding process to BEST, experiences communicating with GKFF-BEST, changes for their organizations (and clients) since becoming a BEST partner, recommendations for GKFF-BEST as they support and expand the initiative, and other related topics. The sessions were completed on December 1, 2021.

Partners were asked to describe their onboarding process to the BEST initiative, which includes a series of virtual meetings led by GKFF-BEST staff to describe different aspects of the BEST initiative and the range of supports available to partners. The partners generally characterized

---

<sup>1</sup> Oklahoma voted to expand Medicaid (SoonerCare) eligibility on June 30, 2020; many individuals who were not eligible for Medicaid before are now eligible.

their initial engagement as a BEST partner as positive, describing it was helpful and informative. Partners also praised the responsiveness of GKFF-BEST staff, pointing to how quickly staff provided support and guidance when they needed it.

Partners also discussed what had changed for their organization or clients they serve since they became a partner in the BEST initiative. Partners' responses reflect the different ways that GKFF-BEST is working with partners based on type of programming partners offer, partners' organizational strengths, and partners' client service needs. For example, two partners discussed the benefits of GKFF-BEST funding in terms of strengthening or expanding their services. Another partner described how GKFF-BEST has helped the organization leverage the expertise of technology consultants, who have created a new performance dashboard that has helped them to be more efficient in their daily operations.

Three partners spoke to how GKFF-BEST has helped them to promote racial equity within their own organizations. Partners appreciated access to professional development focused on diversity, equity, and inclusion (DEI) and materials focused on DEI provided by the GKFF-BEST team. They also appreciated the funding to provide children with books that are culturally and linguistically responsive. When asked to identify additional ways GKFF-BEST could support racial equity in Tulsa, two partners encouraged GKFF-BEST to continue their investment in North Tulsa, while ensuring that Black families in other parts of Tulsa are also supported. Other suggestions included helping organizations identify steps to improve diversity in leadership, providing expanded access to DEI training, and supporting partners in identifying racial disparities in their services.

Finally, partners praised GKFF-BEST for their support in connecting them with other BEST partners. As one partner said, "I feel part of a family now. I feel like if I don't know who to call, I can call someone at BEST who will tell me who to call. I feel like I have a seat at a table and can be identified as a resource and also can find resources as well."

### ***Lessons Learned and Next Steps***

The 2021 listening sessions generated rich information from partners, ranging from organizations that have been involved in the initiative from its early stages to those new to BEST. In the past year, AIR has shifted the listening sessions to focus on more specific topics with subsets of partners—an approach that has yielded more nuanced feedback on issues than broader discussions with all partners. In 2022, AIR will continue to work with GKFF-BEST to identify key areas of interest to explore through the process study to support continuous improvement of the initiative.



## BEST Partner Workforce Survey

The purpose of the BEST Partner Workforce survey is to gather information on a range of topics, including staff knowledge of BEST partner services, referral practices, service access barriers and facilitators, communication and coordination among service providers, the role of families in BEST partner agencies, staff professional development needs, staff perceptions regarding racial equity issues, and demographic information about respondents. We conducted the first survey in 2020. The survey was replicated in 2021 (with a few exceptions—a small number of open-ended 2020 items were dropped because they did not yield rich data last year). The 2021 survey also included new items focused on housing insecurity and families' use of the new federal child tax credit. Findings from the 2021 workforce survey will be available in early 2022. We will continue to repeat the survey annually until 2024. Over time, these repeat respondents will form a “Tulsa early childhood workforce panel” for the BEST initiative, whose perspectives will help us capture BEST’s impact at the institutional and workforce level.

### *Review of 2020 Workforce Findings*

In 2020, the workforce survey was administered to a total of 297 frontline staff, and their managers, within 21 BEST partner organizations. The overall response rate for the 2020 survey was 67% (N=206). Highlights from the 2020 Workforce Survey findings include the following:

- **Staff knowledge of the BEST initiative and individual BEST partners varied.** About two thirds of the respondents had heard of the BEST initiative. Many survey respondents in the family support and health sectors had heard of BEST, whereas only half of the respondents in the early learning and care (ELC) sector knew about BEST.
- **BEST partners regularly refer clients to needed services.** Almost two thirds of the respondents indicated that they routinely make client referrals to other agencies, either formally and/or informally, as part of their job. These staff reported making referrals (or having the knowledge to do so) across a broad range of service sectors. More than half of the staff who reported they make referrals, stated that they use “warm handoffs” during referrals, meaning they personally help their clients contact other service providers.
- **Staff reported that the most difficult sector for clients to access is child care for infants and toddlers, followed closely by housing assistance, legal services, and mental health services for adults.** Common challenges to service access include a lack of transportation, a lack of child care, long wait times for services, client concerns about their immigration status, and clients’ lack of knowledge about available services.
- **Many BEST partner staff in different programs communicate regularly about shared clients.** More than half of the respondents reported communicating with staff in other

agencies. The most cited reason for coordination problems between agencies was that staff often do not have permission to discuss clients with other organizations.

- **Engaging families in decision making and leadership roles is challenging.** A large majority of respondents said it was at least somewhat challenging to involve parents and family members in efforts to improve services, mostly because of the lack of time on the part of the parents and family members. Less than half of the respondents agreed with the statement that staff regularly try to get ideas from parents on how to improve services, and less than one third of the respondents reported that (a) opportunities exist for parents to serve in leadership roles and (b) parents are included in meetings where decisions are made about improving services.
- **Staff enjoy their jobs, but many agreed that their work is stressful.** Almost all respondents believed that their work makes a meaningful contribution, and the vast majority reported having the support and resources they need to do their jobs well. Most staff agreed or strongly agreed that it would take a lot for them to leave their jobs. At the same time, more than half of the respondents reported that their job was very stressful. Staff indicated a strong degree of interest in professional development across a range of topics.
- **Half of responding staff reported that they talk with their adult clients about challenges or advantages they may face because of their race or ethnicity.** Staff also described how frequently their adult clients told them that their race/ethnicity was the reason they faced various challenges in their lives. The most common challenges (rated as a challenge occasionally or a great deal) were receiving poor- or low-quality services, followed by being paid less in their jobs. More than two thirds of the staff indicated that clients reported that their race/ethnicity was the reason they were stopped by the police or another official.

AIR launched the second BEST Workforce Survey on November 2, 2021, and kept it open to respondents until the end of the year. The survey was administered to a total of 317 frontline staff, and their managers, within 26 BEST partner organizations (only BEST partners that directly deliver services to children, parents, or other adults are included in these surveys). The overall response rate for the 2021 survey was 61% (N=212), ranging from 23% (one partner) to 100% (four partners) across 26 partners.<sup>2</sup> As of this writing, 60% of the 2021 respondents were repeat respondents, meaning they also complete the 2020 survey.

### ***Lessons Learned and Next Steps for the Workforce Survey***

To minimize burden on repeat respondents and produce more insightful survey data, AIR programmed the 2021 workforce survey to incorporate responses from last year's survey. In other words, a "repeat respondent" (a staff member who completed the survey in 2020) is

---

<sup>2</sup> The overall survey response rate was 61% as of December 17, 2021. The survey was kept open until December 31, 2021. Therefore, the final response rate may be slightly higher. For context, the 2020 survey response rate was 67% (N=206).

given differently worded questions in the 2021 survey and is asked to comment on changes to their 2020 responses instead of answering last year's questions again. Although this approach reduces the length of the survey for repeat respondents and will likely produce more interesting responses, the programming was more complex. In future administrations of the survey, we will build in more time to accommodate this step in the process.

In addition, we continue to recognize the importance of our relationships with partner leads. These leads play a critical role in encouraging their staff to complete the survey. In 2021, we provided each participating partner lead with the survey response rate for their organization as well as e-mail language they could adapt as needed and share with their staff to encourage their participation in the survey.

AIR will present the workforce survey findings early in 2022, and planning for the next workforce survey will begin in late spring of 2022.

### Key Informant and Stakeholder Interviews

In the fourth quarter of 2021, GKFF-BEST and AIR decided to conduct listening sessions with select members of the GKFF-BEST Leadership Team and several GKFF-BEST consultants to better understand and document the strategies they are implementing to advance the BEST initiative. To this end, AIR conducted five interviews that involved eight participants and covered the following five topics:

- Improving the closed-loop referral process
- Providing parents with additional childcare options through the *Kith.care* pilot
- Strategic partnerships with the state
- New and evolving partnerships and collaborations among BEST partners
- Investing in shared leadership and data among BEST partners

**Unite Us.** As described earlier (p. 7), Unite Us is a new closed-loop referral system that helps participating organizations make and track referrals. According to the GKFF-BEST data team, the COVID-19 pandemic has impacted the rollout of the Unite Us system; getting partners to buy into and sign up with the system has taken longer than originally planned. At the same time, GKFF-BEST emphasized the importance of phasing in the system gradually, based on partners' preferences and comfort level, ensuring that they are true partners in the process. GKFF-BEST will continue to track and support partners in the system, envisioning strong potential for its use among a wider set of partners over time.

**Kith.care.** GKFF-BEST described their work to promote childcare choices for parents and removing barriers to services, which includes a collaboration with the Oklahoma Department of Human Services (OKDHS) on the state’s *Kith.care* program. Developed in 2020, the purpose of *Kith.care* was to help essential workers secure child care during the pandemic, when many programs closed. *Kith.care* pays a relative or a trusted friend to watch a child in their home.

GKFF-BEST has worked with OKDHS on *Kith.care* in several ways, including piloting an expansion of *Kith.care* with several BEST partners to families in poverty who are eligible for a childcare subsidy. GKFF-BEST also facilitated a feedback loop among BEST partners and OKDHS that focuses on making the *Kith.care* system more accessible to parents, particularly because initial sign-ups for the program have been slow. OKDHS staff, GKFF-BEST, and participating BEST partners meet regularly to share barriers and develop potential solutions to improve *Kith.care*. In addition, GKFF-BEST helped the state develop the [Kith.care website](#) to improve the application process for parents.

**Strategic Partnerships.** GKFF-BEST reflected on their collaboration with state agencies to advance efforts to support children and families. These efforts build on a strong partnership between GKFF-BEST, the Oklahoma Department of Human Services (OKDHS) Secretary, and OKDHS staff to address joint priorities that align with the BEST initiative. GKFF-BEST prioritizes community engagement in their work with state agencies, elevating the voices of those closest to services and impacted by poverty. In addition to working with state agencies to expand access to *Unite Us* and the *Kith.care* program, examples of collaboration with the state include working with OKDHS staff to help them identify ways to leverage funding, such as COVID-19 relief funds, Temporary Assistance for Needy Families (TANF), and rental assistance. GKFF-BEST also helped change a state regulation requiring a paternity test to access child care, elevating a concern voiced by parents to BEST community liaisons. In this case, the state repealed the child care subsidy eligibility requirement of paternity testing in order for biological mothers to be eligible for services. Finally, GKFF-BEST collaborated with the state on the *Front Porch* initiative, which embeds state staff within trusted community organizations who provide families with support and guidance to enroll in services.

**Engagement with Partners.** GKFF-BEST described their relationship-based approach to engage new partners and work with established partners in new ways. As the BEST initiative has grown, GKFF-BEST staff have reflected on and refined how they identify and onboard new partners into the initiative as well as engage existing partner organizations in new projects. GKFF-BEST’s engagement with organizations—whether with new or established partners—always aligns with the overall goals of the initiative. Working with partners to identify and leverage how partners’ work fits within the BEST initiative can take time, according to GKFF-BEST staff. They emphasized the importance of using a relationship-based approach to engage organizations,

staying open to new and creative strategies that have a positive impact in the community, and remaining flexible to meet the unique needs of each partner. Four specific examples of how GKFF-BEST has engaged partners based on these values include (a) creating a new partner onboarding process, (b) developing new pathways to partnership (e.g., pilot partners), (c) working with subcommittees to ensure that GKFF-BEST's approach to engaging new partners is equitable, and (d) implementing a nomination process with the BEST Advisory Group to identify organizations that they trust and recommend as possible partners.

**Investment in Shared Leadership and the Use of Data.** Regarding shared leadership, GKFF-BEST employs intentional structures to engage staff, partners, family members, and other stakeholders in decisions. In addition to the BEST Advisory Group, *ConnectFirst* maintains a shared leadership team comprised of leaders from its various programs, including the Tulsa Health Department Family Advocate program, Children First, HealthySteps, Family Connects, Bright Beginnings, and other key staff. *ConnectFirst* also engages in shared leadership activities with other community partners. For example, they recently participated in a collaborative effort with Tulsa Public Schools (TPS) and the North Tulsa Community Alliance to develop a joint vision and plan for a parent resource center in North Tulsa. GKFF-BEST engaged in many strategy meetings to build consensus among partners, including parents, to develop a shared vision and approach for the project.

In addition, GKFF-BEST has invested in analyzing and using data to make progress toward the goals of the BEST initiative. The GKFF-BEST data team has focused on supporting closed-loop referrals (as described earlier), analyzing data to identify trends, and supporting data sharing among partners. Central to this work has been use of a tool called Spotlight, which enables GKFF-BEST to share and match individuals across data sets without revealing identifiable information. The GKFF-BEST data team also is working with the Oklahoma Policy Institute and Impact Tulsa to gather and use publicly available eviction data.

### **System Assessment Tool**

To help the GKFF-BEST team track the progress of BEST over time for continuous improvement purposes, AIR drafted a "system assessment tool." This tool will provide a mechanism to document BEST's progress in creating a network of coordinated agencies working together to promote positive outcomes for children and families in Tulsa. To use the tool, GKFF-BEST and AIR assign ratings to a set of indicators (first, each team will assign a rating to each indicator independently, and then come together to review and finalize the ratings, as described in more detail below). The tool is intended to be flexible and will evolve to reflect changes in the BEST initiative over time.

The system assessment tool is organized around four related domains (detailed in Exhibit 2). The domains—components, infrastructure, coordination, and context—were selected based on (a) a review of the research on systems change initiatives and (b) existing rubrics and assessment tools used in early childhood efforts similar to BEST. Racial equity topics are woven throughout each of these components; together, the four domains and the interwoven aspects of racial equity contribute to a well-functioning early childhood system. In other words, these domains and racial equity topics represent the broad strategy to improve the service infrastructure and outcomes for children. It is important to note that BEST may not address all four components—or may not address them all at the same time or with equal measure or success.

**Exhibit 2. BEST Draft System Assessment Tool: System Domains**

Components	Infrastructure	Coordination	Context
BEST helps young children and families access high-quality services that meet their needs and preferences.	BEST includes structures and supports to enhance the capacity of partners to provide high-quality services to young children and families.	BEST includes structures and supports that promote collaboration among system partners to provide high-quality services to young children and families.	BEST takes actions to improve the political context that surrounds it to create policy and funding changes to improve conditions for young children and families.
<b>Equity: BEST promotes equity and antiracism in Tulsa’s child- and family-serving systems.</b>			

In the tool, each of the four domains is broken down into a set of constructs. For example, the *components* domain includes three draft *constructs*:

- Service Reach.** BEST offers new and expanded services to help reach the initiative’s annual and overall goals related to increasing healthy births, promoting a positive trajectory by age 3, ensuring kindergarten readiness, and achieving success by third grade.
- Service Access.** With reasonable effort, families, especially those most in need, can access free or low-cost services that they need and want.
- Service Fit.** BEST partners offer culturally and linguistically responsive services that are designed to address the needs and preferences of all families.

For each construct, the tool includes a set of sample *indicators and data sources* that could be used to rate progress. A general rating scale (e.g., from 0 [not developed/not met] to 3 [well-developed/advanced]) can be used to rate each indicator and provide a snapshot of where the initiative stands from a big-picture perspective.



In 2021, AIR and GKFF-BEST reviewed and discussed the development and use of the tool. GKFF-BEST staff provided input on some of the indicators to better capture GKFF-BEST efforts. AIR also cross-walked the tool with GKFF-BEST Phase II milestones to ensure alignment. GKFF-BEST and AIR discussed various approaches to using the tool, including having AIR assign draft ratings to the indicators followed by a joint discussion with GKFF-BEST to review and refine them.

In addition, this year AIR pilot-tested one of the domains of the tool: *coordination*. It is important to note that, at this point in the BEST Study, only data from the process study and the extant data work are available until the other study components, the ethnography and outcome/impact studies, are fully implemented. To test the tool, AIR reviewed each indicator in the coordination domain, noting if data are available (or not available) to assign a rating. Because of the scope of the tool, we found that more than half of the indicators in the coordination domain rely entirely or partly on data and other information maintained by the GKFF-BEST team. Ratings for other indicators can draw on findings from the process study listening sessions and workforce survey (or, in the future, from other components of the BEST Study).

### ***Lessons Learned and Next Steps***

The system assessment tool is intended to be comprehensive to reflect the complexity of the BEST initiative as well as broader systems change efforts in support of young children and families. As such, the tool includes indicators of progress that fall within BEST's sphere of influence as well as factors beyond the immediate scope of BEST. In this way, the tool can be used to document where and how BEST is (and is not) placing its attention and resources—and what else may be needed.

Given the pilot test, we propose that AIR and GKFF-BEST complete the tool (or sections of the tool over time) independently, assigning ratings where they each have access to relevant data. Then, the teams can meet to jointly discuss and share their ratings and respective rationale, with the goal of coming to consensus on them. The value of the tool may come from these discussions—rather than the specific ratings—to improve AIR's understanding of the BEST initiative, provide context for future findings from the outcome/impact study component, and support GKFF-BEST's internal planning efforts for the initiative.

We also suggest adding a space to the tool to indicate if data are not available (either through the evaluation of BEST or GKFF's own work with partners) to make a rating on any indicator and/or if the indicator is beyond the scope of the BEST initiative. In addition, identifying areas for potential future data collection (e.g., indicators that we feel are important, but are not currently covered either by GKFF-BEST or AIR's data collection) can be a helpful function of the tool. In 2022, AIR will continue discussions with GKFF-BEST about the system assessment tool



and findings from the initial pilot test. These discussions also will include a focus on how to use the tool moving forward.

## Section III: Outcome/Impact Study Key Activities and Findings

The outcome/impact study activities address Research Questions 2, 3, and 4 (pp. 2–3 above). A multicohort study design will be used to estimate the impact of the BEST initiative on families and children. AIR will collect relevant outcome data directly from parents and children through representative surveys. Eventually, the survey sample will include two birth and two kindergarten cohorts, with surveys conducted about 1 month, 18 months, and 30 months after recruitment. The differences in the outcomes and experiences between the two sets of cohorts are a primary source of inference about the efficacy of the BEST initiative. The key activities for the outcome/impact study in 2021 included the following:

- Implementing sample recruitment
- Developing measures and survey protocols
- Implementing primary data collection
- Implementing extant data collection and analysis

We summarize our work for each activity in the subsequent sections, concluding with lessons learned and next steps of the work for 2022.

### Sample Recruitment

At two time points, we will recruit approximately 1,260 families with newborns across two cohorts. The proposed sampling frame will include a representative sample of English-speaking and Spanish-speaking mothers who are residents of Tulsa City with babies born in Tulsa City hospitals. Our initial sample targets did not anticipate the impact that COVID-19 would have on recruitment.<sup>3</sup>

Recruitment of children and families into the outcomes/impact study began this year in June 2021, but unfortunately has been slow due to the ongoing pandemic circumstances impacting hospitals, schools, and families. Exhibit 3 provides a summary of where we are in recruitment to date, followed by detailed information about the recruitment processes that were implemented in 2021 for the birth and kindergarten cohorts. Our website with recruitment information is <https://best.airprojects.org/>.

---

<sup>3</sup> Our initial estimates regarding the time to recruit the required sample would be 4–6 months, with an assumption of a 20% study participation agreement rate (Howard et al., 2020).

**Exhibit 3. Recruitment Update and Strategies**

	Recruitment Numbers and Strategies
<b>Birth Cohort 1</b>	<p>As of December 20, 2021:</p> <ul style="list-style-type: none"> <li>• 129 families have consented to participate in the study.                             <ul style="list-style-type: none"> <li>– An additional 39 families have expressed interest, and consent is in process.</li> <li>– 15 families have completed an interest form but are ineligible due to their child’s age or location.</li> <li>– 11 families completed an interest form but later declined to participate.</li> </ul> </li> <li>• 68 families have completed the 1-month survey.</li> <li>• 45 families have expressed interest in the follow-up ethnographic study (only 10 needed).</li> </ul>
<b>Kindergarten Cohort 1</b>	<p>As of December 20, 2021:</p> <ul style="list-style-type: none"> <li>• 91 families have agreed to participate in the study and are ready to be surveyed.                             <ul style="list-style-type: none"> <li>– 18 schools have received study materials to distribute to families.</li> <li>– 15 schools have reported that they distributed study materials to families.</li> <li>– 6 schools declined to participate.</li> </ul> </li> <li>• 25 additional families’ consent forms have been collected by schools, but AIR is waiting on receipt of these forms.</li> <li>• 4 families have completed the 1-month survey.</li> </ul>

**Birth Cohort**

Over the last year, to recruit families during a global pandemic, the birth cohort recruitment team engaged in fruitful discussions with important **local partner groups** to support recruitment efforts. All discussions resulted in engaged partnerships to support BEST sample recruitment and agreement about concrete next steps between the partner and AIR. The list below summarizes these efforts and recruitment results.

- In spring 2021, AIR partnered with **TeamBirth** to recruit families with newborns into the BEST Study from one hospital. Unfortunately, due to unforeseen, extenuating circumstances, this partnership did not result in the recruitment of any birth cohort families.
- Since June 2021, **Bright Beginnings Talking is Teaching tote bags** including BEST Study recruitment materials have been distributed to mothers who just gave birth in Tulsa hospitals. This is scheduled to continue into 2022 with plans to revamp recruitment materials as needed in response to recruitment success and partner feedback.

- In July 2021, we met with various **hospital representatives** to discuss additional strategies for recruiting families, including having the birth certificate clerk, social workers, postdelivery nurses, and hospital residents talk with new mothers. Hospital staff also felt it would be possible to have a member of the project team be in the hospital as a recruiter, following approvals and proper protocols. Unfortunately, the “Delta” wave of new COVID cases in the late summer and fall stopped many of these new activities in their tracks. At an appropriate time in 2022, depending on the impact of new COVID variants, the recruitment team will follow up with hospital representatives to determine the next steps to jumpstart recruitment activities in Tulsa hospitals.
- In July 2021, we partnered with Oklahoma State University on their **evaluation of the Bright Beginnings program**. Currently, this partnership has provided AIR with 48 concrete recruitment leads, which have led to 23 additional sample members for the birth cohort survey.
- In August 2021, AIR met with BEST **community liaisons** to discuss how we can work with them in their local communities at special events or with relevant community groups to let families know about the study. In addition, we facilitated a meeting with Spanish-speaking community liaisons, introducing them to the BEST Study and providing recruitment materials they can distribute to families who are interested in the participating in the study. AIR recruitment team staff joined the community liaisons WhatsApp group to ensure an open line of communication with these community leaders if any recruitment questions arise. In early 2022, AIR will coordinate with BEST community liaisons and other local partners to plan which special in-person events AIR can join to recruit families.

In 2022, along with continuing to implement the various recruitment strategies described above, AIR will continue to explore additional approaches.

### **Kindergarten Cohort**

At two time points, we will sample and recruit a representative sample of approximately 1,100 English-speaking and Spanish-speaking families with public school kindergartners who are in the Tulsa Public Schools (TPS) catchment area.

AIR began outreach to 23 sampled TPS schools on September 17, 2021. Our outreach to these schools has included the following activities:

- Sending introductory e-mails to principals that include a video link about the study and an informational flyer.
- Confirming teacher names and e-mail addresses with the principals.

- Sending introductory e-mails to teachers that include a video link about the study and an informational flyer.
- Confirming that kindergarten class rosters match those that we have received from TPS.
- Delivering study materials (e.g., keepsake backpacks with consent forms for parents to sign) to the schools for teachers to distribute to students to take home.
- Asking teachers to request that consent forms be returned within 1 week and asking for teachers' help e-mailing reminders to parents to return the paper consent form or complete it online.
- Asking that teachers let us know about the signed consent forms they receive back before they return them to AIR.

From these efforts, we have confirmed consent of a total of 91 children and their families for the kindergarten cohort study as of December 20, 2021. We are continuing to follow up with schools to try to obtain parent consent from more kindergarten families.

In late November, we began implementing additional recruitment strategies to obtain additional consent from the TPS schools that had already distributed consent forms, including:

- E-mailing parents about the opportunity to participate in the study.
- Piloting calling parents directly.
- E-mailing principals to ask about upcoming school events in early 2022 that the study team could attend to recruit parents in person and for suggestions of other communications strategies we might use (e.g., putting a note in the school newsletter).
- Mailing schools posters to put up in the school office or other places where parents may see them and sending schools additional hardcopy study information and consent packets in case parents prefer to complete paper forms.
- Sending holiday e-cards to parents.

### ***Lessons Learned and Next Steps***

We have stayed aware of the unpredictability and impact of the COVID-19 pandemic. As a result of slow initial return of consent forms received from our school-partnership recruitment efforts, we began additional efforts to increase the study participation rate.

We will continuously strategize alternative recruitment options and time frames for study activities with our Tulsa local partners, including community, district, school, and hospital

partners. It is always important to identify alternate recruitment options in a study with large sample goals, as the BEST study has.

## Developing Measures and Survey Protocols

### *Data Collection Protocols and Procedures*

There will be three rounds of data collection for each of the birth and kindergarten cohorts. The evaluation team will collect information at 1–2 months, 18–20 months, and 29–31 months after recruitment. The goal of the initial 1-month follow-up is to gather information about families choosing to participate in the study and their awareness of services. At 18 months, the survey will gather data on protective factors and children’s development, and the final time point’s goal is to gather information on parents’ future goals/aspirations for the children and their development. Constructs are summarized in our 2020 [annual report](#) (Howard et al., 2020). The constructs reflect both family and child outcomes as well as targeted protective factors (i.e., parent/child attachment, parent well-being) that BEST aims to improve during implementation of the initiative.

AIR conducted a training with data collectors to prepare them to collect 1-month survey data via the CATI system. AIR uploads 1-month interview data into the BEST Study’s *Airtable* workspace on a 2-week cycle. Data checks are administered and verified with the established codebook, and any discrepancies are discussed with the team.

### *Lessons Learned and Next Steps*

The community context is a key factor in measurement selection; we want to ensure that we measure outcomes that are aligned with the BEST theory of change and logic models. Key criteria for the measurement selection process include identifying measures that are available in multiple languages, are culturally responsive to families living in Tulsa, and balance constructs aligned with both protective and compensatory experiences (PACEs) and adverse childhood experiences (ACEs). For the 18-month survey, this approach has made it challenging to create an instrument that can be completed in less than 90 minutes for birth cohort families and less than 60 minutes for kindergarten cohort families. We have started to address the length of the survey by reviewing and refining the list of proposed measures for the 18-month survey in order of priority, including ongoing consideration of the use of ACE and PACE constructs. The AIR team also created crosswalks between the 18-month survey and the BEST logic models to ensure that all data collection activities are aligned to the BEST vision while avoiding duplication and overburdening respondents. The AIR team continued to revise the 18-month birth cohort survey to achieve a data collection time of less than 75 minutes, programmable in the CATI system.

## Primary Data Collection

The AIR team has created the final 1-month phone survey for both cohorts. 66 members of the birth cohort have completed the 1-month survey, and data collection for the 1-month kindergarten survey began the week of December 13, 2021.

Prior to data collection, we recruited mothers with young infants to pilot-test the 1-month survey for the birth cohort and parents of kindergartners to pilot-test the 1-month survey for the kindergarten cohort. For each cohort, eight mothers participated in the pilot. At the end of the pilot, we conducted a cognitive interview with participants to gather feedback on the flow and wording of items within each section of the survey. From the pilots, in general, we found that the 1-month survey flowed well and took less than 20 minutes to complete in most cases. The results from the pilot led to further refinement of the instruments before initiating data collection, such as streamlining the “experience prior to kindergarten” question.

## Extant Data Collection and Analysis

During 2021, the AIR team continued to build strong relationships with several local- and state-level organizations to gather extant administrative data. We will use these data to describe outcome trends in Tulsa and to make comparisons to Oklahoma City and other cities to assess the impact of BEST. The development of these partnerships has been very successful so far, and we appreciate all the help we have received from BEST staff and partner agencies.

In this section, we present trends in outcomes based on analyses of data we have obtained in the past 2 years. In this report, we focus on comparisons between Tulsa and Oklahoma City, which allows us to use state-level data sources that include both of Oklahoma’s major cities. These analyses serve two purposes: (1) they help us document the extent of existing inequality in Tulsa across important child and family outcomes, compared with Oklahoma City, and (2) they help us set the stage for future comparative interrupted time series analyses to estimate the impact of BEST. These data come from several state data partners, including the Oklahoma Department of Human Services (OKDHS) and Oklahoma State Department of Education (OSDE). Future analyses will include other comparison cities in addition to Oklahoma City. The exhibits included in this section of the report present baseline trend data for Tulsa and Oklahoma City for a selection of indicators related to three of the four BEST goals. These goals aim to increase the number of children who are:

- On a positive developmental trajectory by age 3 (Goal 2),
- Ready to enter kindergarten (Goal 3), and
- Achieving success by third grade (Goal 4).



Specifically, we show the following:

- Indicators of child abuse and neglect (related to Goal 2 and an indicator of ACEs for all children)
- Preschool enrollment (related to Goal 3)
- Third-grade proficiency in English and mathematics (related to Goal 4)

Some indicators, such as preschool enrollment and third-grade achievement, have been well studied in Tulsa. Our approach builds on these prior analyses by drawing on American Community Survey (ACS) data as well as restricted-use data on ACEs from OKDHS to provide a broader understanding of inequality in these outcomes in Tulsa and compare levels of inequality in Tulsa with similar statistics in Oklahoma City (and other comparison cities in future analyses).

Using the ACS data to understand preschool enrollment allows us to include a wider range of preschool types than other administrative data, which only capture enrollment in public preschool programs. For example, many families enroll their children in private preschools, which are not included in public enrollment records but are included in questions asked in the ACS. Moreover, using the ACS measures of preschool enrollment allow us to make valid comparisons with other comparison cities outside of Oklahoma. Exhibit A2 provides additional information about the data indicators included in this year's report.<sup>4</sup>

We present citywide averages over time for each indicator and outcome as well as disparities in trends by income level to understand the nature of income inequality in both cities. Graphs presenting racial disparities for the indicators and outcomes are presented in Appendix B.

### ***Initial Extant Data Analysis Findings***

#### **ACE Indicators—Abuse and Neglect**

Child abuse and neglect is an important indicator of traumatic childhood events and ACEs. OKDHS maintains detailed records of allegations of child abuse and neglect, which, combined with estimates of the number of children in a zip code or an ethnic group, allow us to calculate how rates of allegations vary across neighborhoods and ethnic groups. Comparing how these rates (and the differences between them) change over time with comparable trends in other cities may uncover impacts of the BEST initiative on these important outcomes. For the analyses of this indicator, we compare trends in Tulsa and Oklahoma City using zip code-level data that were aggregated to produce city-level averages.

---

<sup>4</sup> Data for these analyses come from the American Community Survey, Oklahoma State Department of Education, and Oklahoma Department of Human Services.

Overall rates of allegations of abuse and neglect were similar over time in Tulsa and Oklahoma City (Exhibit 4) and were lower than the national average of approximately 14%.<sup>5</sup> The disparity in rates between higher and lower income areas was larger in Tulsa than in Oklahoma City (Exhibit 5). This means that children in lower income zip codes in Tulsa were more likely than children in lower income zip codes in Oklahoma City to have been referred to the child welfare system for abuse or neglect. One reason for this may be that measures of economic well-being suggest that income inequality is worse in Tulsa than in Oklahoma City (see sidebar), so the differences in income and poverty levels between neighborhoods in Tulsa may be more pronounced than they are in Oklahoma City. It also is possible that child welfare agencies in Tulsa were more proactive about responding to allegations of abuse or neglect in lower income neighborhoods or that the actual rates of abuse or neglect were higher in those neighborhoods in Tulsa than in Oklahoma City. Either way, these disparities in alleged child abuse and neglect are a useful potential indicator of child well-being that BEST may be able to improve over time.

**Income Inequality in Tulsa and Oklahoma City**

*Measures of economic well-being demonstrate that income inequality is worse in Tulsa than in Oklahoma City, which may help to explain greater disparities observed in Tulsa.*

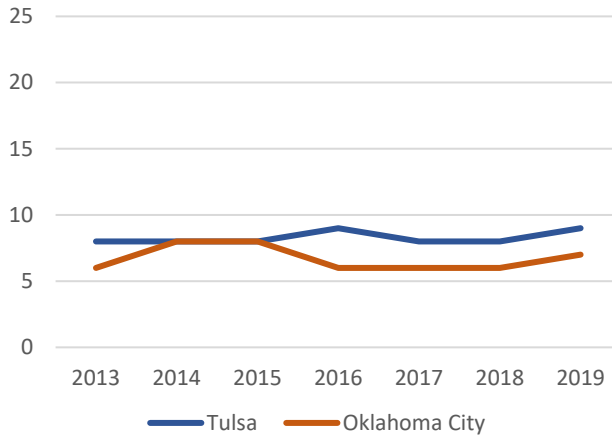
**Economic Well-Being in Tulsa and Oklahoma City**

Measure	Tulsa	Oklahoma City
Median household income*	\$47,650	\$55,557
Poverty rate*	19.4%	16.1%
Gini coefficient †	0.53	0.48

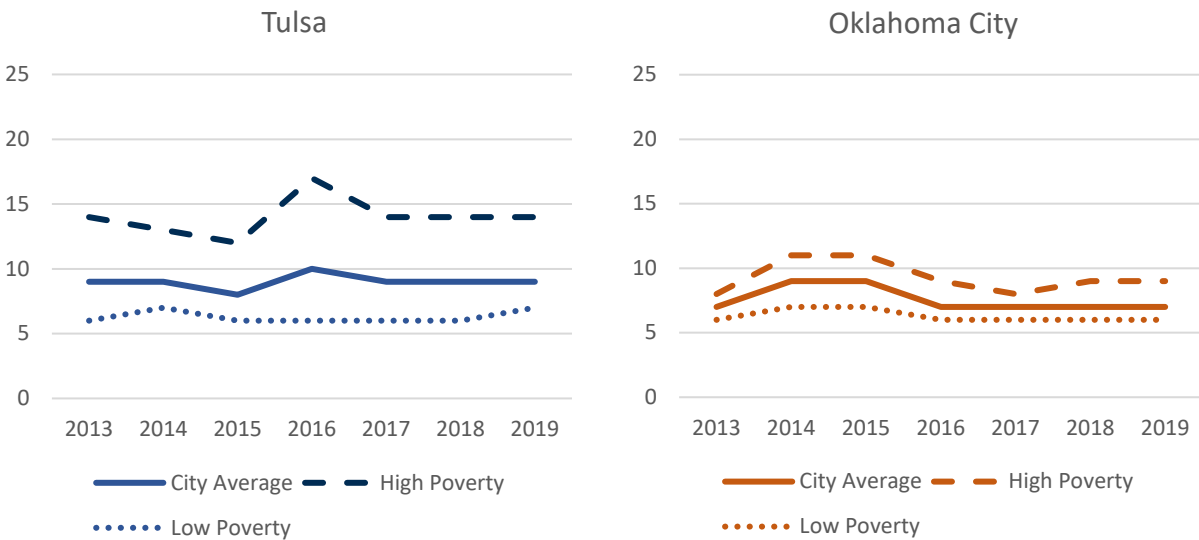
Sources: \* U.S. Census Bureau Quick Facts (2019).  
 † U.S. Census Bureau (2019).  
 Gini Index of Income Inequality American Community Survey 1-year estimates.

<sup>5</sup> Centers for Disease Control and Prevention (2021).

**Exhibit 4. Percentage of Children under Age 9 for Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, 2013–19**



**Exhibit 5. Percentage of Children Under Age 9 For Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19**

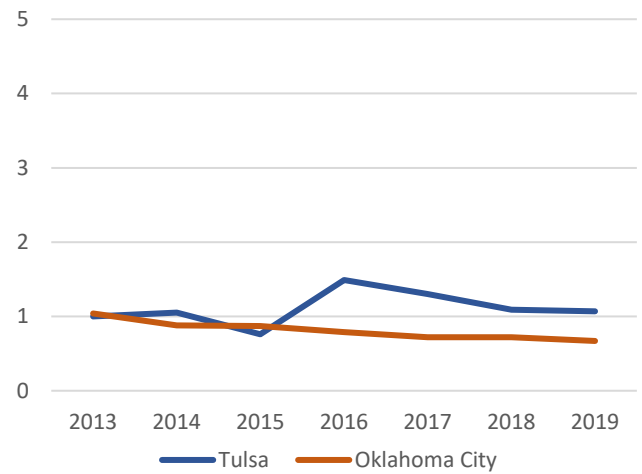


*Note.* Data are from 2013–19 Child Protective Services records provided by the Oklahoma Department of Human Services.

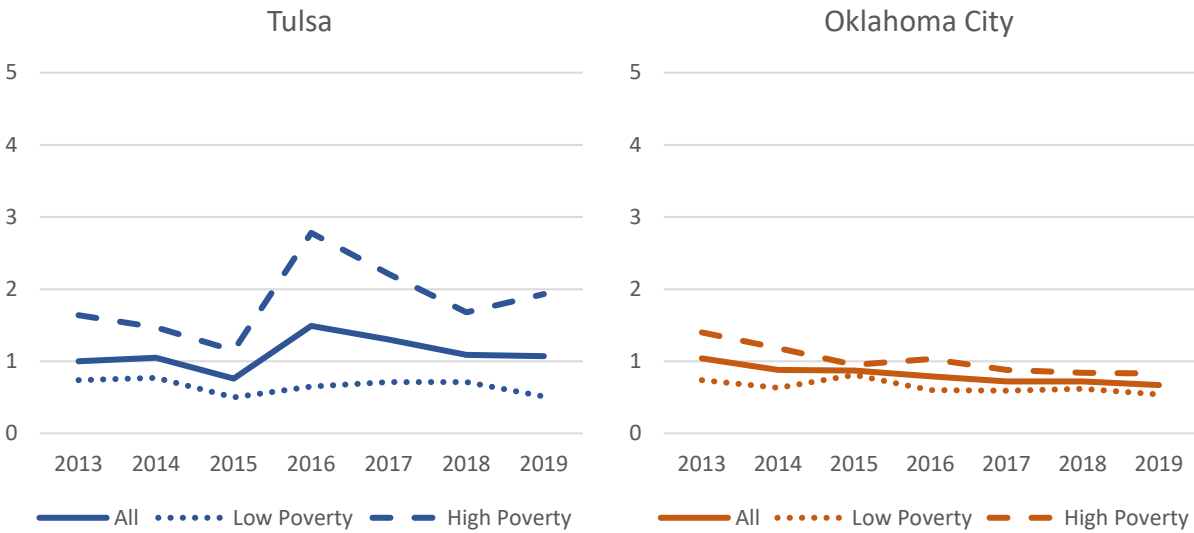
**ACE Indicators—Out of Home Placements**

Rates of out-of-home placements, an even more serious indicator of traumatic childhood events and ACEs, were much lower in absolute terms than allegations of abuse or neglect—below 3%—indicating that most child welfare referrals are resolved without resulting in such placements. The overall trend in out-of-home placements was comparable between Tulsa and Oklahoma City (Exhibit 6). However, consistent with trends in abuse and neglect, the disparity in rates for children in high-poverty areas compared with lower poverty areas was larger in Tulsa than in Oklahoma City (Exhibit 7). Racial disparities were similar between the two cities (Exhibit B2) and indicated much higher out-of-home placement rates among African American families in Tulsa as well as Oklahoma City than among White and Latino families. After we obtain the necessary data, the next step will be to further disaggregate these disparities by ethnicity, *controlling for neighborhood poverty* to determine the extent to which disparities by race or ethnicity can be explained by differences in socioeconomic status.

**Exhibit 6. Percentage of Children Under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, 2013–19**



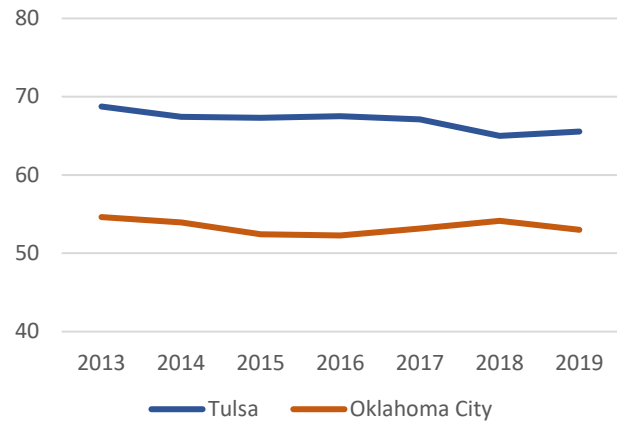
**Exhibit 7. Percentage of Children Under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19**



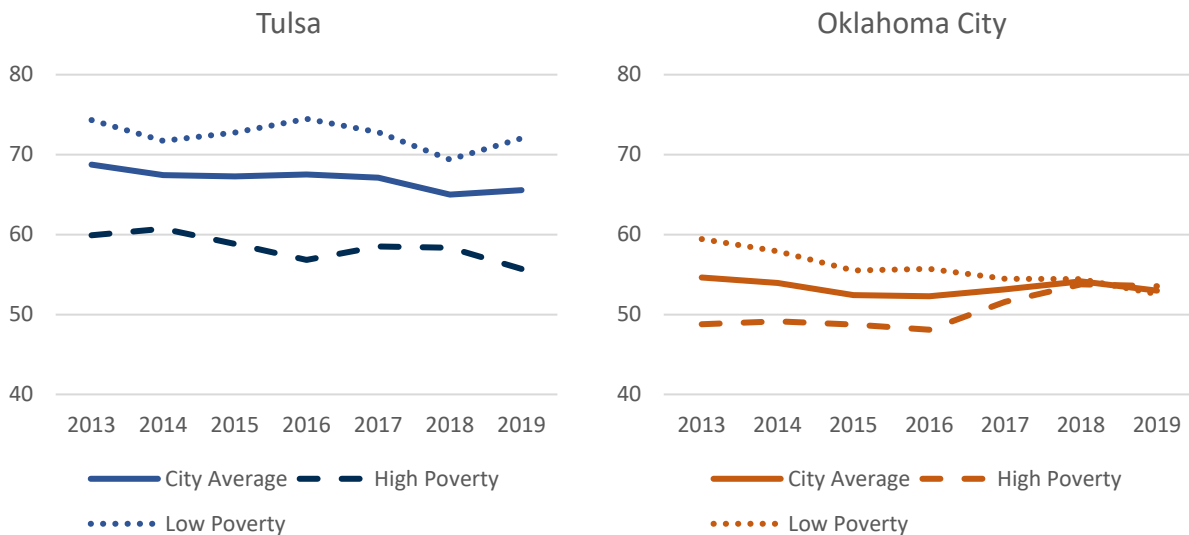
**Preschool Enrollment**

As in the 2020 analyses, we used two measures from the ACS to estimate trends in preschool enrollment (Exhibit 8): the total number of 3- and 4-year-old children in the population and the number of these children enrolled in a nursery or preschool in the past 3 months. These analyses reflect city-level averages for Tulsa and Oklahoma City. For analyses by neighborhood poverty level, we relied on zip code-level data that was aggregated by AIR to produce city-level averages. For analyses where we examined preschool enrollment by race and ethnicity, (presented in Appendix B), we relied on data that were already aggregated to the city-level by our data partner for both Tulsa and Oklahoma City. Using these data, we see that Tulsa’s preschool enrollment rate is consistently higher than Oklahoma City’s rate over time. This may reflect the success of earlier foundation and community efforts to increase prekindergarten enrollment, even before the BEST initiative. Again, disparities in preschool enrollment between high- and low-income areas are wider in Tulsa than in Oklahoma City (Exhibit 9).

**Exhibit 8. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool in Tulsa and Oklahoma City, 2013–19**



**Exhibit 9. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool in Tulsa and Oklahoma City, by Neighborhood Poverty Level, 2013–19**

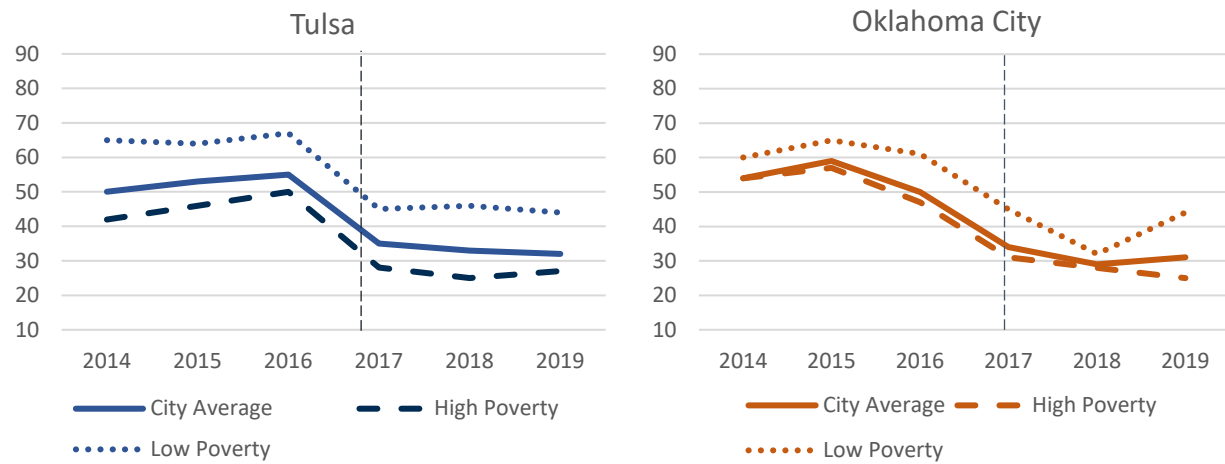


*Note.* Date source is 2013–19 American Community Survey 5-year estimates data.

### Third-Grade English Language Arts (ELA) and Mathematics Proficiency

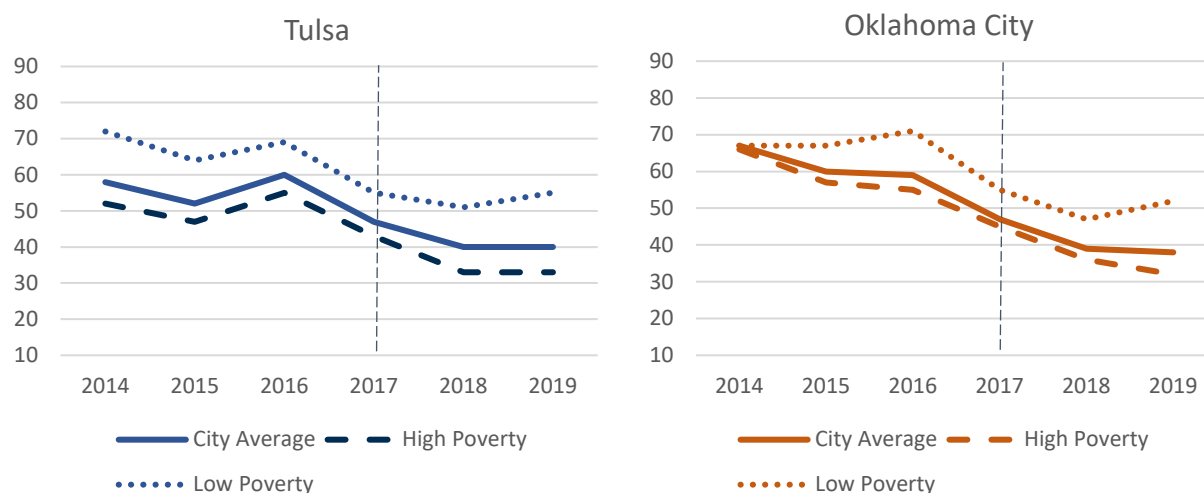
We also examined variation in educational trends in the rate of third graders who reached the *Basic* level or higher in ELA and mathematics proficiency (Exhibits 10 and 11) for Tulsa and Oklahoma City. Analyses for this indicator relied on school-level data that were aggregated to product district-level averages for Tulsa Public Schools and Oklahoma City Public Schools. Districtwide proficiency rates were comparable between the two cities as were disparities between high- and low-income areas.

**Exhibit 10. English Language Arts Proficiency (*Basic* or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in High- and Low-Income Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19**



*Note.* The state assessment changed in the 2016–17 school year, denoted by the dotted vertical line. Data come from the Oklahoma State Department of Education for 2013–14 through 2018–19.

**Exhibit 11. Mathematics Proficiency (Basic or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in High- and Low-Income Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19**



*Note.* The state assessment changed in the 2016–17 school year, denoted by the dotted vertical line. Data come from the Oklahoma State Department of Education for 2013–14 through 2018–19.

**Lessons Learned and Next Steps**

The baseline trends presented in this report are part of foundational analyses we need to conduct prior to the comparative interrupted times series analyses that will ultimately provide estimates of the impact of the BEST initiative. These analyses build on baseline trends presented in last year’s report, which focused primarily on the extent of inequality *within* Tulsa on select indicators (preschool enrollment, third-grade achievement, prenatal care, premature births, and low birthweight births). This year’s analyses compare inequality trends *between* Tulsa and Oklahoma City, one of our comparison cities.

In general, we found that citywide trends in ACE indicators and education outcomes were comparable between Tulsa and Oklahoma City. Preschool enrollment was one notable exception—Tulsa had consistently higher rates of preschool enrollment than Oklahoma City. Generally, trends in racial and income disparities also were comparable. However, disparities in outcomes between zip codes with higher and lower poverty rates were greater in Tulsa than in Oklahoma City. This may reflect the fact that poor families in Tulsa appear to be more concentrated in specific neighborhoods than in Oklahoma City. Given that baseline citywide trends were very similar between the two cities, we have confidence that Oklahoma City will be a suitable comparison city for the rigorous impact analyses we will conduct in the future.

We will continue building on our understanding of baseline trends in Tulsa and comparison cities in future analyses. Most immediately, we plan to use publicly available data for the other four comparison cities (Arlington, Texas; Minneapolis, Minnesota; Oakland, California; and



Wichita, Kansas) to make comparisons on select indicators, including preschool enrollment and third-grade proficiency. In addition, the next section details upcoming data requests and analyses that we are currently planning that will contribute to our understanding of the baseline for the BEST initiative.

We have three activities planned for 2022 that will expand our understanding of baseline trends in Tulsa, the extent of inequality prior to full-scale implementation of BEST, and how trends compare with Oklahoma City and the additional comparison cities. First, we plan to examine de-identified student-level records from Tulsa Public Schools to conduct more in-depth analyses of educational outcomes. Student-level records will allow us to examine patterns of inequality at the intersection of race and income. Moreover, we also will be able to move beyond third-grade state assessment results to examine results from the Measures of Academic Progress (MAP), conducted three times per year to assess student progress, as well as kindergarten readiness assessments. Second, we are working to obtain de-identified birth characteristics data for Tulsa and Oklahoma City. Our initial examination of birth data in the December 2020 report was based on aggregated data for zip codes. Individual-level birth records will allow us to examine inequality in access to prenatal care, low birthweight births, and premature births. Third, we are collaborating with Asemio and BEST partners on data-linkage projects to address additional research questions of interest related to BEST impacts, such as the relationship between Medicaid enrollment data and children's academic and attendance outcomes.

## **Section IV: Ethnography Key Activities**

The ethnography activities address Research Questions 2, 3, and 4 (pp. 2–3 above). The purpose of the ethnographic study is to provide an in-depth perspective from the families' points of view on their day-to-day experiences raising young children in Tulsa, including their interactions with systems and service providers. Key ethnographic study activities include the following:

- Creating a sampling approach
- Completing Institutional Review Board approval requests and implementing sample recruitment
- Developing ethnographic data collection protocols
- Implementing data collection
- Conducting data analysis

We summarize our work within each of these ethnographic study activities in the subsequent sections, concluding with lessons learned and next steps for the work in 2022.

## Recruitment and Sampling Approach

The sample for the ethnographic study is a subsample of the birth and kindergarten samples recruited for the outcome/impact study. Sampling has been initiated to select a total of 40 families for the ethnographic study, 10 families for each cohort. We plan to use data from the 1-month survey to identify families as possible candidates for the ethnography, with the goal of recruiting a diverse sample of parents based on their neighborhood, economic status, number of children, and preferred home language.

Recruitment for the ethnography birth cohort has begun. At the conclusion of the 1-month survey, we ask families if they are interested in participating in the ethnography study. As of December 13, we have completed 1-month surveys from 66 families. At this time, 44 families have expressed interest in participating in the ethnography study.

## Developing Ethnographic Data Collection Protocols

The ethnography uses the Ecocultural Family Interview (EFI). The EFI is an approach to ethnography research that uses a conversation with parents about how they organize their everyday routine. The approach focuses on learning how families plan, create, change, and sustain their everyday activities. Organizing a daily routine is something all families must do. Parents share their experience about things that go right or wrong in their family routines, and how they adapt with the skills, resources, supports, and beliefs they have to make a routine for themselves and their children meaningful. The format of the open-ended interview is a mixture of conversation, probing questions, and preplanned structured questions to hear about the family routine and circumstances from the parents' perspective, using their own words. Interviewers are trained to guide the conversation to be sure that they have a clear understanding of the parent's meaning and the family's circumstances.

Within this approach, there are five tools that AIR uses as part of the ethnographic study. These tools include (1) the qualitative interview conversation with the parent/caregiver, (2) the interviewer's EFI cue cards to ensure that all topics are covered and the interview flows in a conversational manner, (3) the audio recording of the interview, (4) written interview summary notes, and (5) the EFI codebook, which adds to the traditional ethnographic method by providing a systematic approach that rates the family on key items in the EFI. The nine themes that we expect will guide the ethnographic data collection are listed in Exhibit 12. Each theme also is comprised of subthemes and examples that help the interviewer score a family in that area.

## Exhibit 12. Ecocultural Family Interview Key Themes

---

A. Family Subsistence and Work
B. Services
C. Information
D. Cultural Beliefs and Influences
E. Home-Community Environment
F. Networks and Supports
G. Connectedness
H. Domestic Workload and Child Care Tasks
I. Sustainability of Daily Routine

---

### Primary Data Collection

We have reached out to the 40 families who have expressed interested in the additional study activities to let them know that we will be in contact in early 2022 about next steps. As of December 7, 2021, the ethnography protocols have been piloted with one birth cohort family.

### Lessons Learned and Next Steps

From the large proportion of 1-month survey respondents who have expressed interest in participating in an additional study, it would appear that families are enjoying their study experience and want to continue working with the team. In 2022, AIR will continue to collect ethnography data for both the birth and kindergarten cohorts.

### Conclusion

We designed the BEST Study to be responsive to the requirements of a participatory and equity-focused evaluation; therefore, we will actively seek out feedback and suggestions for improvement from community stakeholders and study participants. However, due to the COVID-19 pandemic, a key study activity, recruitment, has been slow to produce the results originally expected prior to the pandemic. The components that we have been able to learn the most from in 2021, in terms of data collected and analyzed, are the process study and the extant data component of the outcome/impact Study.

Despite the straining circumstances of the pandemic, we also learned that there continued to be a great deal of support from Tulsa organizations for the BEST Study. The level of cooperation, research approvals, and executed data-sharing agreements, along with numerous positive conversations from a range of organizations and stakeholders in Tulsa, reinforce the support and excitement for the BEST Study and its design, despite study challenges presented by the pandemic, in 2022.

## References

Centers for Disease Control and Prevention. (2021). *Prevent child abuse & neglect*.

<https://www.cdc.gov/violenceprevention/pdf/infographic/can-infographic.pdf>

Howard, E., Bos, J., Caverly, S., Fain, G., & Dahlke, K. (2019). *Birth through Eight Strategy for Tulsa (BEST) Phase II evaluation plan*. American Institutes for Research.

Howard, E., Caverly, S., & D'Souza, S. (2020, October 2). *Birth recruitment cohort planning—hospital birth statistics memo*. American Institutes for Research.

## Appendix A. Extant Data Indicators

### Exhibit A1. Focal Extant Data Outcome Indicators

For each indicator in this exhibit, we examined Tulsa citywide baseline trends between 2013 and 2019. We also examined trends for low-income and high-income areas and schools in Tulsa based on 2015 neighborhood and school-level poverty rates.

Indicator	Description or Definition	Source
<b>Child abuse and neglect</b>	Percentage of children under age 9 for whom there were abuse or neglect allegations; calculated by dividing the number of children for whom there were abuse or neglect allegations (Oklahoma Department of Human Services [OKDHS]) by the estimated number of children under age 9 in each zip code (American Community Survey [ACS]) <sup>6</sup>	OKDHS, ACS
<b>Preschool enrollment</b>	Parent-reported preschool enrollment of 3- and 4-year-old children in any public and private preschool or nursery school; calculated by dividing the number of children reported to be in preschool or nursery school by the number of children ages 3 and 4 in each zip code	ACS
<b>Grade 3 English language arts (ELA) proficiency</b>	Percentage of third-grade students who scored <i>Basic</i> or higher on Oklahoma School Testing Program (OSTP) state assessments of ELA proficiency	Oklahoma State Department of Education (OSDE)
<b>Grade 3 math proficiency</b>	Percentage of third-grade students who scored <i>Basic</i> or higher on OSTP state assessments of math proficiency	OSDE

Data for these analyses come from administrative sources, such as OKDHS, as well as publicly available data from ACS and publicly available third-grade test score data.

Analyses of abuse and neglect and out-of-home placements relied on administrative case records from OKDHS. Because the data are de-identified, and in some cases, aggregated, we cannot determine unduplicated counts. Based on national reporting, we expect the rates to be only slightly inflated. Trends presented correspond to the city level.

Analyses of preschool enrollment relied on ACS data. Analyses by neighborhood poverty level were based on zip code-level data that were aggregated to the city level. Due to lack of

<sup>6</sup> Child welfare data were requested from the Oklahoma Department of Human Services (OKDHS) for children from birth through age 8 to correspond with the focus of the BEST initiative. Aggregated data for this group of children were provided by OKDHS because of the sensitive nature of the data. Data for the denominator are estimates from the American Community Survey.

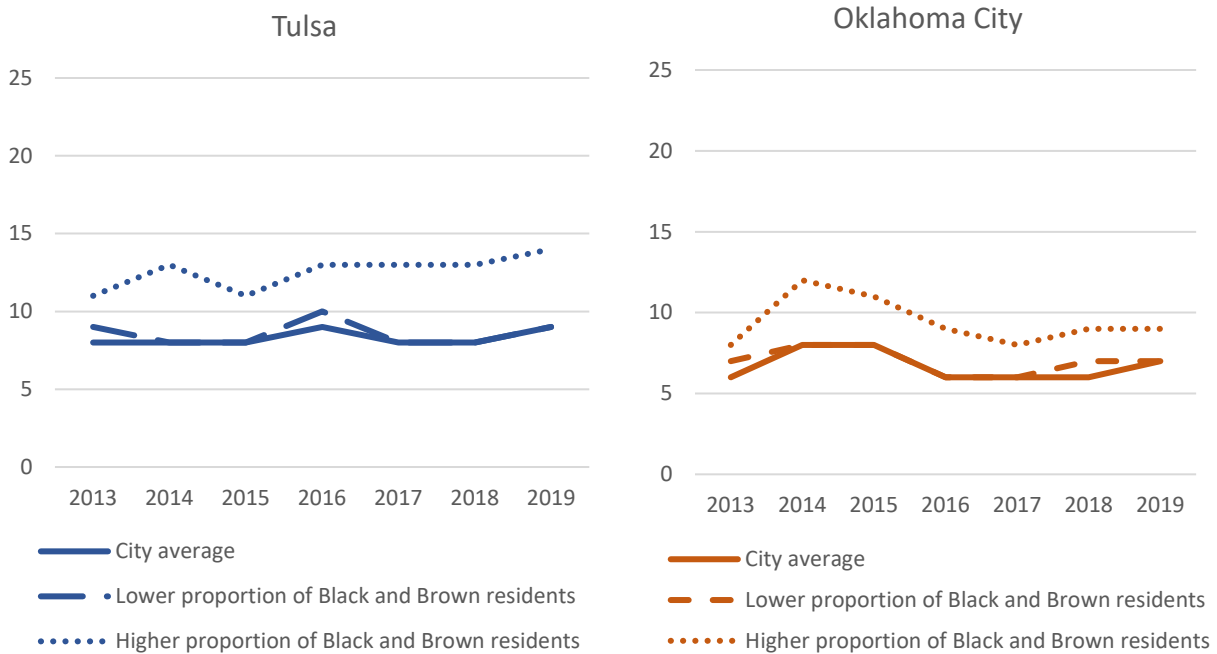
race/ethnicity data at the zip code level, analyses by race/ethnicity were conducted at the city level.

Analyses of third-grade proficiency were based on school-level data from OSDE that were aggregated to the school district level.

## Appendix B. Supplemental Extant Data Analyses

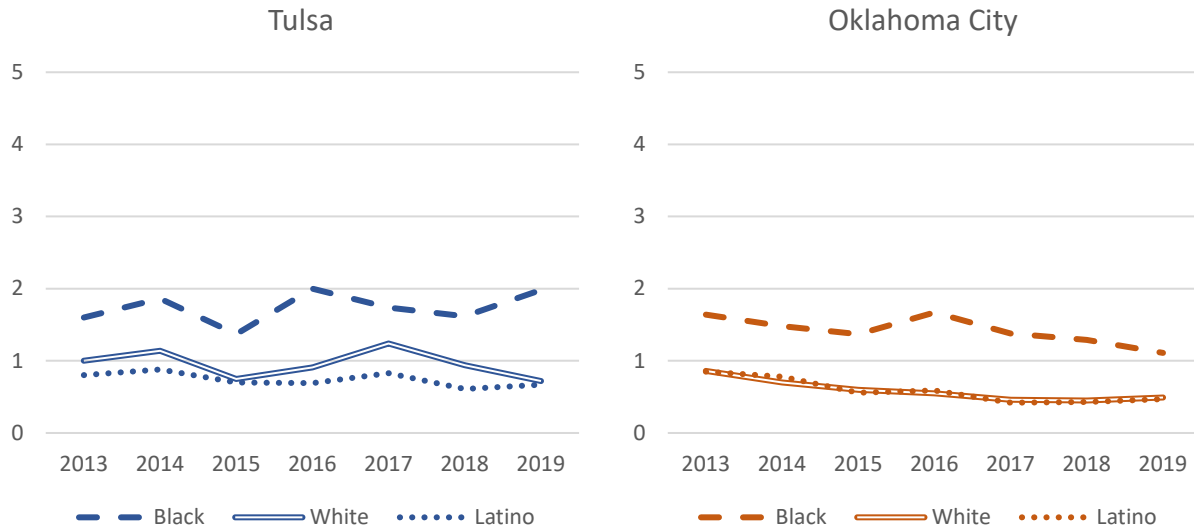
The following analyses (Exhibits B1–B6) present racial disparities for each of the Adverse Childhood Experience (ACE) indicators and educational outcomes presented in Section III. The results demonstrate that indicators and outcomes are generally worse for children of color than their White counterparts and that inequality trends between Tulsa and Oklahoma City were similar. These analyses do not control for socioeconomic status, which would likely reduce the disparities observed. We would not expect disparities to completely disappear, however, because of institutionalized racism.

**Exhibit B1. Percentage of Children under Age 9 for Whom There Were Allegations of Abuse or Neglect in Tulsa and Oklahoma City, by Race/Ethnicity Composition of Neighborhood<sup>7</sup>, 2013–19**

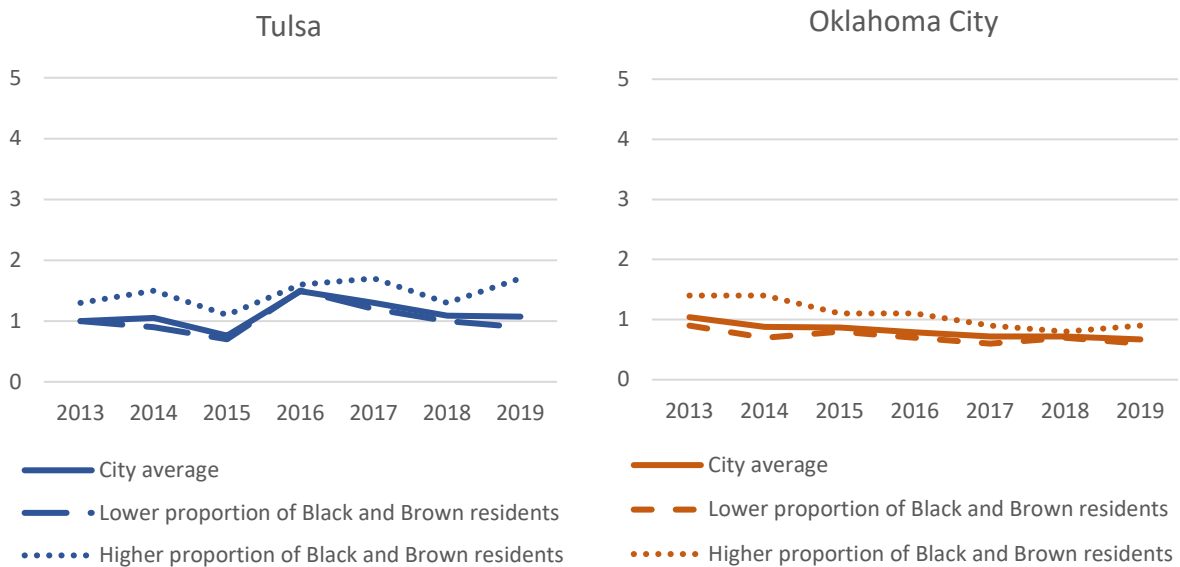


<sup>7</sup> Neighborhoods were categorized into two groups based on a 20% threshold of the percentage of Black and Brown residents in the neighborhood.

**Exhibit B2. Percentage of Children under Age 9 Who Experienced Out-of-Home Placements by Race/Ethnicity in Tulsa and Oklahoma City, 2013–19**



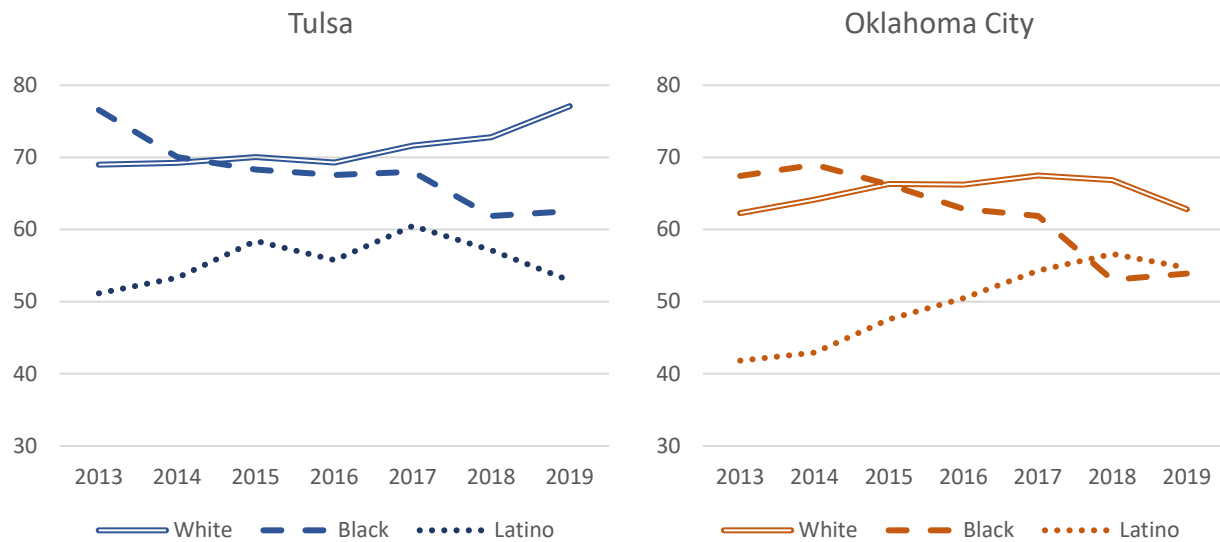
**Exhibit B3. Percentage of Children under Age 9 Who Experienced Out-of-Home Placements in Tulsa and Oklahoma City, by Racial Composition of Neighborhood<sup>8</sup>, 2013–19**



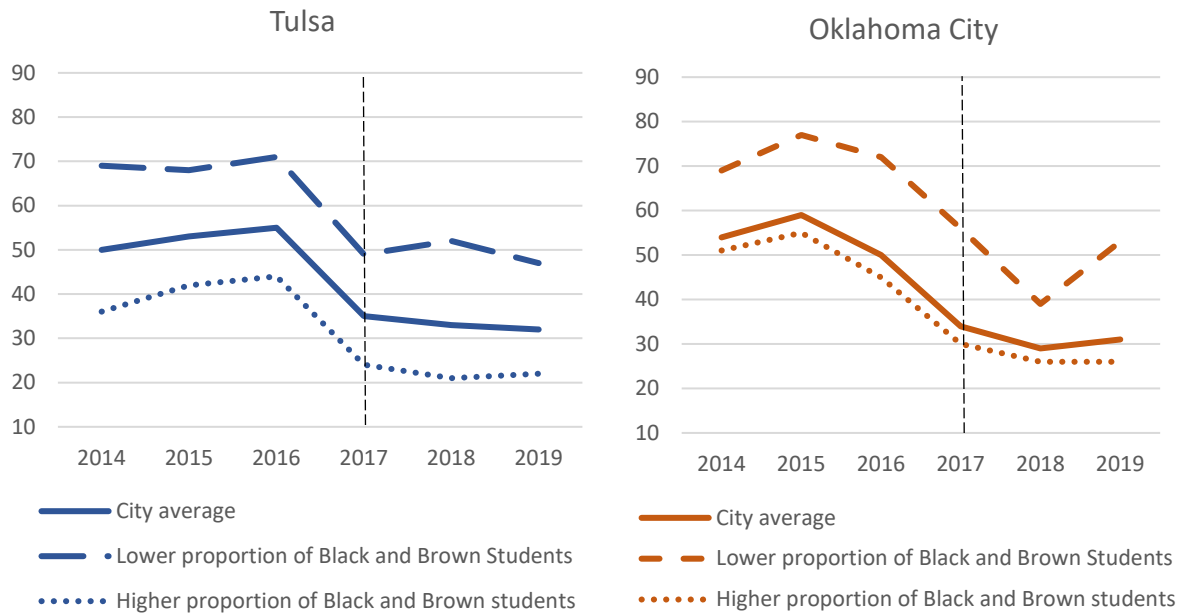
<sup>8</sup> Neighborhoods were categorized into two groups based on a 20% threshold of the percentage of Black and Brown residents in the neighborhood.



**Exhibit B4. Percentage of 3- and 4-Year-Old Children Enrolled in Preschool by Race/Ethnicity in Tulsa and Oklahoma City, 2013–19**

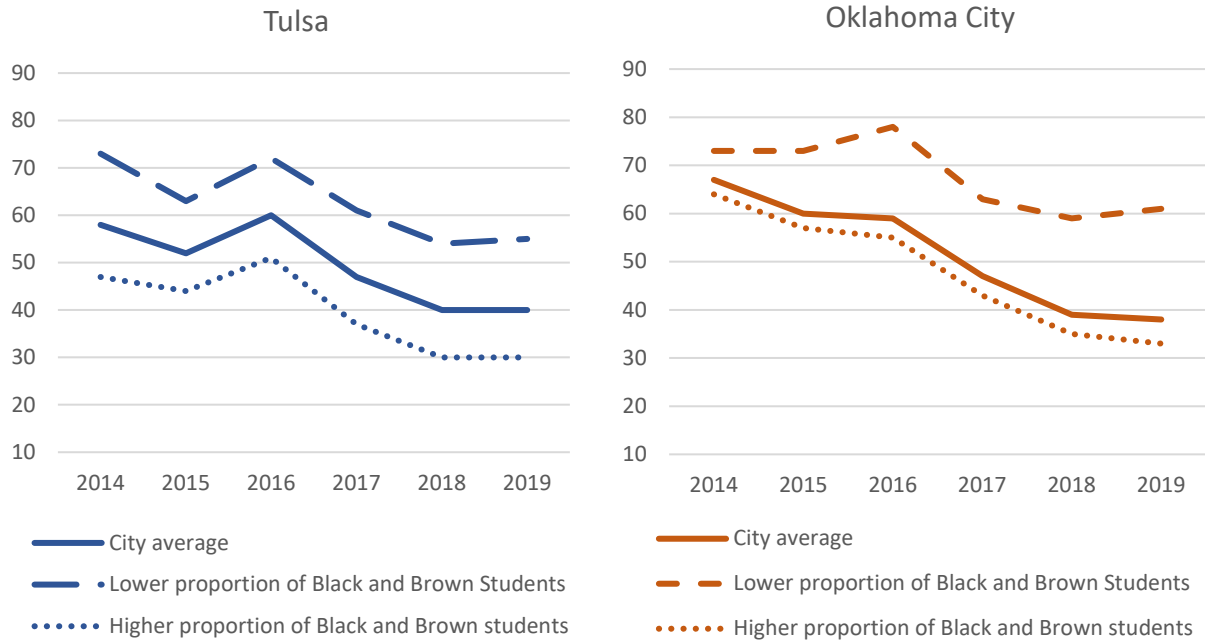


**Exhibit B5. English Language Arts Proficiency (*Basic* or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students by Racial Composition of Schools<sup>9</sup> in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19**



<sup>9</sup> Schools were categorized into two groups based on a 20% threshold of the percentage of Black and Brown students in the school.

**Exhibit B6. Math Proficiency (*Basic* or Higher) on the Oklahoma School Testing Program Assessment for Third-Grade Students in Black and Brown Majority Schools and White Majority Schools in Tulsa and Oklahoma City, School Years 2013–14 Through 2018–19**





Established in 1946, the American Institutes for Research® (AIR®) is a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance both domestically and internationally in the areas of education, health, and the workforce. AIR's work is driven by its mission to generate and use rigorous evidence that contributes to a better, more equitable world. With headquarters in Arlington, Virginia, AIR has offices across the U.S. and abroad. For more information, visit [www.air.org](http://www.air.org).

## MAKING RESEARCH RELEVANT

### AMERICAN INSTITUTES FOR RESEARCH

1400 Crystal Drive, 10th Floor

Arlington, VA 22202-3289 | 202.403.5000

[www.air.org](http://www.air.org)

### LOCATIONS

**Domestic:** Arlington, VA (HQ) | Sacramento and San Mateo, CA | Chicago, IL | Indianapolis, IN | Waltham, MA | Rockville, MD | Chapel Hill, NC | Austin, TX

**International:** Ethiopia | Haiti