

Birth through Eight Strategy For Tulsa Phase II Evaluation

2025 Annual Report

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Acknowledgments

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The Birth through Eight Strategy for Tulsa (BEST) Phase II Evaluation project (the BEST study) is directed by Dr. Eboni C. Howard, with a team of contributing AIR staff. Staff are listed according to the 2025 study component they substantially contributed to and authored, as follows:

- **Process Study:** Gabriele Fain, Rebecca Wang, Joanne Carminucci, Chelsea Qi Xing, Patrick Rich, Ashley Darang, Patrick Steele
- **Outcome Impact Study:** Patrick Rich, Preeya Mbekeani, Austin Gragson, Rebecca Wang, Joanne Carminucci, Dong Hoon Lee, Stephanie D’Souza, Jennell McHugh, Cecilia Xuning Zhang
- **Ethnography Study:** Paula Dias, Vivian Le, Stephanie McCarty, Kaitlin Carson

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Section I: Birth through Eight Strategy for Tulsa Phase II Evaluation Overview—The BEST Study

The purpose of this annual report by the American Institutes for Research® (AIR®) is to summarize the Birth through Eight Strategy for Tulsa (BEST) study activities, challenges, and findings from 2025 and to describe the expected next steps for 2026. The report covers the period of January 1, 2025, to December 31, 2025, and is based on the original BEST evaluation plan.¹ In this section, we summarize the purpose of the study, the three study components, the research questions, and the study 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 ethnography study. For each study component, we provide an update of activities, findings, lessons learned, and next steps.

The primary objective of the BEST initiative is to break the cycle of intergenerational poverty. BEST provides coordinated supports in the earliest years of children’s lives to help make Tulsa, Oklahoma, a good place for all children and families to live, grow, and thrive. By convening a diverse network of Tulsa partners—public agencies, health care and women’s health organizations, child care providers, education institutions, and other local nonprofit organizations—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 is an 8-year effort to understand how a comprehensive, continuous, and integrated system-change approach can expand opportunities and improve the lives of young children and their families in Tulsa. The study’s central purpose is to determine whether BEST creates change that leads toward four goals: (a) more children being born healthy, (b) more children on a positive developmental trajectory in the first three years of life, (c) more children prepared to enter kindergarten, and (d) more children achieving success by third grade. To measure the impact of BEST at the child level, it is valuable to track BEST processes, activities, and impacts at the system level and understand how the impact of BEST is actualized in the daily lives of children and families. Thus, the evaluation has the following three distinct but interrelated studies:

- A **process study** that gathers information from BEST partners, community stakeholders, and George Kaiser Family Foundation (GKFF®)—BEST leadership to understand how Tulsa’s preconception-to-age-8 service system is shifting.

¹ 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.

- An **outcome/impact study** that provides information from administrative data about shifts in Tulsa community service outcome trends over time, before and after the BEST initiative. It also gathers information directly from children, parents, and teachers in Tulsa to examine changes in child and family outcomes due to BEST. It includes four cohorts of children: two cohorts surveyed from birth and two cohorts surveyed from the start of kindergarten.
- An **ethnography study** that describes the routines and experiences of a small subset of families participating in the outcome/impact study to understand what families experience raising young children in Tulsa.

Taken together, the three studies make up the comprehensive BEST Phase II evaluation and will help answer all the BEST evaluation research questions.

A technical working group (TWG) has been advising the study team 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 at the Frank Porter Graham Child Development Institute at the University of North Carolina-Chapel Hill), Dr. Marta Tienda (Maurice P. During '22 Professor in Demographic Studies, Emeritus Professor of Sociology and Public Affairs, Princeton University), and Robert Goerge (Senior Fellow, NORC at the University of Chicago).

Guiding Evaluation Research Questions

Five overarching research questions guide the BEST study. The first four capture the effects of BEST on service infrastructure, service reach, parental outcomes, and child outcomes. The fifth captures facilitators of and barriers to BEST implementation, service delivery, and the initiative's capacity to change the trajectory on child and family outcomes in positive ways. For each question, it is important to look at the impact of BEST on equity in Tulsa as it relates to supporting the needs of families and communities.

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?

- a. **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?
- b. **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 parent beliefs and attitudes about parenting and early learning experiences?
- c. **Family Functioning.** To what extent, and in what ways, does BEST change family functioning, including resilience, mobilizing resources, and social supports?
- d. **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?
- e. **Equity.** To what extent does BEST change the level of equity in these parent, family, and home outcomes across cultural 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 (i.e., 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 cultural 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 which child and family developmental and functional areas do family background and neighborhood characteristics influence child outcomes?

Study Timeline Updates and Summary of 2025 Findings

The BEST evaluation began in January 2020, and most analysis is planned to be completed by December 2027. Because of the COVID-19 pandemic delays to many study activities—including delays to sample recruitment and data collection—it is expected that some final analysis will occur in 2028. Exhibit 1 provides an overview of key project milestones to date. Exhibit 2 lays out key study activities on a timeline to indicate when the study will have information to address each of the key research questions.

Exhibit 1. Project Timeline and Key Milestones to Date

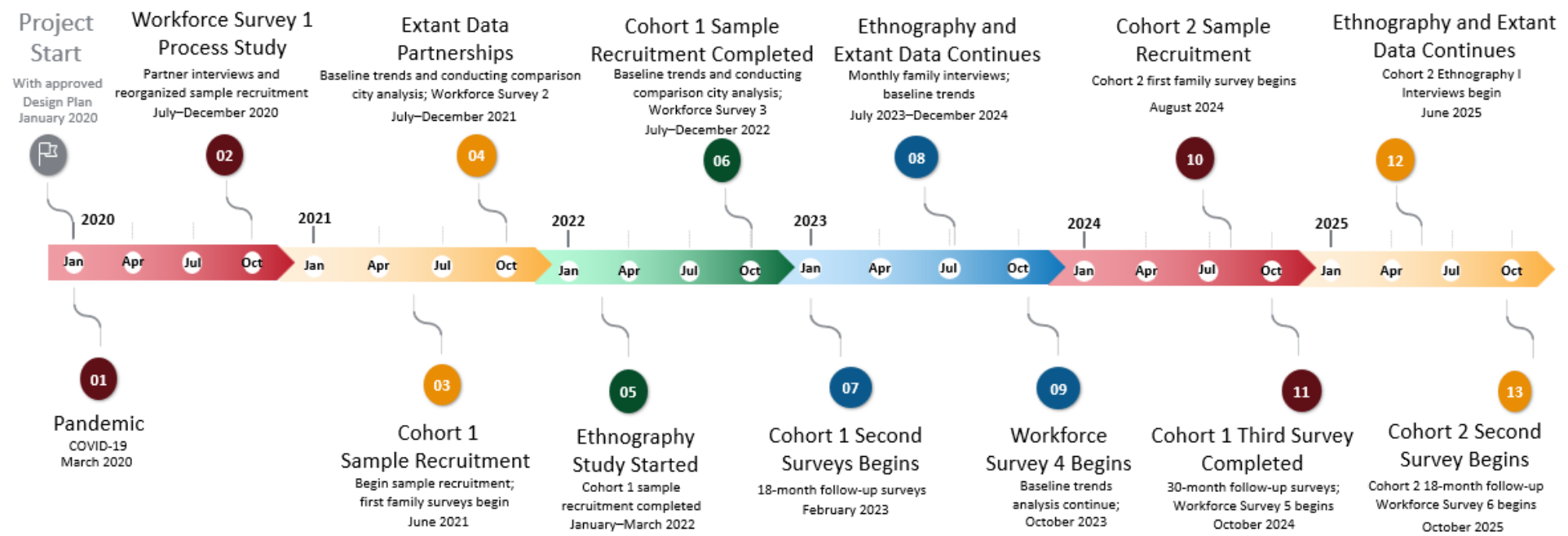
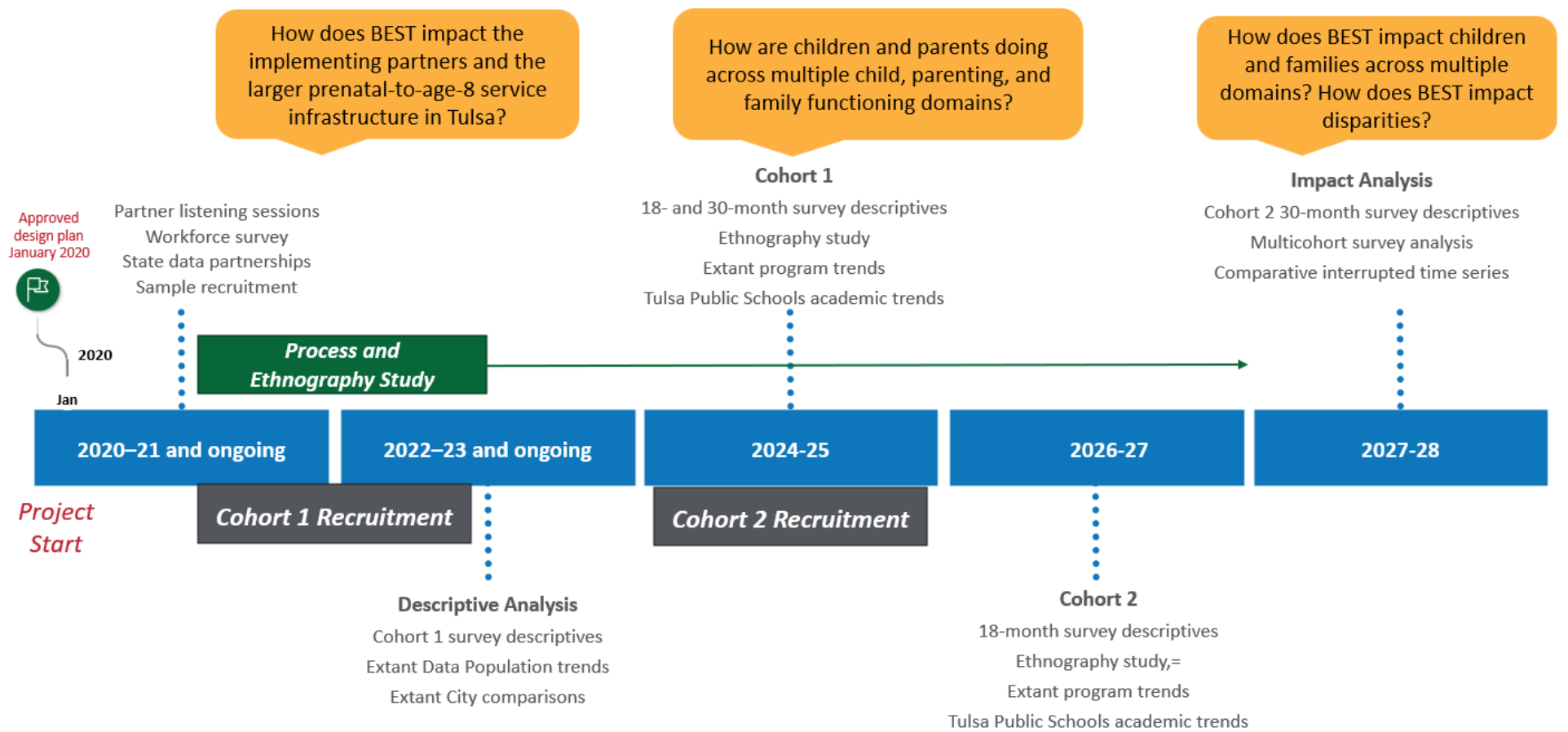


Exhibit 2. Timeline for Addressing Key Research Questions



What We Have Accomplished in 2025

	Gathered feedback from BEST Partners about their experiences in the BEST initiative.
	Conducted the fifth annual workforce survey (administered to frontline staff and their managers in BEST partner organizations), to track changes in the service infrastructure.
	Recruited the Birth Cohort 2 and Kindergarten Cohort 2 survey sample and administered the 1-month survey to participating families. Developed a Family Service Use Survey .
	Analyzed descriptive data from the 30-month surveys of Birth Cohort 1 and Kindergarten Cohort 1 and the 1-month survey of Cohort 2.
	Analyzed baseline trends using administrative data on school vaccination rates to describe historical patterns in Tulsa and Oklahoma City Public Schools.
	Maintained contact with Cohort 1 families participating in the ethnography study , and recruited additional families for Cohort 2, completing 167 interviews in 2025.
	Analyzed ethnographic data on work, subsistence, social services and child development .

What We Have Learned

Process Study	
1	A major strength of the BEST initiative is that it continues to be effective in promoting coordination and collaboration among participating organizations.
2	Knowledge of the BEST initiative among partner agency staff has consistently grown over the past 5 years.
3	As in past years, staff reported that they continued to use “warm handoffs” to personally help a client connect with a service.
4	Between 2020 and 2024, the percentage of staff who reported making referrals to services gradually decreased.
5	Almost three quarters of the BEST partner staff communicated regularly about shared clients to other BEST partners—which continues a positive trend since 2020.
6	Engaging families in decision-making and leadership roles continues as a challenge for some BEST partners.
7	BEST partner staff continue to report high satisfaction with their jobs, and they report that work stress was lower than in past years.
8	BEST partners reported that increased coordination and collaboration among organizations in the initiative have led to positive outcomes related to service access and quality.

Outcome/Impact Study

9	Early childhood education services were the most used reported by families in the Birth Cohort 1 survey sample, followed by health/mental health services and nutrition services. The least reported services were legal/criminal justice services and housing services.
10	Parents from Medicaid-eligible households in the Cohort 1 survey sample report higher levels of stress, rates of depression and concerns about meeting living expenses.
11	Thirty percent of the children in Birth Cohort 1 sample and 46% of the Kindergarten Cohort 1 sample had experienced at least one Adverse Childhood Experience (ACE). A significantly higher percentage of Medicaid-eligible children have experienced an ACE compared to children not eligible for Medicaid.
12	Parents in the Cohort 1 survey sample participate in early learning activities with their children, on average, multiple times a week.
13	Sixty-eight percent of Medicaid-eligible families in the Birth Cohort 1 sample accessed Women, Infants, and Children (WIC) services during 2022-2024.
14	Recruitment of the Cohort 2 sample is complete. The Birth Cohort 2 and Kindergarten Cohort 2 sample had a greater proportion of families identifying as Hispanic than the overall Tulsa population.
15	The proportion of kindergarten students up to date on all vaccines declined in both Tulsa Public Schools and Oklahoma City Public Schools between the 2017–18 and 2023–24 school years.

Ethnography Study

16	Most of the families in the Cohort 1 ethnography sample reported concerns about their child's development. Concerns were related to developmental delays, attention-deficit/hyperactivity disorder (ADHD), and behaviors co-occurring with these conditions.
17	Despite concerns about their children's development, Ecocultural Family Interview (EFI) scores suggest that families did not find it difficult caring for children and did not spend a lot of time and effort looking for information on child development.
18	All parents who wanted to be employed were working, and most households had at least one parent working full time. There were no parents who were unemployed and seeking a job.
19	Parents' occupation types varied based on whether parents were single or partnered; all single parents (all mothers) worked in the service industry and juggled multiple jobs to support their families.
20	Parents expressed a moderate level of satisfaction, per the EFI scores, but expressed concerns such as living paycheck to paycheck, having student loan debt, not having enough savings, not getting enough hours at work, and not getting child support.
21	Services sought by the ethnography Cohort 2 sample were primarily focused on support for accessing food or health care.

Section II: Process Study Key Activities and Findings

Activities of the process study address Research Question 1. This evaluation component focuses on describing how the BEST initiative engages with, supports, and interacts with the preconception-to-age-8 service infrastructure and how the effort continues to evolve as a community-based initiative. The most important informants for the process study are members of the BEST Partner Network (BEST partners) and the GKFF-BEST team. The BEST partners are public, nonprofit, and private organizations working with children and communities in Tulsa and receive funding and support from GKFF-BEST staff. BEST partners who were active in 2025 are listed in Exhibit 3, organized by three major sectors: early learning and care programs and related supports, family support programs, and health-related services.

Exhibit 3. Sector, Program, and Parent Organization for Survey Respondents

Service sector	Program and parent organization
Early learning and care programs and related supports	ART 4orms Foundation
	CAP Tulsa
	Early Learning Works
	Educare
	Gaining Ground
	Reach Out and Read
	Reading Partners
	Dolly Parton’s Imagination Library (Tulsa City-County Library)
Family support programs	Birthright Living Legacy
	Bright Beginnings
	Children First
	ConnectFirst
	Domestic Violence Intervention Services
	El Centro
	Emergency Infant Services
	Family Advocates (Tulsa Health Department)
	Hunger Free Oklahoma
	Jail Visitation Program (Parenting in Jail)
	Met Cares Foundation
	Parent Resource Center (Tulsa Public Schools)
	parentPRO (Tulsa Health Department)

Service sector	Program and parent organization
	Restore Hope
	South Tulsa Community House
	Strong Tomorrows
	Teach Not Punish Family Resource Center
	Tulsa Responds
	Uma Tulsa
	Women in Recovery (Family & Children's Services)
	Women's Justice Team (Family & Children's Services)
	Women, Infants, and Children (WIC; Tulsa Health Department)
Health-related services	Amplify Youth Health Collective
	Array of Hope (CREOKS)
	Be Well Community Development Corporation
	Centering Pregnancy
	Tulsa Birth Equity Initiative's Community-Based Doula program
	Family Connects (Parent Child Center of Tulsa)
	Healthy Start (Tulsa Healthy Department)
	HealthySteps (Parent Child Center of Tulsa)
	The Tulsa Health Department Lactation Consultant
	Maternal Mental Health Program
	Platicas (Conversations; Mental Health Association)
	Skillz on Wheelz
	Tulsa Health Department Outreach Services
	Take Control Initiative

The process study is also a source of formative feedback for the GKFF-BEST team. Key process study activities include periodic implementation update meetings with the GKFF-BEST team. These meetings focus on (a) organizing listening sessions and interviews with BEST partners and advisors and (b) developing and administering an annual workforce survey and analyzing survey data.

Key Highlights from the Process Study

In 2025, the process study gathered information about partners' experiences as participants in the BEST initiative. As described in more detail in the following sections, two key themes emerged. First, according to BEST partners, a major strength of the initiative is that it continues to be effective in promoting coordination and collaboration among participating organizations, leading to increased service access and quality for clients. Second, BEST partners identified the GKFF-BEST team's approach to working with BEST partner organizations as a strength of the initiative. BEST partners emphasized that GKFF-BEST staff foster openness and honesty in their communications with them, provide valuable thought partnership, and offer strategic support.

AIR also interviewed GKFF-BEST Advisor Jill Geiger to learn more about her work to promote state-level policy and sustainability efforts that help advance GKFF-BEST priorities and positive conditions for children and families—work that includes identifying strategies to bill Medicaid for services.

Finally, AIR analyzed the data collected through the 2024 Workforce Survey. The Workforce Survey examines perceptions from BEST direct service staff and their managers about BEST-funded services and supports and outcomes for children and families. The survey is administered annually, from October through January, and 2024 marked its fifth year of administration. The 2024 survey results reflected growth in trends observed in previous years, including increases in staff knowledge of the BEST initiative and knowledge of other BEST partners. Almost three quarters of BEST partner staff reported that they communicated regularly about shared clients to other BEST agencies—a continued positive trend since 2020. Finally, most staff reported that Tulsa is becoming a better place to raise children. In the subsequent sections, we provide more details about process study findings in 2025, concluding with lessons learned and next steps for the evaluation in 2026.

Findings from Listening Sessions and Interviews With BEST Partners and Advisors

As mentioned, AIR organized all-partner listening sessions and conducted an interview with Jill Geiger, consultant and senior advisor to GKFF-BEST.

- The all-partner listening sessions occurred in February and March 2025. Fifty-four partners were invited to participate in one of six sessions; a total of 29 people joined these discussions, representing 27 partners (two partners each had two people representing their program). The purpose of these all-partner listening sessions was to gather feedback from BEST partners about the current implementation status of the BEST initiative.

“I think one of the benefits of BEST has just really been helping to build a cohesive network of the organizations and agencies, school districts, all of the above that are working to increase resources, increase access, help families create a better life, whatever that looks like for them, how they see it is a powerful thing when you come together.”

– BEST Partner

- AIR interviewed Jill Geiger, consultant and senior advisor to GKFF-BEST, in November 2025. The purpose of the interview was to learn more about GKFF-BEST’s work to collaborate with local and state agencies to advance policy changes in support of children and families and in alignment with BEST priorities.

Findings: 2025 All-Partner Listening Sessions

The 2025 listening sessions focused on partners’ successes and challenges, collaboration efforts, communication with GKFF-BEST, and related topics. Findings from the listening sessions echoed themes that emerged in previous partner discussions, described below.

Partners described the ways their participation in the BEST initiative is beneficial and impactful. The most common theme that emerged was how the BEST initiative has increased collaborative efforts among Tulsa organizations, echoing comments that partners have voiced in past listening sessions.

Partners described their work to improve outreach to communities and facilitate referral processes for clients through improved coordination among the BEST network. For example, that coordinated outreach has, according to partners, helped increase enrollment in their services. Partners also discussed how increased collaboration within the BEST network of partners has improved services in some way. Some partners noted that clients now have access to more services across the birth-to-age-8 continuum; more culturally relevant services (through BEST-funded translation services); and more comprehensive, integrated supports.

As in previous years’ listening sessions, partners described the important role of GKFF-BEST in promoting collaboration among service providers in the BEST initiative. GKFF-BEST helps make one-on-one connections among partners and provides opportunities for partners to network in larger settings through targeted convenings.

During the listening sessions, BEST partners also discussed needs of the families they serve. BEST partners described their work to help families navigate the current political climate regarding immigration. Partners underscored the rising level of anxiety among immigrant communities in the current climate, particularly about accessing health care services. In

addition, partners reported that many families are struggling with basic needs, including food security, housing, health care, and transportation. Emergency cash aid has been significantly helpful in many cases, with partners expressing appreciation for BEST's support in this area.

BEST partners also highlighted several aspects of GKFF-BEST's efforts that have been beneficial to the BEST network and the children and families they serve. This includes GKFF-BEST's work to promote the use of data to inform partners' work. BEST, according to partners, has helped generate more accurate data about evictions and about the child care market, which has helped inform policy and programmatic approaches. Several partners pointed to the benefits of receiving GKFF-BEST data capacity grants to improve internal systems, streamline enrollment for clients, and develop internal capacity to manage data systems.

BEST partners also emphasized the impact of GKFF-BEST's support for professional development and other strategies to strengthen and retain the workforce. For example, a few partners described how GKFF-BEST's support has helped them develop as program leaders, supporting their personal upward career trajectory. In addition, partners have used funds from their GKFF-BEST grants to provide valuable training for their staff.

Several partners pointed out GKFF-BEST's policy work as a critical success of the BEST initiative. GKFF-BEST has effectively advocated on behalf of organizations serving young children and their families. Several partners noted that GKFF-BEST opened lines of communication with state agencies that would not otherwise be possible. GKFF-BEST has also facilitated conversations between partners and state-level staff to provide on-the-ground feedback about what is working (and what is not) in the field to inform state-level policy development.

Echoing comments from past listening sessions, BEST partners emphasized that GKFF-BEST staff foster openness and honesty in their communications with them, provide valuable thought partnership, and offer strategic support for their work. Partners emphasized that they can be honest and transparent with GKFF-BEST about the program challenges they face. Partners appreciated GKFF-BEST's relationship-based approach that includes a collaborative planning and reporting process regarding partners' goals and progress.

Partners also reflected on their sustainability planning and the role of GKFF-BEST in this process, noting that GKFF-BEST has been supportive in discussions about sustainability planning, encouraging organizations to diversify their funding sources and explore long-term options. In general, partners indicated that GKFF-BEST staff are thoughtful in their discussions with them about sustainability and have provided useful assistance, such as helping partners connect with grant writers and think about other potential sources of support in the community. A few partners encouraged GKFF-BEST to be more transparent in conversations about long-term sustainability. Partners also encouraged GKFF-BEST to be more concrete with

them about an “exit plan” from BEST funding and expressed hope that partners would be given enough notice to plan to maintain their current level of services.

When asked to comment on the progress of the BEST initiative in Tulsa in promoting positive outcomes for children and families, most partners agreed that the BEST initiative has made a significant difference in Tulsa. Partners pointed to a range of positive outcomes, including (a) the significant number of new partners in the initiative; (b) the creation of the Parent Resource Center in North Tulsa; (c) the initiative’s focus on prevention and promotion strategies, in addition to intervention treatments; and (d) a strong strategic focus on collaboration among service providers within Tulsa.

“[GKFF-BEST has] a big impact. They’re one of the few organizations philanthropically that started to see the connection between healthy children and healthy outcomes and having access to both parents before it became a big buzzword.”

Finally, partners identified ways that GKFF-BEST could continue to support their organizations to improve the lives of children and families in Tulsa. Partners encourage GKFF-BEST to continue and/or expand many of the supports they already provide as part of the initiative:

- Provide and enhance language supports to meet the diverse language needs in Tulsa.
- Provide access to professional development for partner leaders and for other staff, including direct service staff.
- Support the workforce in other ways, including strategies to reduce staff stress and promote retention.
- Promote networking among partners through partner wide convenings, small-group events focused on specific topics or service areas, individual partner connections, and “field trips” so that partners can visit and observe one another’s sites.
- Support efforts to attract and retain a stable, qualified workforce, including providing access to professional development and other workforce supports and incentives for new staff to work in Tulsa.

ALL-PARTNER 2025 LISTENING SESSIONS: KEY FINDINGS

1. *Partners state that coordination and collaboration is one of the primary benefits of participating in the BEST initiative.*
2. *Many families are experiencing significant stress given the current federal immigration policies.*
3. *Families continue to need help with meeting basic needs.*
4. *BEST helps to enhance and promote the use of data to strengthen services and systems.*
5. *Partners appreciate GKFF-BEST's support for the workforce.*
6. *Partners appreciate GKFF-BEST's advocacy for state policies in support of children and families.*
7. *Partners describe productive and positive relationships with GKFF-BEST staff.*
8. *Partners appreciate GKFF-BEST's support for sustainability planning, but some partners wanted more transparency about the long-term funding plan for the initiative.*
9. *Partners agreed that the BEST initiative has helped improve conditions for children and families in Tulsa.*
10. *Partners encourage GKFF-BEST to continue their investments in Tulsa's service infrastructure.*

Findings: Interview With Jill Geiger, Consultant and Senior Advisor to GKFF-BEST

GKFF-BEST has contracted with Jill Geiger and her team for approximately 6 years. Jill's career began in Oklahoma's central state budget office, where she served as a senior budget and policy analyst. Jill transitioned from the state budget office to establish her own consulting firm, with GKFF-BEST serving as her anchor client.

Jill's team helped advance GKFF-BEST's priorities by securing funding and advancing policy that promotes important community health services. An important strategic tactic to support the BEST initiative sustainability efforts is working with the state's Health Care Authority. A recent success of Jill's state-level work has been her team's support of the state's successful pursuit of a federal grant for Transforming Maternal Health (TMaH). This effort also highlights multiple years of successful lobbying for changes in Oklahoma's Medicaid reimbursement policies so that community health workers can bill for their services. Community health workers are included in the TMaH model and now are a provider type that can be reimbursed by Medicaid in Oklahoma.

In addition to supporting funding and policy changes in the Oklahoma Health Care Authority, Jill and her team work to build the capacity of BEST partners to secure funding to expand their capacity to provide needed services. This support has included a three-part training to support and encourage partners to apply for grants independently. Partners have appreciated the training, which includes a hands-on approach with real-life examples.

Throughout the interview, Jill repeatedly discussed the importance of systemic change. Her work, and that of GKFF-BEST, is focused on identifying gaps in systems and developing solutions that last over time. This includes changing Medicaid billing practices, building grant-writing capacity among grantees, and relying on a network of individuals and organizations to collectively address issues.

Lessons Learned and Next Steps

The 2025 all-partner listening sessions generated rich information from partners about their experiences participating in the BEST initiative. Conducting listening sessions for a fifth year provided additional evidence of the benefits of the BEST initiative for the Tulsa service infrastructure. Comments in the 2025 listening sessions echoed partner feedback from previous years, with many successes of the initiative resting on GKFF-BEST's collaborative approach to working with partners. In addition, the interview with Jill Geiger provided context for GKFF-BEST's priorities for the long-term sustainability of services currently funded by BEST.

In 2026, AIR will continue to work with the GKFF-BEST team to identify key areas of interest to explore through the process study, including sustainability of the progress accomplished through BEST and priorities for the initiative moving forward.

BEST Partner Workforce Survey

The purpose of the BEST Partner Workforce Survey is to gather information from staff at BEST partner organizations about 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, and staff perceptions regarding family needs. Only BEST partners who directly deliver services to children, parents, or other adults are included in the survey. We conducted the first survey in 2020, administering it to 21 programs and 297 staff. We have since conducted it annually to an expanding partner group (in 2024, the survey was administered to 45 BEST partner organizations). The full survey report can be found on the [BEST Study website](#).

Analysis and Findings from the 2024 Workforce Survey

The 2024 survey was conducted with 479 direct service staff and their managers within BEST partner organizations. The team reached out to 50 organizations that were part of the BEST network in 2024, and 45 organizations provided contact information for staff to participate in the survey.² Five new partners participated in the survey in 2024. The survey response rate was 80% ($n = 381$). The sample size for individual survey items may be smaller because not all respondents answered all questions.

² The GKFF-BEST team provided a list of its actively funded BEST partners for the purposes of this survey.

Sixty percent of this year's respondents ($n = 229$) also completed the survey in one of the previous years; 13% ($n = 50$) completed the survey in all years, while 47% ($n = 179$) completed the survey in one or more but not all previous years. Seventeen percent of this year's sample also participated in the first workforce survey in 2020. A large share of respondents were new respondents in the 2024 sample (40%), reflecting the continued growth of BEST through 2024.

Using an online survey software platform, we launched the survey on November 11, 2024, and we closed it on February 18, 2025. The representation of respondents across agencies reflects the size of the agency workforce; larger partner agencies were more heavily represented than smaller ones. Most respondents were direct service staff working with children and families (75%); the remaining portion (25%) were managers and supervisors. The largest proportion of respondents came from the family support service sector (43%, $n = 165$), followed by early learning and care (27%, $n = 101$), and health-related services (30%, $n = 115$). However, it should be noted that the sector that seemed to grow the most in 2024 was health-related services, which grew from 17% of the sample in 2023 to 30% in 2024.

Highlights from the 2024 survey include the following:



Knowledge of the BEST initiative among partner agency staff has consistently grown during the 5 years of the workforce survey. Seventy-eight percent of first-time survey respondents reported that they had heard of the BEST initiative, compared to 77% in 2023, 71% in 2022, 66% in 2021, and 63% in 2020.



Staff knowledge of BEST partners increased from 2020 to 2024. In some cases, the percentage of staff who reported that they know a lot about individual BEST partner organizations increased by 20

percentage points or more between 2020 and 2024. Notably, knowledge of ConnectFirst, the crucial family navigation component of the BEST initiative, increased from 36% in 2020 to 55% in 2024. Given that ConnectFirst did not exist prior to the BEST initiative, the growth in its awareness over time is significant for the initiative. The most well-known partner agencies and programs continue to be Women, Infants, and Children (WIC); Emergency Infant Services (EIS); CAP Tulsa; and Educare.

Workforce Survey Main Topics

1. Demographic information about respondents
2. Staff knowledge of BEST and BEST partner services
3. Referral practices
4. Communication and coordination among BEST partners
5. Role of families in BEST partner agencies
6. Staff job satisfaction
7. Family needs
8. Reflection on services and systems in Tulsa



Between 2020 and 2024, the percentage of staff who reported making referrals to services gradually decreased. The most pronounced drops occurred between 2021 and 2022, in the post-COVID-19 pandemic year. Over the 5 years of the survey, the largest drops in the percentage of staff who reported making referrals occurred in the areas of domestic violence (a 23% drop between 2020 and 2024) and preschool and child care (20% and 18% reductions, respectively).



Most staff make referrals as part of their jobs. As in past years, staff reported that they continued to use “warm handoffs” in 2024, personally helping a client connect with a service provider. Referral staff reported using warm handoffs most frequently when referring to family support, mental health, and health services. Other common referral strategies included providing clients with a list of resources and referring them to 211, a free helpline which connects people to health and human services. After a drop in 2022, the percentage of staff who used warm handoffs increased for some types of services in 2024.



Almost three quarters of BEST partner staff communicated regularly about shared clients to other BEST agencies—which continues a positive trend since 2020. In 2024, 54% of respondents were satisfied with this communication with other agencies. Staff reported that the most common challenge to service coordination was a lack of permission or authority to discuss information about clients with other organizations.



Engaging families in decision-making and leadership roles remains a challenge for some BEST partners. Most staff (87%) agreed with the statement that “The opinions of families are heard regardless of their race, culture, or language spoken.” However, fewer staff indicated that staff regularly get ideas from families on how to improve services (81%) or that opportunities exist for family members to serve in leadership roles (64%). Rates of family engagement were lower overall than in 2020 but have been trending up since 2021, especially in leadership opportunities.



In 2024, staff reported high satisfaction with their jobs and that work stress is lower than in past years. Almost all staff reported that their work makes a meaningful contribution. In addition, the large majority reported that they have the support and resources they need from their respective workplaces and that it would take a lot for them to leave their jobs (98%, 87%, and 85%, respectively, which is similar to findings from 2023). Reported work stress is also declining. In 2024, only 47% of respondents reported that their job was very stressful (a 14-point reduction from 2022, a 3-point reduction from 2023); which is the lowest level in all 5 years of the survey.



Staff reported that Tulsa is becoming a better place to raise children. Sixty-eight percent of respondents agreed with the statement that “Tulsa is becoming a better place to raise children.” In addition, 95% of respondents agreed or strongly agreed that their organization is paying more attention to ensuring that all clients, regardless of race, ethnicity, or income, have access to services. Respondents also were very positive about their organization being better able to identify and address problems (86%). Notably, most of the repeat respondents agreed that bureaucracy and red tape were less of a problem than they had been before (63%).

Lessons Learned and Next Steps for the Workforce Survey

The 2024 workforce survey highlighted several strengths of the BEST initiative, including increased awareness among staff about the BEST initiative and increased regular communication among BEST partners about shared clients. In addition, staff working in BEST partner agencies reported that they enjoy their work and believe that they are making a meaningful contribution in their jobs. The survey data also pointed to several areas that may inform continuous quality improvement efforts for the BEST initiative. These include awareness of some BEST partners and community services (particularly newer partners), family engagement, referral practices, barriers to service access, and the ongoing barriers faced by adult clients due to their cultural background.

AIR launched the sixth administration of the BEST Workforce Survey on November 11, 2025, and we will keep it open until early 2026. The survey was administered to 428 frontline staff and their managers within 37 BEST partner organizations. At the end of December 2025, the response rate was 56% ($n = 240$).³ To date, 65% ($n = 185$) of the 2025 respondents are repeat respondents, meaning they also completed the survey in 2020, 2021, 2022, 2023, and/or 2024; and 38% ($n = 55$) are new respondents, meaning they had never completed a survey in a previous year and/or they began working in a BEST partner organization in 2025. AIR will share the 2025 workforce survey findings in 2026.

³ For context, the 2020 survey response rate was 67% ($n = 206$), the 2021 survey response rate was 70% ($n = 250$), the 2022 survey response rate was 70% ($n = 287$), the 2023 survey response rate was 80% ($n = 321$), and the 2024 survey response rate was 80% ($n = 381$).

Section III: Outcome/Impact Study Key Activities and Findings

The outcome/impact study activities address Research Questions 2–4 (as detailed on page 3-4). The outcome/impact study has two main parts: a multicohort survey study and a comparative interrupted time series (CITS) study.

- For the **multicohort survey study**, we follow two groups of children from birth and two groups from kindergarten, surveying families at three points: about 1 month, 18 months, and 30 months after joining the study. Examining differences between Cohort 1 and Cohort 2 will be the primary source of evidence about the impact of the BEST initiative.
- For the **CITS study**, we look at community-level data from administrative sources from Tulsa and Oklahoma City to compare the two cities. This helps us see if changes over time in Tulsa are different from those in a similar city without the BEST initiative.

Multicohort Survey Sample

Cohort 1 (2021–22)

- Birth 220
- Kindergarten 253

Cohort 2 (2024–25)

- Birth 163
- Kindergarten 177

The key activities for the outcome/impact study in 2025 included:

- Completing the 30-month survey descriptive analysis for Birth Cohort 1 and Kindergarten Cohort 1
- Recruiting participants, collecting and analyzing 1-month survey data, and starting 18-month data collection for Cohort 2
- Acquiring greater understanding of the specific services that families are using—through analysis of optional write-in responses to the survey, acquisition and analysis of administrative data, and development of a new Family Service Use Survey
- Refining our outcome/impact measures and indicators
- Analyzing extant data to examine trends of child and family well-being for the CITS Study—School vaccinations

30-Month Survey Descriptive Analysis for Cohort 1

A key activity in 2025 was conducting descriptive analysis of the 30-month survey data for Cohort 1. This included examining indicators, such as ACEs, that were not collected in earlier surveys. The descriptive information from the 30-month data provides an initial snapshot of the sample's characteristics across a range of indicators; it also provides early insights that help us prepare for the impact analyses that will be conducted once data from Cohort 2 families are collected. In this section we present descriptive information related to three main questions:⁴

1. To what extent do Cohort 1 families participate in services?
2. What do parent well-being, home learning activities, family functioning, and the home environments of children in Cohort 1 look like?
3. What is the status of children's health and development among the Cohort 1 sample?

We first discuss Birth Cohort 1 and then Kindergarten Cohort 1. It is helpful to consider how many respondents remained engaged across survey points: For Birth Cohort 1, 68% of 1-month respondents ($n = 149$) also completed the 30-month survey, and for Kindergarten Cohort 1, 78% of 1-month respondents ($n = 197$) did so. For each sample, we will address the above questions in order. The domains covered are:

- Service use
- Parent well-being⁵
- Child-rearing practices, home learning activities, and extended school care
- Adverse childhood experiences
- Concerns about meeting monthly living expenses, eviction, and utility shutoff
- Child's health conditions
- Child developmental and academic skills⁶

⁴ Given that the impact analysis is not the focus at this time, the research questions guiding this Cohort 1 analysis have been adapted accordingly from Research Questions 2, 3, and 4 for the evaluation.

⁵ Reported for birth sample only (not on kindergarten sample survey).

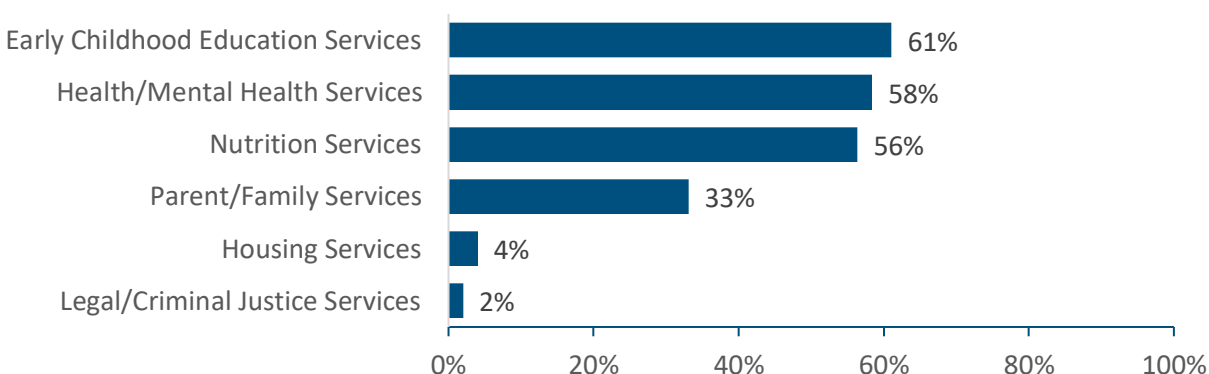
⁶ Reported for birth sample only (not on kindergarten sample survey).

Birth Sample 30-Month Survey

To what extent do Birth Cohort 1 families participate in services?

Forty-nine percent of the children in the Birth Cohort 1 sample ($n = 83$) are eligible for Medicaid⁷ based on total household income and size. As shown in Exhibit 4, early childhood education was the most reported type of service, used by 61% ($n = 91$) of respondents. The other services used by more than half the respondents were health/mental health services and nutrition services. The least commonly reported types of services were legal/criminal justice services and housing services.

Exhibit 4. Percent of Respondents Who Accessed Various Community-Based Services, Birth Cohort 1, 30-Month Survey



Note. $N = 149$.

Although we have a sense of the proportion of our sample that used various types of community-based services, in the 18- and 30-month surveys we cannot say definitively if the service is a BEST-supported or BEST-related service. When a respondent answered “yes” to indicate that they used a category of services, we asked a follow-up open-ended question, requesting that respondents provide the name or a brief description of the service(s) used. Respondents provided various names and derivatives of organization names. We analyzed this qualitative data by counting the names of the services or organizations mentioned by Cohort 1 survey respondents at both the 18- and 30-month survey points. Among Birth Cohort 1 families who provided an open-ended response at the 30-month mark regarding a service they use ($n = 149$; 61% of the total sample), the most mentioned were SoonerCare (by 46%, $n = 69$), WIC (46%, $n = 68$), and SNAP (33%, $n = 49$). Other services mentioned by at least five families in the Birth Cohort 1 families include:

⁷ In Oklahoma, children are eligible for Medicaid if household income is 205% of the federal poverty line or below.

- CAP Tulsa—a BEST partner that provides child care and early education services
- ConnectFirst/Family Advocate—a BEST partner that provides service referrals and resources to families
- Emergency Infant Services—a BEST partner that offers assistance with basic needs items for children under 5 years old whose families are facing financial and personal challenges
- Restore Hope—a BEST partner that provides food assistance, rent assistance, and spiritual support to families in crisis

In addition to the survey data, we worked with our partner Asemio to match WIC records from the Tulsa Health Department to our Birth Cohort 1 sample. We found that 58% of families in that sample received WIC nutrition services between 2022 and 2024 ($n = 92$). Among families eligible for Medicaid, 68% ($n = 54^8$) used WIC during this time. On average, sample families had eight WIC appointments during this 2-year period of time.

What does parent well-being, home learning practices, family functioning, and the home environments of children in Birth Cohort 1 look like?

In this section, we present initial survey results on indicators for parent well-being, child-rearing practices, family functioning, and the home environments of children in Birth Cohort 1.

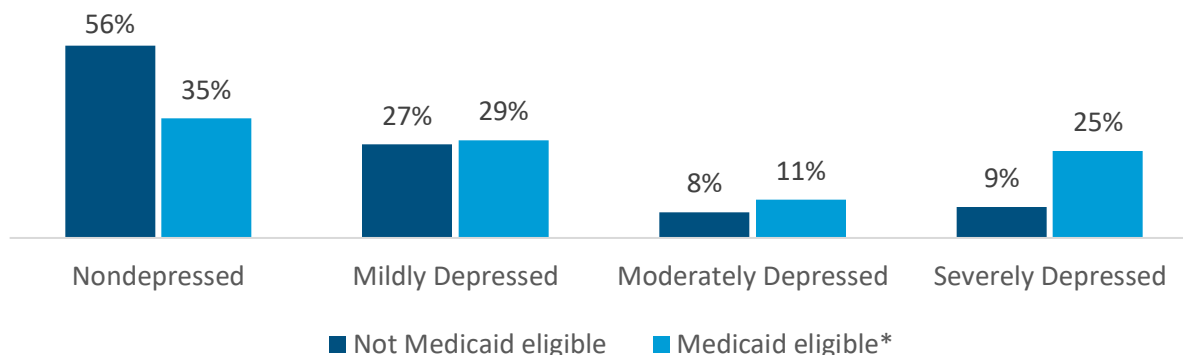
Parent well-being

Parent well-being was assessed using a scale⁹ that asked parents how often in the past week they felt or behaved in ways that were symptomatic of depression. As shown in Exhibit 5, overall, more than half of parents (56%, $n = 83$) met the benchmark for at least mild depression on the self-report measure. Slightly over one quarter (27%, $n = 40$) of all respondents met the benchmark for moderate or severe depression on the self-report measure. On average, parents who were Medicaid-eligible had higher depression scores than parents who were not Medicaid eligible. Less than a quarter of parents who were not Medicaid eligible had scores that indicated parental depression (17%, $n = 28$), while about 65% ($n = 41$) of Medicaid-eligible parents did. Nine percent of non-Medicaid-eligible parents had scores that indicated severe parental depression, while one quarter of Medicaid-eligible parents did.

⁸ Medicaid status was not able to be calculated for the entire Birth Cohort 1 sample: some respondents did not report household size and income, which are required for us to estimate Medicaid eligibility status.

⁹ An abbreviated version of the [Center for Epidemiologic Studies-Depression Scale \(CES-D\)](#).

Exhibit 5. Distribution of Parental Depression Scores by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



Note. $n = 63$ Medicaid, $n = 66$ non-Medicaid.

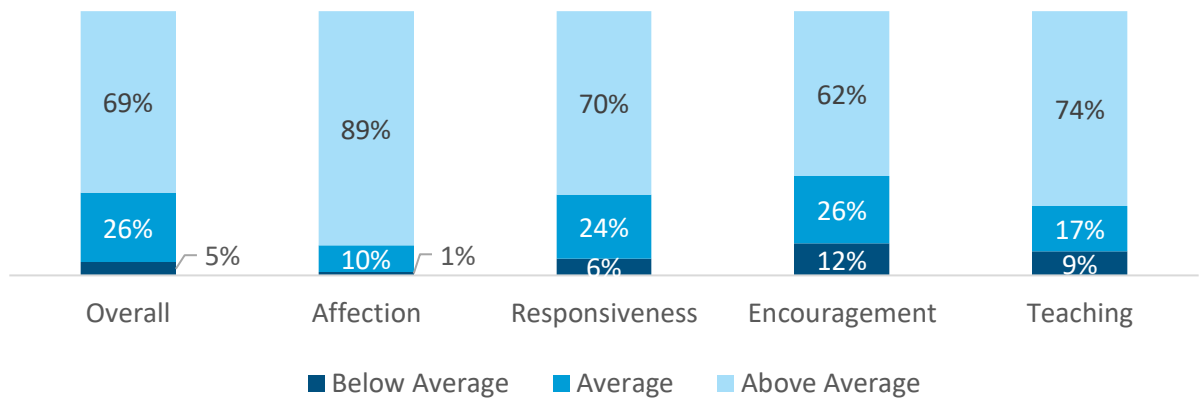
*Statistically significant ($p < .05$) difference in the total score on this measure between those who are and are not Medicaid eligible.

Child rearing practices, home early learning activities, and extended school care

Respondents' child-rearing practices were assessed during in-person data collection visits using an observational tool called PICCOLO¹⁰ to identify developmentally supportive parenting behaviors. PICCOLO captures parental actions across four domains: affection, responsiveness, encouragement, and teaching. These domains have been empirically linked to positive child outcomes—including cognitive development, social-emotional development, and various aspects of school readiness. As shown in Exhibit 6, most parents were observed to show developmentally supportive parenting behaviors, with 95% ($n = 134$) being rated average or above on the tool's overall composite score. Parents who are not eligible for Medicaid were less likely to be rated below average on the Teaching subscale, compared to parents who are eligible for Medicaid.

¹⁰ PICCOLO stands for Parenting Interactions with Children: Checklist of Observations Linked to Outcomes and comprises 29 observable actions that parents use to actively nurture and support their child's development. Roggman, L. A., Boyce, L. K., & Innocenti, M. S. (2008). *Developmental parenting: A guide for early childhood practitioners*. Paul H. Brookes.

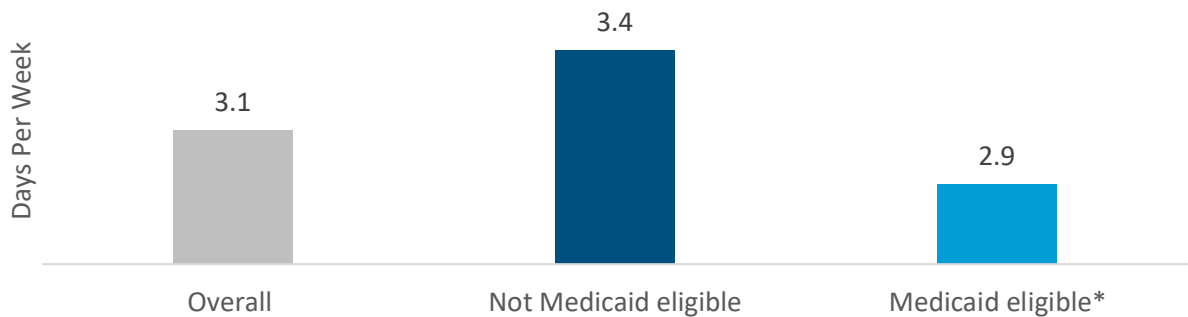
Exhibit 6. Distribution of Ratings on PICCOLO Developmentally Supportive Parenting Behavior Tool, Birth Cohort 1, 30-Month Survey



Note. N = 141.

Parents were asked how often they read books, sang songs, or told stories to the key study child in the past week. As shown in Exhibit 7, the average respondent read books, sang songs, and told stories about 3-6 days per week with their child. Parents eligible for Medicaid reported doing these early learning activities less (1-2 days per week) on average than parents not eligible for Medicaid (3-6 days per week).¹¹

Exhibit 7. Average Frequency of Early Home Learning Activities in Days Per Week, Overall and by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



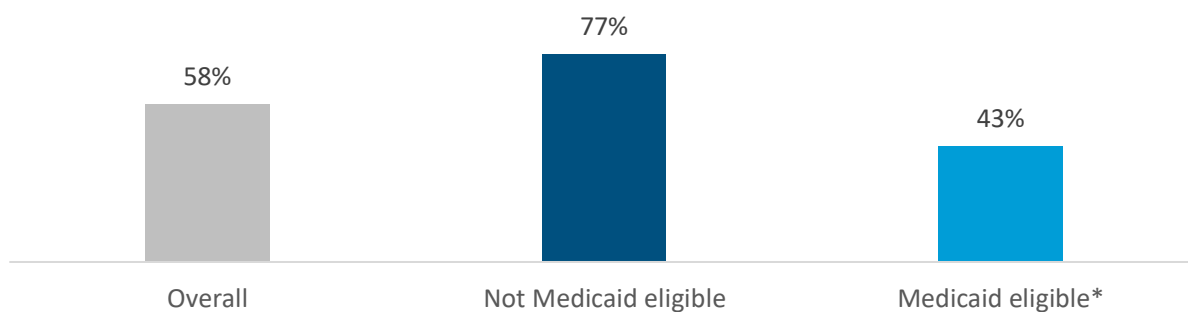
Note. Overall N = 149, Medicaid n = 63, non-Medicaid n = 66.

*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

¹¹ The response options for the early learning questions were: (in the past week) 1 - NOT AT ALL, 2 - 1-2 DAYS, 3 - 3-6 DAYS, 4 - EVERY DAY. The overall average score of 3.1, for example, means that respondents participated, on average, in early learning activities with their children 3–6 days and every day in the past week.

More than half (58%; $n = 86$) of respondents in Birth Cohort 1 indicated they used before or after school care. As shown in Exhibit 8, Medicaid-eligible families (43%, $n = 27$) were less likely to use these child care options than non-Medicaid-eligible families (77%, $n = 51$). Center-based care was the most common option used, with 62% ($n = 54$) of the respondents choosing this type of care; the other options, relative care and home-based care, were less commonly used. There were no statistical differences in the types of before/after school care programs used between families by Medicaid status.

Exhibit 8. Use of Before or After School Care, Overall and by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



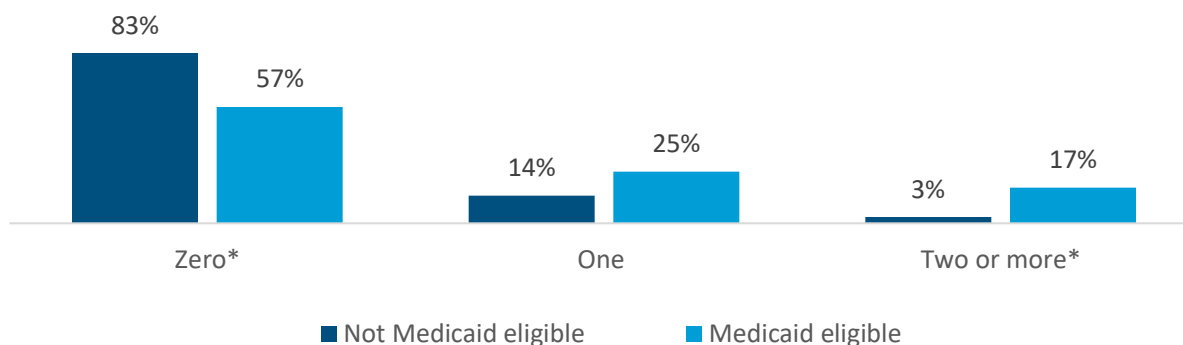
Note. Overall $N = 149$, Medicaid $n = 63$, non-Medicaid $n = 66$.

*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

Family Functioning and Home Environment

Parents were asked nine questions on a questionnaire about adverse childhood experiences (ACEs) their child may have experienced that could negatively impact their development. Overall, 30% ($n = 45$) of parents reported that their child in the Birth Cohort 1 sample had experienced at least one ACE. The most common ACE experienced was parents divorced/separated, followed by having a family member with a mental illness. As shown in Exhibit 9, a significantly higher percentage of Medicaid-eligible children in the cohort had experienced an ACE compared to non-Medicaid-eligible children. Compared to children who are not Medicaid eligible, Medicaid-eligible children were more likely to have a parent who served time in prison or be treated unfairly because of health condition (see Exhibit 10).

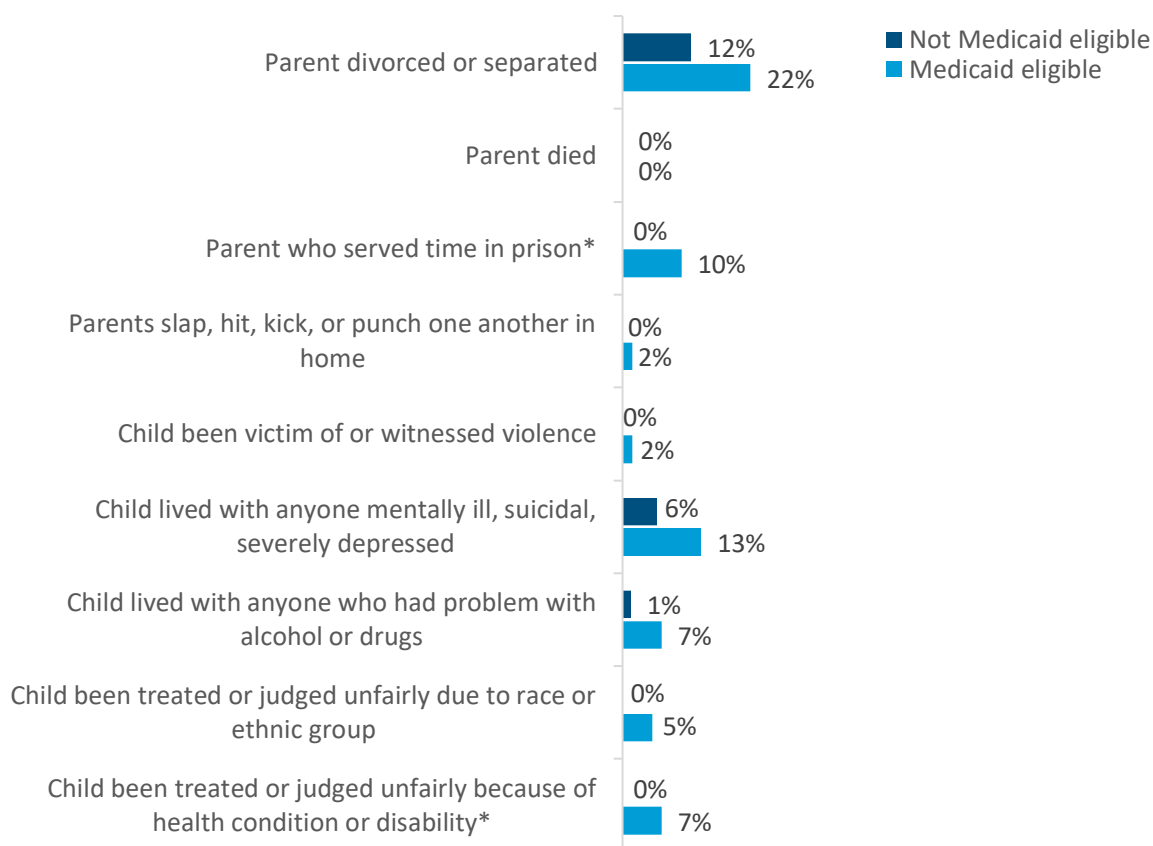
Exhibit 9. Number of ACEs by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



Note. N = 129.

*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

Exhibit 10. Distribution of Types of ACEs Experienced, by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey

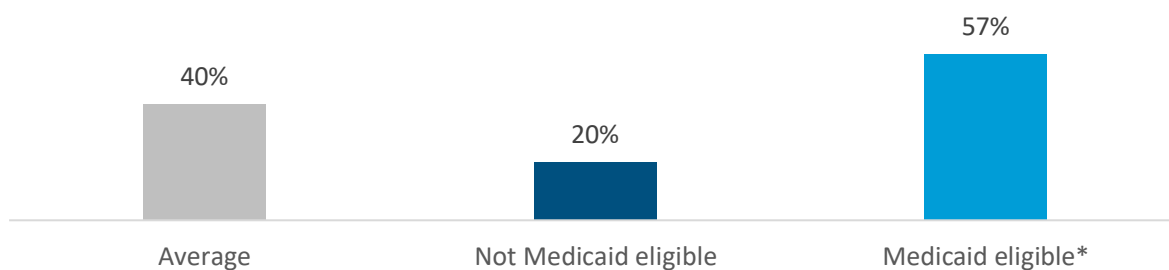


Note. N = 129.

*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

Respondents were asked multiple questions about economic hardship, including concerns about meeting living expenses, concerns about utility shutoffs, and eviction risk. As shown in Exhibit 11, 40% ($n = 60$) of all Birth Cohort 1 respondents reported worrying about meeting monthly living expenses at least “occasionally.” A significantly higher percentage of Medicaid-eligible respondents (57%, $n = 36$) reported this worry than respondents not eligible for Medicaid (20%, $n = 13$). In the 30-month survey, roughly 6% ($n = 3$) of respondents reported being threatened with eviction in the last 12 months. Similarly, roughly 7% ($n = 10$) of respondents reported having their gas, water, or electricity shut off in the last 12 months. There was no significant difference between respondents who were Medicaid-eligible and those not eligible on any of these indicators.

Exhibit 11. Worry About Meeting Monthly Living Expenses, Overall and by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



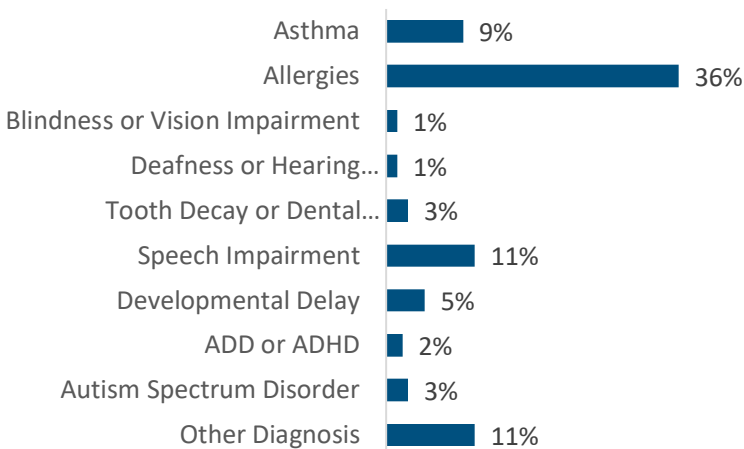
Note. Overall $N = 149$, Medicaid $n = 63$, non-Medicaid $n = 66$.

* Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

What is the status of children’s health and development among the Cohort 1 sample?

As shown in Exhibit 12, the most common health condition diagnosed by 30 months of age in Birth Cohort 1 was allergies, with 36% ($n = 54$) of respondents indicating their child had been so diagnosed.

Exhibit 12. Health Diagnosis Reported by Parents, Birth Cohort 1, 30-Month Survey

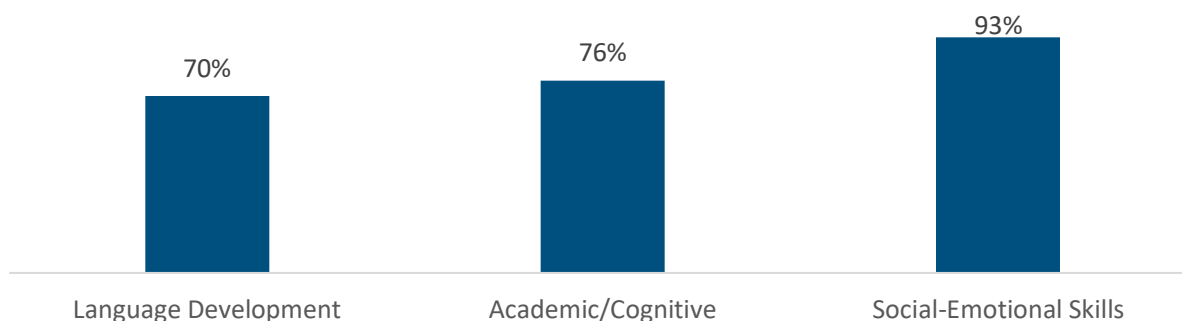


Note. $N = 149$. Respondents could select multiple health conditions.

Children in Birth Cohort 1 were also directly assessed using the BRIGANCE Early Childhood Screen III (0–35 months), a collection of age-specific assessments that provide a snapshot of a child’s mastery of developmental and academic skills.¹² As shown in Exhibit 13, most children in the Birth Cohort 1 sample were progressing sufficiently in their development at about 30 months of age. Overall, 70% ($n = 99$) of children in the sample scored average or above on the Language Development subscale. Similarly, over 75% scored average or above on the Academic/Cognitive Development subscale ($n = 106$). Ninety-three percent of the sample scored average or above on Social-Emotional Skills ($n = 131$).

Children’s health

Exhibit 13. Percent of BRIGANCE Subscores At or Above Average, Birth Cohort 1, 30-Month Survey

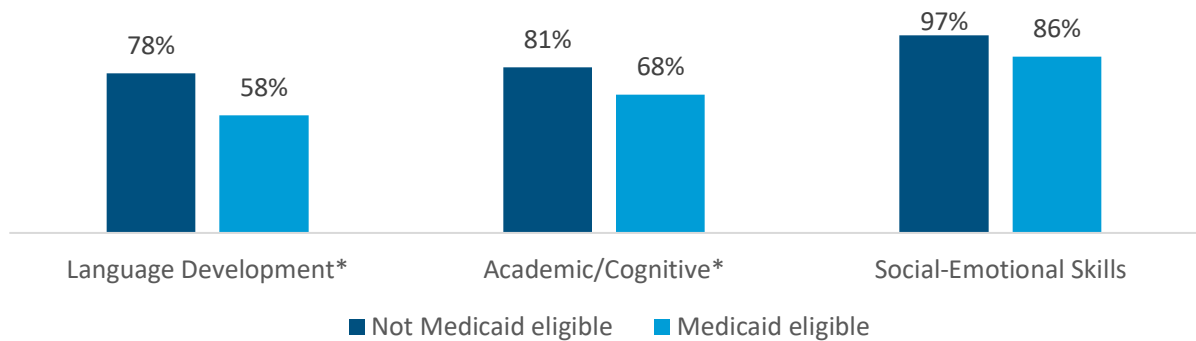


Note. $N = 141$.

¹² French, B. (2013). *BRIGANCE Screens III technical manual*. Curriculum Associates.

As shown in Exhibit 14, children whose families are not Medicaid eligible had higher Language Development and Academic/Cognitive subscores compared to those whose families are Medicaid eligible. However, there was no significant difference in Social-Emotional Skills subscores by Medicaid eligibility.

Exhibit 14. Percent of BRIGANCE Subscores At or Above Average by Medicaid Eligibility Status, Birth Cohort 1, 30-Month Survey



Note. N = 123.

*Statistically significant ($p < .05$) difference in the standardized score for this measure between those who are and are not Medicaid eligible.

Summary

Overall, the children in the Birth Cohort 1 sample are on a positive developmental trajectory at 30 months of age. Most children show developmentally appropriate academic and social-emotional skills. In general, parents are involved and engage in early learning activities multiple times a week with their children.

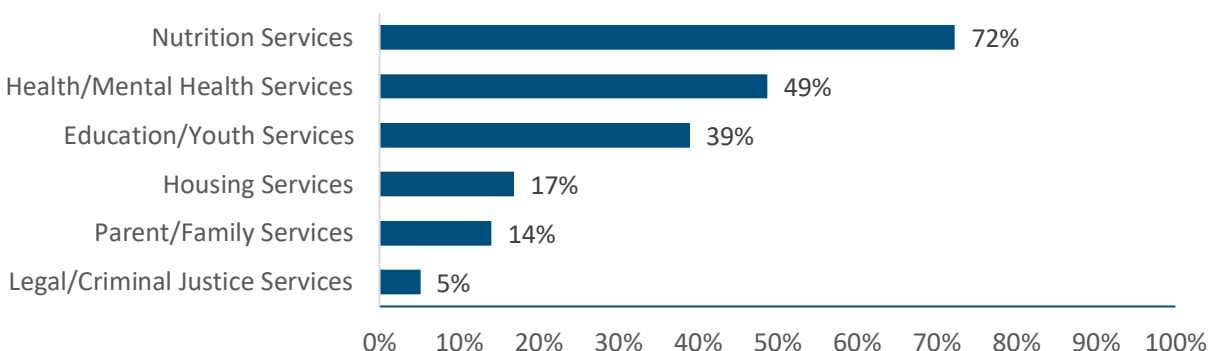
Some differences in outcomes do emerge when comparing outcomes based on Medicaid eligibility, which is a proxy for socioeconomic status. Families that are Medicaid eligible often experience greater challenges related to child development and parental well-being. Parents from Medicaid-eligible households report higher levels of stress, with higher rates of depression and concern about meeting living expenses. Children from Medicaid-eligible households also show lower academic skills than children from non-Medicaid-eligible households.

Kindergarten Sample 30-Month Survey

To what extent do Kindergarten Cohort 1 families participate in services?

Eighty-three percent ($n = 140$) of the families with children in the 30-month survey are eligible for Medicaid¹³ based on total household income and size. As shown in Exhibit 15, nutrition services were the most common type of service families reported using (used by 72% of respondents). The next most common services used were health and mental health services, which were used by slightly under half of the respondents. The least accessed service was legal/criminal justice services.

Exhibit 15. Percent of Respondents Who Accessed Various Community-Based Services, Kindergarten Cohort 1, 30-Month Survey



Note. $N = 195$.

Analyzing the open-ended responses from families who provided a response about using a service (66% of the Kindergarten Cohort 1 sample), we found that the most commonly used services were SNAP (food assistance; by 45%, $n = 88$), free/reduced-price lunch (38%, $n = 75$), and SoonerCare (Medicaid; 27%, $n = 53$). Other services mentioned by the Kindergarten Cohort 1 families on the 30-month open-ended survey, with at least more than one respondent mentioning the service, included 211, Community Service Council, and Restore Hope (a housing service).

What does parent well-being, home learning practices, family functioning, and the home environments of children in Kindergarten Cohort 1 look like?

In this section, we present initial survey results on indicators for parent well-being, child-rearing practices, family functioning, and the home environments of children in the Kindergarten Cohort 1 survey.

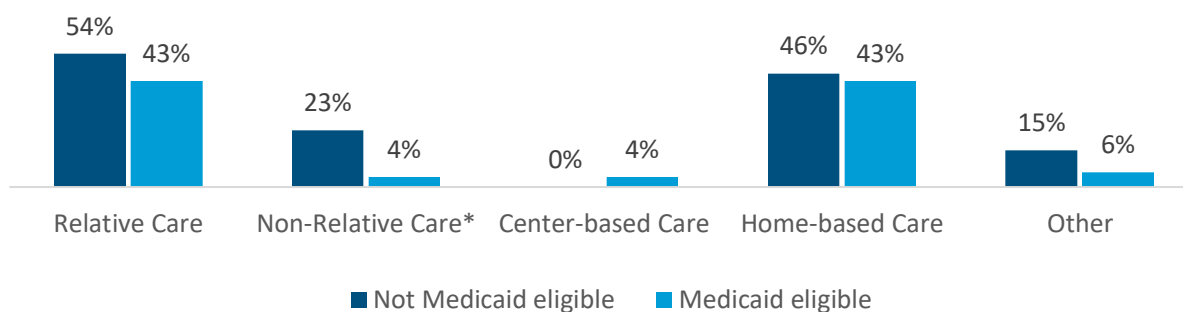
¹³ In Oklahoma, children are eligible for Medicaid if household income is 205% of the federal poverty line or below.

Home learning practices

In the 30-month survey, we collected information on how often the parent read books, sang songs, or told stories in the past week. Overall, the average respondent read books, sang songs, and told stories about 1-2 days per week with their child. There was no significant difference between the frequency of early learning activities of Medicaid-eligible and non-Medicaid-eligible parents.

Thirty-five percent ($n = 67$) of respondents indicated they used at least one form of before/after school care. Of the families who reported using before or after school care, relative care was the most common option, followed closely by center-based care. As shown in Exhibit 16, non-Medicaid-eligible families were more likely to report using non-relative care for before or after school care than Medicaid-eligible families.

Exhibit 16. Distribution of Types of Before or After School Care Used, by Medicaid Eligibility Status, Kindergarten Cohort 1, 30-Month Survey

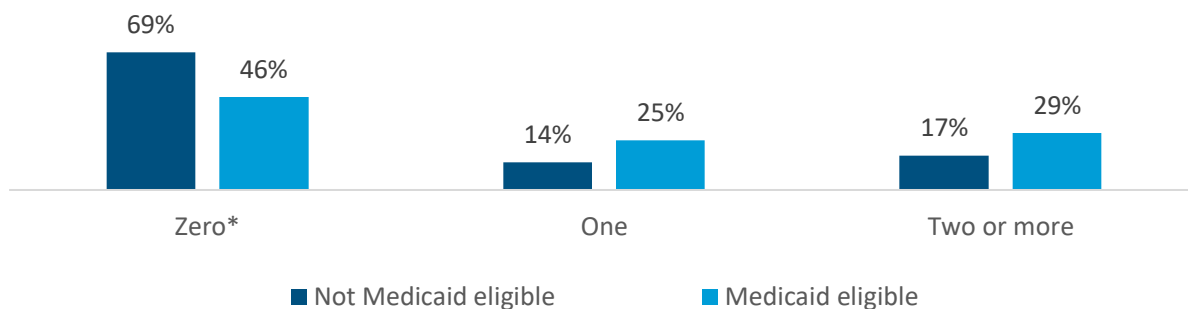


Note. Medicaid $n = 49$, non-Medicaid $n = 13$. Respondents could select multiple care options.

Family functioning and home environment

Parents were asked a nine-item questionnaire on ACEs that their child may have experienced that could negatively impact their child's development. Almost half of the children in the Kindergarten Cohort 1 sample (46%, $n = 89$) were reported to have experienced at least one ACE. As seen in Exhibit 17, a significantly higher percentage of non-Medicaid-eligible children had experienced zero ACEs compared to Medicaid-eligible children. The most common ACE experienced by Kindergarten Cohort 1 children was parents divorced/separated, followed by a parent serving time in prison, followed by being the victim of or witnessing violence and having a family member with a mental illness—as shown in Exhibit 18. Across all ACEs, the proportion of children who experienced a particular type of ACE did not statistically differ between those who were eligible for Medicaid and those who were not eligible for Medicaid.

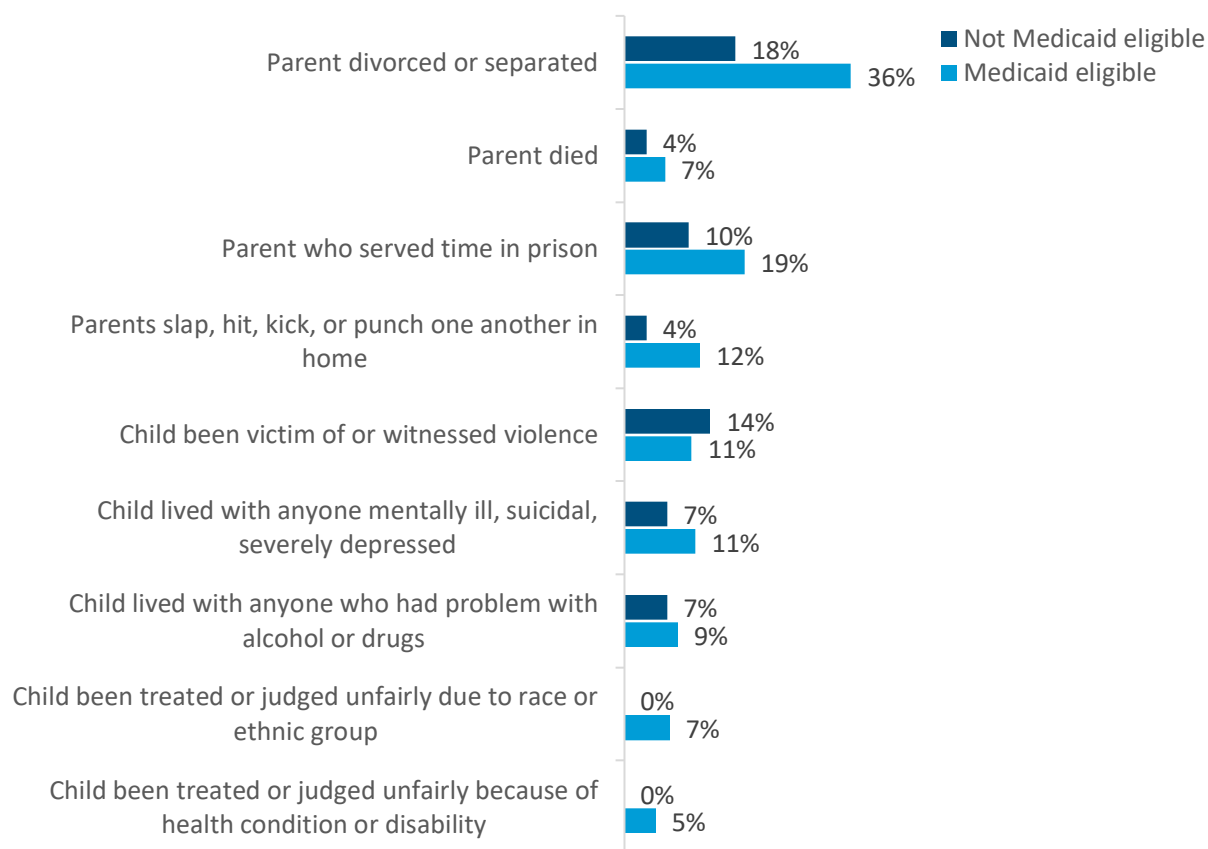
Exhibit 17. Percentage Children Experiencing ACEs, by Medicaid Eligibility Status, Kindergarten Cohort 1, 30-Month Survey



Note. N = 169.

*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

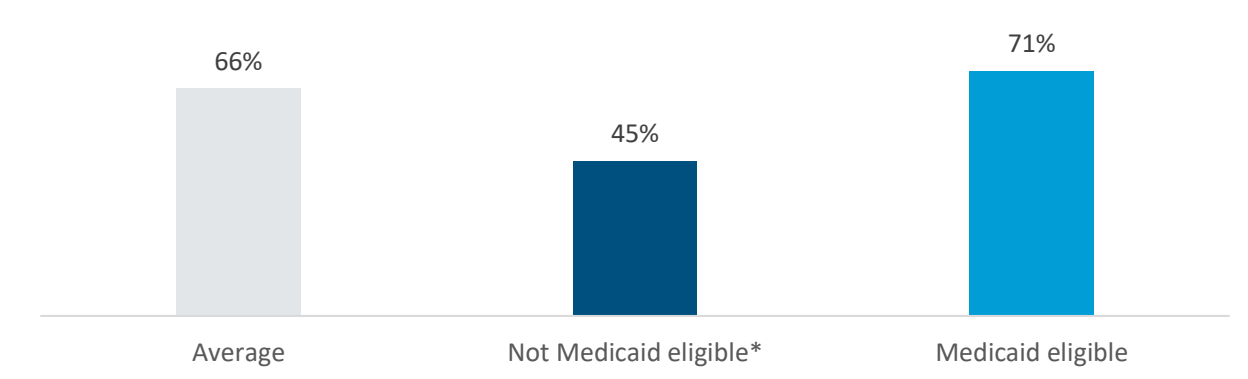
Exhibit 18. Distribution of Types of ACEs Experienced, Overall, Kindergarten Cohort 1, 30-Month Survey



Note. N = 193.

Respondents were also asked multiple questions about economic hardship, including concern about meeting living expenses, utility shutoffs, and eviction risk. In the 30-month survey, 66% ($n = 126$) of all Kindergarten Cohort 1 sample respondents reported worrying about meeting monthly living expenses at least “occasionally” (Exhibit 19). A significantly higher percentage of Medicaid-eligible respondents (71%, $n = 98$) reported worrying about meeting their monthly living expenses compared to non-Medicaid-eligible respondents (45%, $n = 13$).

Exhibit 19. Worry About Meeting Monthly Living Expenses, Overall and by Medicaid Eligibility Status, Kindergarten Cohort 1, 30-Month Survey



Note. Overall $N = 192$, Medicaid $n = 139$, non-Medicaid $n = 29$.

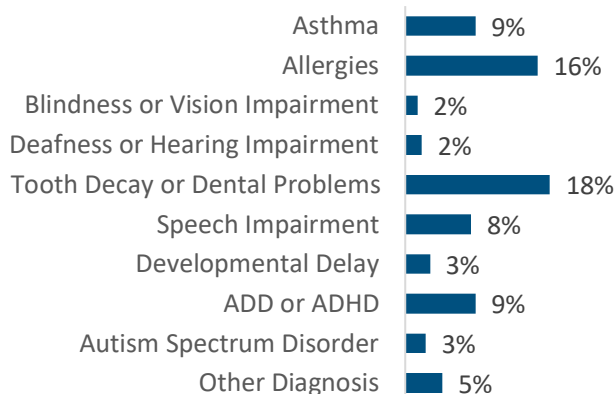
*Statistically significant ($p < .05$) difference in the score between those who are and are not Medicaid eligible.

In the 30-month survey, roughly 10% ($n = 17$) of respondents reported being threatened with eviction in the last 12 months. Eighteen percent ($n = 35$) of respondents reported having their gas, water, or electricity shut off in the last 12 months, with Medicaid-eligible families significantly more likely to report this experience.

What is the status of children’s health and development among the Kindergarten Cohort 1 sample?

Shown in Exhibit 20 are the health conditions diagnosed by kindergarten based on the perspectives of the respondents. Tooth decay or dental problems (18%, $n = 35$), followed by allergies (17%, $n = 32$), were the most common conditions noted. Other noted diagnosis reported included ADD/ADHD and speech impairments.

Exhibit 20. Health Diagnosis Reported By Parents, Kindergarten Cohort 1, 30-Month Survey



Note. $N = 194$. Duplicate count, survey respondents can select more than one health condition.

Summary

Overall, the respondents to the Kindergarten Cohort 1 30-month survey tend to actively support their children's development. Most families had accessed at least one type of community-based service; in particular, over half of families participated in nutrition services and health/mental health services that can promote healthy child development. Parents also engaged in early learning activities with their children.

Some differences in rates of environmental stressors do emerge when comparing outcomes based on Medicaid status, which is a proxy for socioeconomic status. Parents from Medicaid-eligible households reported higher levels of concern about meeting living expenses and higher rates of utility shutoff. Seventy percent of the sample experienced an adverse childhood experience, and children from Medicaid-eligible households were more likely to have experienced at least one ACE compared to children from non-Medicaid-eligible households.

Lessons Learned and Next Steps

Most parents in the study seek services, especially nutrition and health/mental health related services, and are engaged in activities that promote their children's health and well-being. Children and parents from lower socioeconomic status, as determined by Medicaid eligibility, experience more stressors, such as higher levels of parental depression, higher levels of worry about meeting living expenses, and higher rates of ACEs. Children in Birth Cohort 1 tend to demonstrate age-appropriate developmental progress.

Next year, we will administer the 18-month survey to both birth and kindergarten samples. Once data collection for the 18-month surveys is complete, we will have obtained the household income data for Cohort 2, and we can begin to estimate the impact of BEST between children from Medicaid-eligible and non-Medicaid-eligible households. Another key aspect is

the representative analysis of how similarly the survey children reflect Tulsa’s overall child population in terms of demographic characteristics, which is discussed in next section. The representative analysis allows us to determine how closely our survey sample represents similar population groups of Tulsa.

Cohort 2: Recruitment, Descriptive Data Analysis, and 18-Month Data Collection

Recruitment

Recruitment for Cohort 2 was completed in June 2025, and multiple recruitment methods were used. For the Birth Cohort 2 sample, we conducted community outreach via BEST and community partners such as ConnectFirst, El Centro, Hearts for Hearing, Bright Beginning nurses, and local pediatric offices. For the Kindergarten Cohort 2 sample, we attended back-to-school events to share study information and to collect study interest forms. We also worked with the same 28 schools that supported Cohort 1 recruitment to help distribute information to families through the kindergarten teachers. We also emailed parents directly and participated in community outreach activities. The demographic characteristics of members of the Birth Cohort 2 and Kindergarten Cohort 2 samples are shown in Exhibits 21 and 22, respectively.

Descriptive Analyses: Comparing Multicohort Study Demographics

In this section, we compare the demographic characteristics of the Cohort 1 and Cohort 2 samples. This analysis is critical for identifying issues that may affect the validity of comparing participants’ experiences to assess the impact of BEST. Differences in sample characteristics can introduce issues into the final impact analyses such as:

- Confounding bias, where differences in outcomes are due to preexisting differences in the samples rather than to the BEST initiative.
- Comparability issues, where the two cohorts do not represent the same intended population. In this case, we are concerned about how well the two birth cohorts represent births in Tulsa County and how well the two kindergarten cohorts represent kindergartners entering Tulsa Public Schools. Comparability issues can occur when there are major changes in the population of Tulsa between Cohort 1 and Cohort 2.
- Nonresponse bias, where the respondents at later waves of the survey (e.g., 18-month and 30-month) are systematically different from the 1-month respondents.

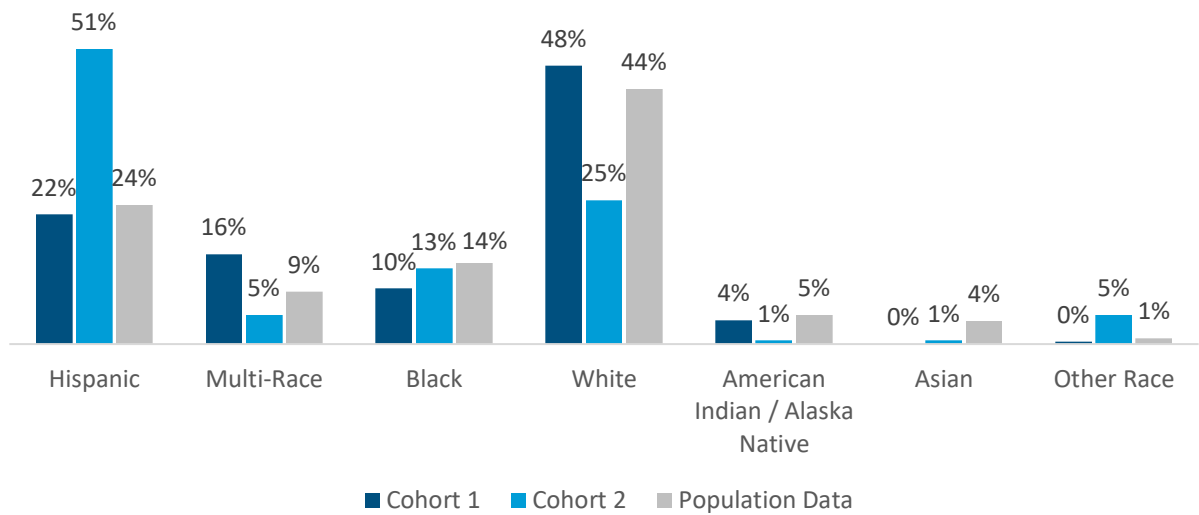
It is important to examine our cohort samples to check for these issues, and that starts with an examination of their demographics.

Many of these issues can be addressed via a range of statistical methods and analyses. For example, we will most immediately consider the use of statistical weights so that our sample

accurately represents the population.¹⁴ In this section, we present comparisons of the racial and ethnic demographic characteristics of parents (primarily the mothers) in Cohort 1 and Cohort 2 with the overall population of Tulsa.

Exhibit 21 compares the racial and ethnic demographics of parents in Cohort 1 and Cohort 2 with the population of Tulsa parents at the time of their child’s birth. The birth sample for Cohort 2 has a greater percentage of parents identifying as Hispanic than Cohort 1 or the Tulsa population estimate.¹⁵ The Cohort 2 birth sample also has a smaller percentage of parents identifying as Multi-Race, White, and American Indian/Alaska Native than the Cohort 1 sample and the Tulsa population.

Exhibit 21. Race and Ethnicity Distribution of Birth Sample with Cohort 1, Cohort 2, and Tulsa City Population (1 Month)



Note. Cohort 1 $n = 218$, Cohort 2 $n = 162$. Data are based on parent race and ethnicity. Data for Tulsa city population was drawn from reported parent race and ethnicity of all births in Tulsa city for Cohort 1. We plan to re-sample this estimation to compare Cohort 2 race and ethnicity with the Tulsa population at a later time.

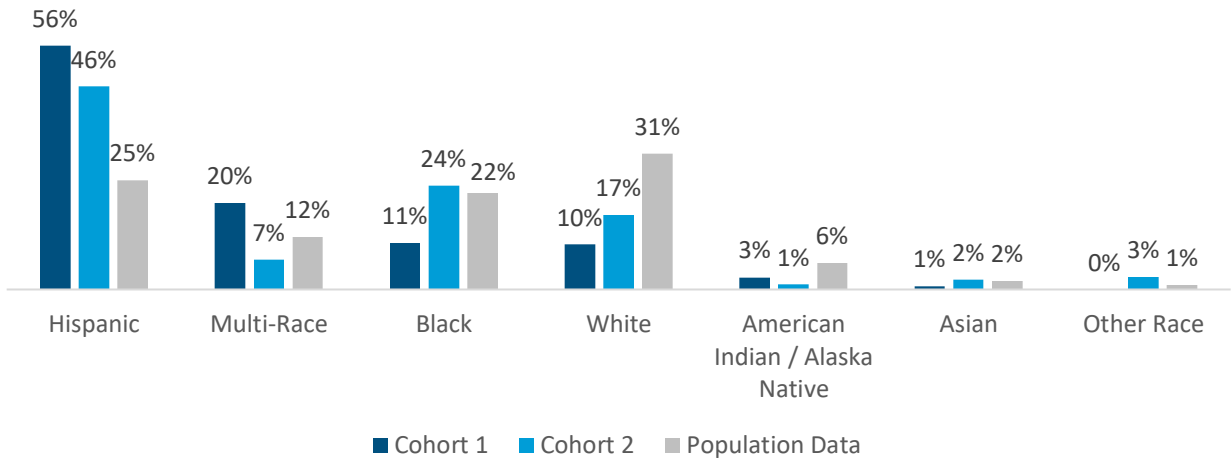
Exhibit 22 compares the racial and ethnic demographics between Cohort 1, Cohort 2, and Tulsa Public Schools’ (TPS) population of students for children in the kindergarten sample. The kindergarten sample for Cohort 2 has a greater percentage of children identified as Black,

¹⁴ Statistical weights correct for unequal sample selection, where a certain population had a higher chance of being part of the study sample than others. In doing so, weights will allow for our sample to more accurately represent the sample of children and families in Tulsa.

¹⁵ Tulsa population estimate is based on Cohort 1 and comes from administrative birth records (which are not yet available to us for Cohort 2). We plan to re-sample this estimation to compare Cohort 2 race and ethnicity with the Tulsa population at a later time.

White, and Other Race children than Cohort 1. The Cohort 2 kindergarten sample also had a smaller percentage (lower likelihood) of being identified as Hispanic, Multi-Race and American Indian/Alaska Native children than Cohort 1. Both cohorts have a greater percentage of Hispanic children than the population, and a smaller percentage of White children than the TPS population.

Exhibit 22. Race and Ethnicity Distribution of Kindergarten Sample With Cohort 1, Cohort 2, and Tulsa Public Schools’ Population (1 Month)



Note. Cohort 1 $n = 253$, Cohort 2 $n = 177$. Data are based on child race and ethnicity. The Tulsa Public Schools’ racial and ethnic distribution was drawn for the Cohort 1 sample. We plan to re-sample this estimation to compare Cohort 2 race and ethnicity with the Tulsa Public Schools’ population later.

In 2026, once we have 18-month data for Cohort 2, we will undertake a more comprehensive analysis, investigating whether there are concerns with nonresponse—that is, examining whether the sample who took the 18-month survey is representative of those who took the 1-month survey.

Cohort 2 18-month data collection

The 18-month data collection for the Birth Cohort 2 sample began in December 2025 and will continue through November 2026. Data gathered through that collection will allow us to compare with the 18-month data from Cohort 1 to examine the impact of BEST. Exhibit 23 lists the constructs in the 18-month and 30-month follow-up parent interviews for the Birth Cohort 2 sample.

Exhibit 23. Birth Cohort Parent Interview Constructs, by Follow-Up Period

Construct	18-month parent interview	30-month parent interview
Service use and access	•	•
Child health and health insurance	•	•
Parent health and well-being	•	•
Parenting and protective factors	•	•
Parent perspectives on racism and discrimination	•	•
Family and household characteristics	•	•
Neighborhood satisfaction	•	•
Child care	•	•
Child self-help and social-emotional skills		•
Early learning activities with children		•
Parent attitudes about early learning		•
Adverse childhood experiences		•

Understanding Families' Use of BEST Partner Services

Currently, our study is designed to examine the use of services via two data collection mechanisms:

1. **Asking questions on the multicohort surveys:** The 18-month and the 30-month surveys for both the birth and the kindergarten samples ask families about the broad categories of services they use, such as health care or education. Additional details asking about the names of specific programs are captured in an optional, open-ended question.
2. **Linking survey data to administrative data:** In our design, we also will match our survey sample with program administrative data to understand what social services children and families use. Most of the programs we will have the ability to match are larger state or count-based programs like WIC, SNAP, and CAP Tulsa.

Since neither one of these methods provides fully nuanced detail about which BEST-supported programs a child or family used during the study period, we developed a supplemental data collection tool to provide additional information. Working with GKFF-BEST, we developed and will implement the Family Service Use Survey. This survey will help us get a clearer picture of which specific BEST partner services children and families use. The Family Service Use Survey asks families if they have heard of each service, whether they have used it, and what might have prevented them from using it. By looking at these answers, we can see which services are

well-known, which are used most often, and what barriers families face. We will compare results between Cohort 1 and Cohort 2 to see if service use changes over time. We plan to release this survey to Cohorts 1 and 2 in 2026.

Revisiting Outcome/Impact Measures and Indicators

With the initial descriptive analysis of the Cohort 1 survey data completed, in addition to many years of baseline analysis of trends with various outcome indicators from administrative data, in 2025 we revisited and solidified the analytic plans for the eventual impact analyses of BEST. Through a series of internal meetings, and discussions with the Technical Working Group (TWG) and GKFF-BEST, we solidified the key focal outcomes and analytic statistical approaches for the impact analysis. Based on the findings from the Cohort 1 survey descriptive analysis, we narrowed the list of outcome measures from our original design;¹⁶ the refined list is shown in Exhibit 24. The descriptive findings from Cohort 1 provided information about which measures have sufficient variation in survey responses to use in the final impact analysis.

For the extant study, where a comparative interrupted time series (CITS) design will be used to estimate the impact of BEST, the outcome measures should meet several important criteria. These three criteria are:

- quality and validity of the measure/indicator;
- availability of the data to include sufficient years prior and post the BEST initiative; and
- availability of the data in the comparison city, Oklahoma City.

Using these criteria, we identified 16 outcomes (see Exhibit 24).

Exhibit 24. Refined List of Outcome/Impact Study Focal Outcome Measures

Multicohort survey study measures		CITS study outcome measures	
SNAP Service Use ^{bk}	Concerns about discrimination ^{bk}	Adequate prenatal care	Teen birth
WIC Service Use ^b	Parental depression ^b	Low birth weight	SNAP benefit usage rate
Medicaid Service Use ^{bk}	Hardship ^{bk}	Gestational diabetes	SoonerCare enrollment
CAP Tulsa Service Use ^b	Preterm birth and low birth weight ^b	Gestational hypertension	Residential instability

¹⁶ 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.

Multicohort survey study measures		CITS study outcome measures	
Educare Service Use ^b	Language development ^b	Eclampsia	Housing affordability
Parent-child interactions ^b	Measures of Academic Progress (MAP) reading and math ^k	Premature birth	Preschool enrollment
Early learning activities ^{bk}	Cognitive development ^b	Breastfeeding	MAP reading and math scores
Adverse childhood experiences ^{bk}	Social-emotional scale ^{bk}	Infant mortality rate	Child care subsidy usage

Note. b = birth sample; k = kindergarten sample; bk = birth and kindergarten samples.

Summary: What We Learned From the Multicohort Study

This year, we continued to learn about the Cohort 1 sample. Children in the Birth Cohort 1 sample tend to demonstrate developmental progress, and parents tend to use positive parenting behaviors as measured by our observational tools. Half of the birth sample and 70% of the kindergarten sample have experienced at least one adverse childhood experience. The data also shows differences based on socioeconomic status, as proxied by Medicaid eligibility status, in areas such as developmental skills or academic benchmarks.

We also learned that sample recruitment in the post-COVID era was extremely difficult in 2021 and 2024; it took a lot longer, required a higher level of effort, and resulted in a much lower sample size than we anticipated when we originally designed the study in 2019. For the Cohort 2 sample, Hispanic/Latino families tend to be overrepresented compared to Cohort 1 and the population of Tulsa. As such, we will likely employ statistical methods to adjust the samples to assure representation and validity in the outcome measures.

We pursued a few different approaches to learn more about which specific services families use. We received administrative data on WIC usage, which shows that 68% of Medicaid-eligible families did access WIC services during their time in the study. And based on optional write-in responses, parents most frequently indicated that SoonerCare, SNAP, and WIC were services they used.

The CITS Study: Analyzing Extant Data to Examine Trends of Child and Family Well-Being

In this section, we share analyses of childhood vaccination rates among kindergarten students in Tulsa and Oklahoma City Public schools using data from the Oklahoma State Department of Health (OSDH). School vaccination measures contribute to our understanding of the “ready for kindergarten” goal of the BEST initiative. Over the last few years, we have examined baseline trends in a long list of measures. These include health program appointment data, maternal and infant mortality, maternal health and birth outcomes, third-grade reading and math proficiency, preschool participation, residential mobility, housing affordability, child welfare, and public benefit receipt—in addition to the new analyses presented in this report on school vaccination rates. These initial analyses of baseline trends lay a foundation for the CITS technique that we will employ to examine the impacts of the BEST initiative; they also provide insights on which measures will be suitable for later impact analysis. We explore two questions:

1. What are the vaccination rate trends in TPS and in OKCPS?
2. What are the characteristics of schools with low vaccination rates (that is, by race/ethnicity composition, and by share of students eligible for free or reduced-price lunch) in TPS?

The examination of school vaccination trends continues our efforts to document historical trends of child and family well-being indicators in Tulsa before implementation of the BEST initiative.

School Vaccination Background, Data Sources, and Measures

In Oklahoma, the Oklahoma Immunization Act (1970)¹⁷ requires all children 2 months of age or older to meet immunization requirements (or file for exemptions) prior to attending childcare centers or public, charter, or private schools in the state. These immunization requirements are determined by the Oklahoma State Board of Health and updated as public health conditions change. Parents/guardians may apply for medical, religious, or personal exemptions from state immunization requirements with proper documentation to the OSDH.¹⁸ Children may be allowed to attend school if they have had at least one dose of all required vaccines for their age and the next dose is not yet due. These children are considered to be in process of receiving

¹⁷ Oklahoma School Immunization Law. (2021). *Title 70 Oklahoma School Immunization Law*. <https://oklahoma.gov/content/dam/ok/en/health/health2/aem-documents/prevention-and-preparedness/immunizations/kindergarten-survey/Title-70-Oklahoma-School-Immunization-Law.pdf>.

¹⁸ Oklahoma School Immunization Law. (2021). *Title 70 Oklahoma School Immunization Law*. <https://oklahoma.gov/content/dam/ok/en/health/health2/aem-documents/prevention-and-preparedness/immunizations/kindergarten-survey/Title-70-Oklahoma-School-Immunization-Law.pdf>.

their vaccines and not yet up to date.¹⁹ To track compliance and coverage of state-mandated vaccines, each year the OSDH conducts the Oklahoma Kindergarten Immunization Survey.

Despite state requirements, childhood vaccination rates have declined in recent years both nationally and in Oklahoma. Nationwide, in the 2023–24 school year, vaccination coverage for kindergarten students was just under 93%, declining from approximately 95% in the 2019–20 school year and the decade prior.²⁰ In the 2023–24 school year, 87% of public kindergarten students in Oklahoma were up to date on all vaccines. This represents a decline of about 4.5 percentage points from 2017–18, when the share of kindergarten students up to date on all vaccines was 90.4%. As vaccination rates have declined in Oklahoma, exemption rates among public kindergarten students have increased, rising to 5.6% in the 2023–24 school year from 2.4% in 2017–18. Nationally, the exemption rate was 3.3% in 2023–24. Oklahoma is one of 14 states that allows exemptions for religious or personal reasons, in addition to medical exemptions. An increase in exemptions is notable because prior research has demonstrated that higher numbers of exemptions are associated with increased risk of vaccine-preventable diseases, such as measles and whooping cough (that is, pertussis).²¹ Oklahoma has seen higher rates of these illnesses as well as flu in 2025 than in previous years.²²

Data Sources and Measures

We used school-level immunization data from the Oklahoma Kindergarten Immunization Surveys from the 2017–18 to 2023–24 school years. OSDH administers the survey annually, and while the survey is voluntary, participation rates are high, with about 90% of kindergarten programs reporting.²³ We present more detailed information on our sample and this analysis in Appendix A. We used school-level immunization survey records from public and charter schools in TPS and OKCPS, focused on two measures, presented in Exhibit 25.

¹⁹ OSDH. (2023). *Guide to immunization requirements in Oklahoma: 2023–24 school year*. <https://oklahoma.gov/content/dam/ok/en/health/health2/aem-documents/prevention-and-preparedness/immunizations/GuideToImmRequirements-English%2023-24.pdf>

²⁰ Seither, R., Yusuf, O. B., Dramann, D., Calhoun, K., Mugerwa-Kasujja, A., Knighton, C. L., Kriss, J. L., Miller, R., & Peacock, G. (2024). Coverage with selected vaccines and exemption rates among children in kindergarten—United States, 2023–24 school year. *MMWR Morbidity and Mortality Weekly Report*, 73(41), 925–932. <http://dx.doi.org/10.15585/mmwr.mm7341a3>.

²¹ Tomlinson, H. (2023). *The impact of non-medical vaccine exemptions on childhood vaccination rates*. Association of State and Territorial Health Officials. <https://www.astho.org/communications/blog/impact-of-non-medical-vaccine-exemptions-on-childhood-vaccination-rates/>.

²² Taylor, J. (2025, August 28). Oklahoma students navigate declining vaccination landscape this back-to-school season. *KOSU*. <https://www.kosu.org/show/stateimpact-oklahoma/2025-08-28/oklahoma-students-navigate-a-declining-vaccination-landscape-this-back-to-school-season>.

²³ OSDH. (2025). *Oklahoma Kindergarten Immunization Survey FAQ*. <https://oklahoma.gov/content/dam/ok/en/health/health2/aem-documents/prevention-and-preparedness/immunizations/oklahoma-kindergarten-immunization-survey/2025/09.10.25OKKindergartenImmsSurveyFAQ.pdf>.

Exhibit 25. School Vaccination Rate Analyses Measures

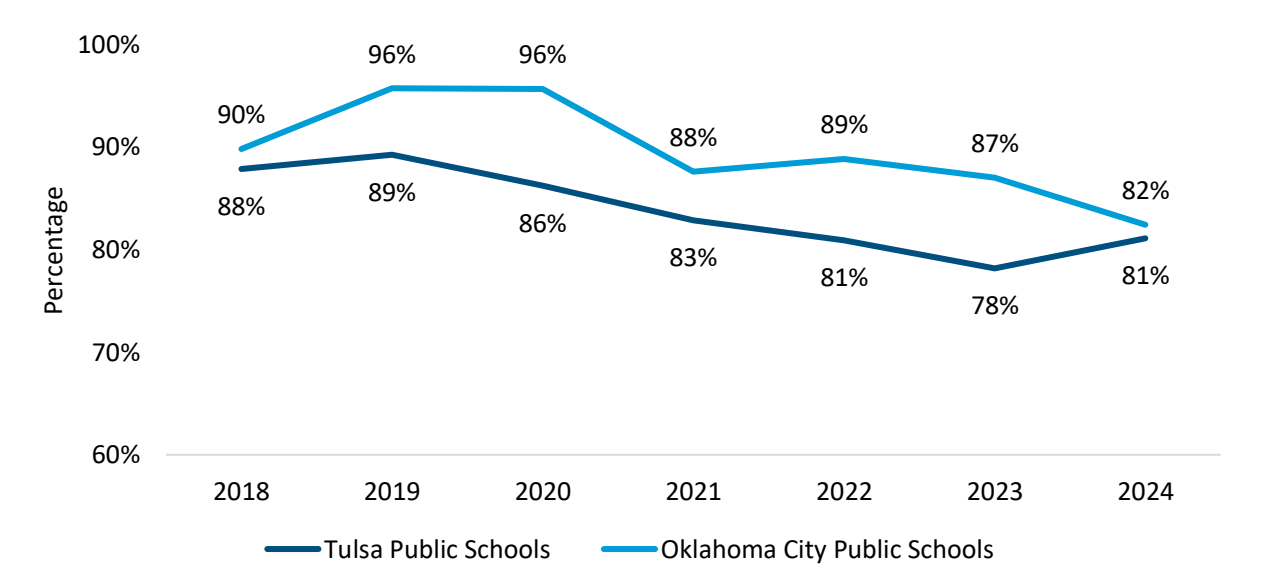
Measure	Description
All-vaccine rate	- District-level percentage of kindergarten students up to date on all required vaccines. - Required vaccines are those in the 4:3:2:3:2:1 series: Diphtheria, Tetanus and Pertussis (whooping cough) (DTP/DTaP), Poliomyelitis (polio), Measles, Mumps and Rubella (MMR), Hepatitis B, Hepatitis A, and Varicella (chickenpox) vaccines, and the numbers refer to the required doses to be considered up to date (e.g., four doses of DTaP). - We weight the school-level all-vaccine rate by the number of kindergarten students enrolled in the school and aggregate up to the district level.
Exemption rate	- District-level percentage of kindergarten students with an exemption on file. - Oklahoma allows exemptions for religious or personal reasons, in addition to medical exemptions.

Key Findings

Average all-vaccine and exemption rates

In both TPS and OKCPS, the share of kindergarten students who have completed all vaccines has declined since 2018. In Exhibit 26, we display the average all-vaccine vaccination rate trend in each district. The vaccination rate in 2024 was 81% in TPS, which represents a decline of 7 percentage points from 88% in 2018. In OKCPS, the vaccination rate in 2024 was 82%, a decline of 8 percentage points since 2018. These declines are larger than the declines in the state overall during this time (4.5 percentage points) and larger than the decline in the national all-vaccine rate (2 percentage points).

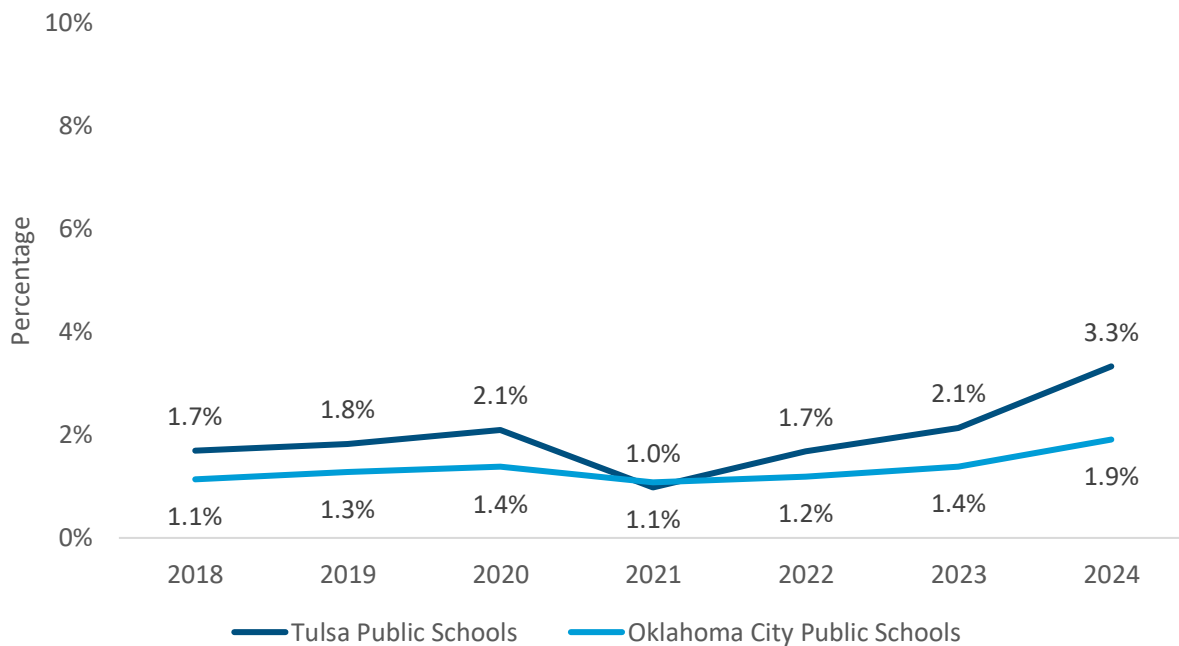
Exhibit 26. Average All-Vaccine Vaccination Rate Among Kindergarten Students in TPS and OKCPS, 2018–24



Note. TPS = Tulsa Public Schools, OKCPS = Oklahoma City Public Schools. Data are weighted by kindergarten student enrollment. Data are from the OSDH Kindergarten Immunization Survey and Common Core of Data.

Exemption rate trends, displayed in Exhibit 27, do not fully explain the declining all-vaccination rate trends. Exemption rate trends remained steady over most of the period, with a slight uptick in the most recent years. Notably, the exemption rates in these two districts are much lower than the state exemption rate (5.6%).

Exhibit 27. Average Vaccine Exemption Rate Among Kindergarten Students in TPS and OKCPS, 2018–2024



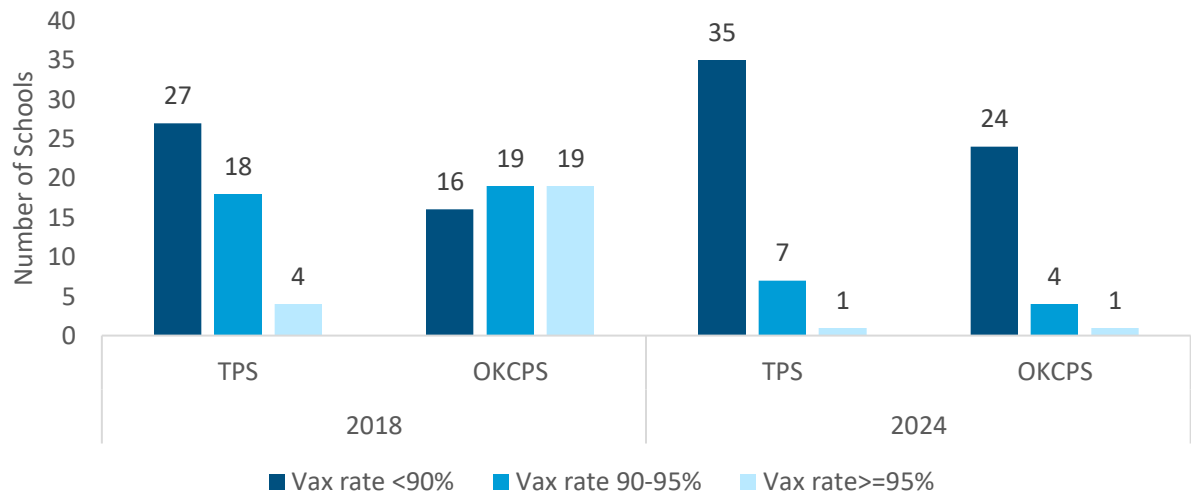
Note. TPS = Tulsa Public Schools, OKCPS = Oklahoma City Public Schools. Data are weighted by kindergarten student population. Data are from the OSDH Kindergarten Immunization Survey and Common Core of Data.

In Exhibit 28, we show the distribution of schools by all-vaccine rates in both districts in 2018 and 2024. We placed schools into one of three categories based on the proportion of kindergarten students that completed all vaccines: (a) less than 90%, (b) between 90% and 95%, and (c) 95% or more.²⁴

²⁴ We focus on the upper threshold of 95% for two reasons. The first reason is that the 95% vaccination rate is the target for the MMR vaccination, given the highly contagious nature of measles. Office of Disease Prevention and Health Promotion. (2023). *Healthy people: Maintain the vaccination coverage level of 2 doses of the MMR vaccine for children in kindergarten—IID-04*. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/vaccination/maintain-vaccination-coverage-level-2-doses-mmr-vaccine-children-kindergarten-iid-04>. The second reason is that the childhood vaccination rate was 95% in the decade prior to 2019.

In Tulsa, four schools (out of 49) had all-vaccination rates of 95% or greater in 2018, yet only one school met this threshold in 2024. Most TPS schools had all-vaccination rates of less than 90% in 2018, and the number of schools with vaccination rates less than 90% increased in 2024. In OKCPS, about one-third of schools had 95% or more of kindergarten students who had completed all required vaccines in 2018; however, by 2024, only one school had a vaccination rate of 95% or higher. Like TPS, in 2024, the majority of OKCPS schools had kindergarten vaccination rates below 90%.

Exhibit 28. Distribution of All-Vaccination Rates Among TPS and OKCPS Schools, 2018 and 2024

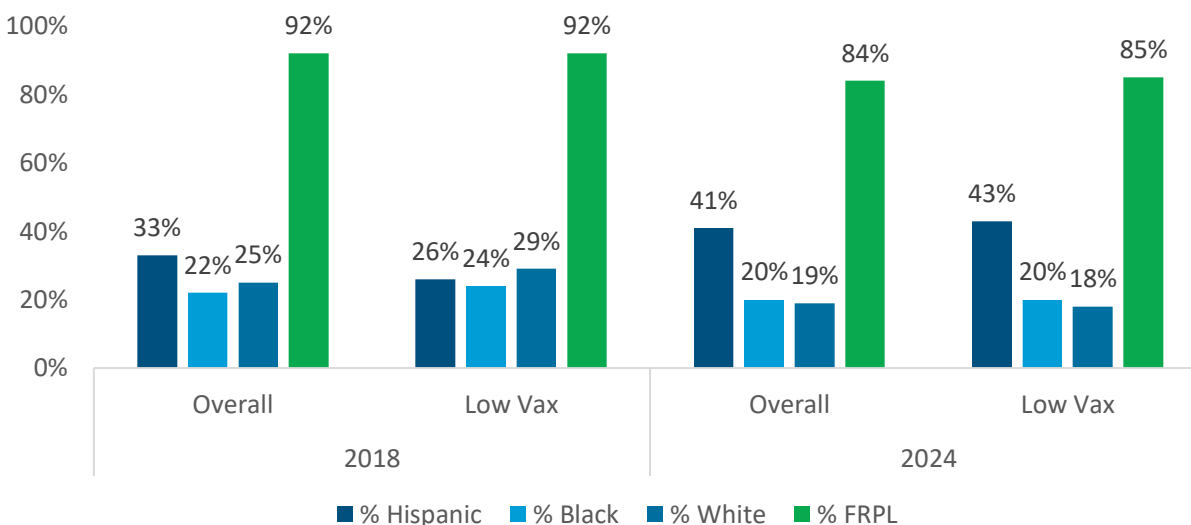


Note. TPS = Tulsa Public Schools, OKCPS = Oklahoma City Public Schools. Schools are categorized into three mutually exclusive groups based on their average vaccination rates in 2018 and 2024. Due to substantial school consolidation in OKCPS, the number of schools was lower in 2024 than in 2018. Sample sizes in each year and the number of schools in each year are presented in Exhibit A–1. Data are from the OSDH Kindergarten Immunization Survey and Common Core of Data.

Characteristics of low-vaccination rate schools

In Exhibit 29, we compare the demographic composition of all TPS kindergarten-serving schools to those with low vaccination rates in 2018 and 2024. We define low-vaccination rate schools as those in which less than 90% of kindergarten students have completed all vaccines. In 2018, low-vaccination rate schools had lower shares of Hispanic students and higher shares of White students than TPS schools overall. In 2024, given that most schools had low vaccination rates, the overall demographic composition of schools is the same as the composition of low-vaccination rate schools.

Exhibit 29. Demographic Composition of TPS Kindergarten-Serving Schools Overall and Low-Vaccination Rate Schools, 2018 and 2024



Note. TPS = Tulsa Public Schools. FRPL = free or reduced-price lunch. Race/ethnicity data are weighted by kindergarten student population, and free or reduced-price lunch data are weighted by school population. Data are from the OSDH Kindergarten Immunization Survey and Common Core of Data.

Summary and Next Steps

We highlight our two key findings:

1. In both TPS and OKCPS, the share of kindergarten students who have completed all vaccines has declined since 2018. These declines are larger than the declines in the state and nationally.
2. Exemption rate trends, which have remained relatively steady over time in TPS and OKCPS, do not explain the declining vaccination rate trends.

One potential explanation for decreasing vaccination rates that are not fully explained by increasing exemption rates is that there may be an increase in the percentage of students who began or initiated vaccine series but have not completed them. Several of the vaccines require multiple doses, and students may have started but not finished a series. One study found that nationwide, in 2019, about one in six children has started but not completed one or more multidose vaccine series.²⁵ In the 2025 school year, in response to declining vaccination rates, OKCPS implemented a new policy requiring students be up to date or exempted before school starts.²⁶ Prior to the policy change, students were able to attend school while their vaccines

²⁵ Michels, S. Y., Niccolai, L. M., Hadler, J. L., Freeman, R. E., Albers, A. N., Glanz, J. M., Daley, M. F., & Newcomer, S. R. (2023). Failure to complete multidose vaccine series in early childhood. *Pediatrics*, 152(2), Article e2022059844. <https://doi.org/10.1542/peds.2022-059844>

²⁶ Taylor, J. (2025, August 28). Oklahoma students navigate declining vaccination landscape this back-to-school season. *KOSU*. <https://www.kosu.org/show/stateimpact-oklahoma/2025-08-28/oklahoma-students-navigate-a-declining-vaccination-landscape-this-back-to-school-season>.

were in progress. It seems that Oklahoma school districts may have discretion whether they allow students who are in process but not fully up to date in their immunizations to attend school and/or they may also have discretion in the grace period they allow students to complete required vaccines—and this may explain the growing gap between the up-to-date and exempt rate.

The trends shared here are part of a broader set of analyses to establish baseline trends in Tulsa prior to the launch of the BEST initiative. Understanding these child and family well-being trends to date in Tulsa and Oklahoma sets the foundation for testing our hypotheses about the BEST initiative's impact. As next steps for the school vaccination analysis, we will add more years of data to better understand the evolution in school vaccination rates over a longer time horizon. In 2026, we will also move beyond examining trends for key outcomes (that is, the 20 identified as part of the processes described above) and look at the impact of BEST, using on our CITS approach. We will first fit models on birth characteristics and then on other outcomes. The CITS models will include covariates to account for other time-varying factors and conduct tests of statistical significance.

What We Learned from the Outcome/Impact Study

As the Phase II evaluation completes its sixth year, we can report on findings from 30-month Cohort 1 samples and demographics of Cohort 2, in addition to documenting trends using extant administrative data. We also learned that sample recruitment in the post-COVID era in 2021 and 2024 is extremely difficult, and we will likely employ several statistical methods to adjust the samples to assure representation and validity in the outcome measures.

This year, we analyzed the 30-month survey data from Cohort 1 and pursued three paths to learn more about which specific services families use. We received administrative data on WIC usage, which shows that 68% of Medicaid-eligible families did access WIC services during their time in the study. More generally, the data shows that families are particularly using nutrition, health-related, and early childhood education services. The data also shows differences based on Medicaid status; for instance, parents from Medicaid-eligible households reported higher levels of depression and concern about meeting living expenses. Children from Medicaid-eligible households were less likely to meet expected developmental benchmarks on academic-related skills than children from non-Medicaid-eligible households.

We found that vaccination rates among kindergarteners have dropped in both Tulsa and Oklahoma City since 2018. In 2023–24, rates were about the same in both districts—81% in Tulsa and 82% in Oklahoma City. Exemption rates have stayed relatively steady and do not fully explain the drop. It may be that more students are starting but not finishing all their vaccines.

Section IV: Ethnography Study Key Activities and Findings

The purpose of the ethnography study is to provide an in-depth description from families' points of view about the day-to-day experiences raising young children in Tulsa, including families' interactions with systems and service providers. The study uses the Ecocultural Family Interview (EFI), a strengths-based, open-ended interview process designed to solicit information from families about their daily routines as a means to understand family functioning and children's development.²⁷ The interview process collects information about the caregivers and their children; their immediate and extended family; their ecology of home, work, and community; and the everyday activities of parents and their children. The approach focuses on learning how families plan, create, change, and sustain their everyday activities. The format of the open-ended interview is a mixture of conversation, probing questions, and preplanned structured questions to hear about the family routines and circumstances from the parent's perspective, in their own words. As the core of the ethnographic data collection, the monthly interviews have a special focus on the experiences and needs of the focus child and other children in each family. In this past year, the key ethnography study activities included completing these interviews with Cohort 1 families and recruiting a new Cohort 2 sample. Specifically, key activities were:

- Ongoing interviewing of Cohort 1
- Exploring Cohort 1 perspectives about their children's special needs
- Recruitment and interviewing of Cohort 2 sample
- Conducting preliminary analysis of data related to work and subsistence and social service use for Cohort 2 families

Ecocultural Family Interview Key Domains

1. Family Subsistence and Work
2. Services
3. Information
4. Cultural Beliefs and Influences
5. Home–Community Environment
6. Networks and Supports
7. Connectedness
8. Domestic Workload and Child Care Tasks
9. Sustainability of Daily Routine

What We Learned from the Ethnography Study

The ethnography study revealed that families in both Cohort 1 and Cohort 2 navigate complex and changing circumstances to sustain a daily routine to support their children, by drawing on a mix of formal and informal resources and supports. Most families can meet their family's basic financial needs but face ongoing challenges with unpredictable household and family expenses, fluctuating social service supports, and the demands of balancing work and caring for their

²⁷ Weisner, T. S. (2002). Ecocultural understanding of children's developmental pathways. *Human Development*, 45, 275–281; Ecocultural Scale Project. (1997). *Ecocultural family interview and manual*. UCLA Sociobehavioral Group.

children. School-based and government services (such as SoonerCare, WIC, SNAP, and occupational or mental health therapy) are critical to support these families' daily routines, including their financial and physical well-being. This was especially true for families with children who have developmental or behavioral needs. Despite these challenges, families demonstrate resilience and adaptability, maintaining or working toward daily routines that are meaningful and aligned to their family values and prioritizing their children's well-being.

In the sections that follow, we summarize the progress and findings from the aforementioned key activities of the ethnography study. The sections conclude with lessons learned and next steps for the work in 2026.

Ongoing Interviewing of Cohort 1

The 20 families selected for the Cohort 1 ethnography study are also part of the Cohort 1 birth and kindergarten outcome/impact study sample (10 Birth Cohort 1 families and 10 Kindergarten Cohort 1 families). Monthly interviews are complete for all Cohort 1 ethnography families. As of December 2025, a total of 492 monthly ethnographic family interviews have been completed since the beginning of the study; 16 of these interviews were completed in 2025. We are now conducting semi-annual interviews with Cohort 1 families who have expressed interest in continuing their participation beyond the 30-month period of the ethnography study. Semi-annual interviews started in December 2024. To date, we have conducted 29 semi-annual interviews with 17 families.

Each family is rated on nine EFI domains on a quarterly basis. This quarterly scoring is used to quantify the information collected from interviews. Each domain contains a subset of items, for a total of 37 items across the nine domains. Based on their conversations with families, interviewers first score each item as low, medium, or high and then assign a numerical ranking on a 9-point scale (0–2 = *low*, 3–5 = *medium*, 6–8 = *high*). For Cohort 1, we have completed a total of 174 EFI quarterly scoring protocols and an average nine EFI scoring protocols per family since the start of the study. The following section provides analysis of data on families' perspectives about child development concerns.

Cohort 1: Family Perspectives About Child Special Needs

In monthly interviews, parents often shared their experiences in raising their children, both the focus child and their other children in the household. Over this period, recurring themes about parental concerns for their child's development began to emerge. Specifically, families shared experiences with their children having a suspected or formal diagnosis, including learning delays, social-emotional challenges, or neurodivergent profiles. In the next sections, we will describe concerns families expressed about their children. We begin with findings from the

Birth Cohort 1 sample, followed by the Kindergarten Cohort 1 sample. Then, we provide a summary comparing the EFI scores of the two cohorts.

Birth Cohort 1

Exhibit 30 provides a summary of the developmental conditions reported by parents for all children in their families, including the focus children. Five of the 10 families in Birth Cohort 1 shared concerns about one of their children’s development. Conditions discussed included developmental delays related to gross motor, language/speech, social-emotional, behavioral and neurodivergent development.

Exhibit 30. Summary of Birth Cohort 1’s Reported Child Development Challenges

Family	Focal child and age	Child conditions	Services notes
Miller family	Focus Child, 20 months	Gross motor skill delays and emotional regulation	SoonerStart referral from pediatrician Concerns resolved over time
Juarez family	Focus Child, 20 months	Gross motor skill and speech delays	Occupational therapy covered by SoonerCare
Adams family	Not Focus Child, 4 years	Autism diagnosis	Occupational therapy covered by SoonerCare
Arther family	Not Focus Child, 14 years	Trouble regulating emotions	Taking medication
	Not Focus Child, 19 years	ADHD diagnosis	Taking medication, therapy
Sommer family	Not Focus Child, 7 years	Anxiety	Therapy, anxiety medication; stopped therapy over time

Note. All names are pseudonyms

One example is from the Juarez family. Elena and Diego Antonio Juarez have been married for more than 13 years and have three children, Rafael (age 20 months, the focus child), Reina (age 5), and Alejandro (age 12). Diego Antonio is the sole financial provider for the family and has enjoyed his full-time work as a waiter for 2 years. Elena, the mom, reported challenges in Rafael’s gross motor and speech development throughout the study, reporting it early in her study participation, saying: “He is a little slow in developing his large motor skill as he is still unable to roll over and get up onto his knees on his own.” She was initially reassured by her pediatrician, but when he was unable to walk at 17 months, he qualified for occupational therapy covered by SoonerCare. Soon after 17 months, Rafael began walking, but Elena continued to take him to therapy noting: “They can help him with other things that I don’t have the time to help him with. And he likes going.” Similarly, Elena reported delays in Rafael’s

language development that the pediatrician was initially not concerned by, but they later provided a referral to weekly speech therapy.

As another example, the Adams family noticed developmental challenges in an older child, Hannah (age 4), who was diagnosed with autism. Mom, Kalani, had concerns about Hannah's tantrums and communication when she was upset. She reported, "Her speech is okay, she can say something, but she sounds like [a] minion when she talks and still can't understand her. When she gets irritated or upset, she does not know how to communicate, for example if she gets upset at her tablet, because it is on a commercial, she will hit the tablet with her hands repetitively again and again." This led her to contact a friend of her mother about an autism evaluation. Hannah was diagnosed with autism and attends occupational therapy twice a week at a pediatric outpatient facility that is covered by SoonerCare.

A final example is the Miller family. The mother, Quinn, and the father of the focus child, Evan, are married with four children: Carson (age 20 months, the focus child), Taylor (age 4), and twins, Emma and Kenneth (age 10). Quinn works full-time in the cafeteria at a preschool program in Tulsa, and Evan works full-time at a construction company. Quinn states that the children are doing well in school, but the twins have had some behavioral issues and one of the twins struggles with reading and math. Quinn has worried about Carson's gross motor development as well as his emotional regulation (specifically tantrums). She opened a SoonerStart referral with the help of his pediatrician at his 16-month checkup. These concerns began when Carson was 8 months, she explained: "There is a baby that is a week younger than him that is already crawling and Carson is not doing any of that yet, I'm a little worried."

Kindergarten Cohort 1

Exhibit 31 presents information about the developmental conditions reported by Kindergarten Cohort 1 families for all their children, including the focus child. Seven of the 10 families shared stories and reported concerns about their children's development. Among these seven families, there are a total of 12 children. For 10 of the 12 children, parents mentioned concerns about or diagnoses of attention-deficit/hyperactivity disorder (ADHD), which is a neurodevelopmental condition that primarily affects self-regulation. ADHD can also impact sensory-processing and physical development, and it often co-occurs with a range of learning disabilities, mental health conditions (such as anxiety or depression), and behavior disorders.²⁸ Parents shared that formal diagnoses were made by their child's pediatricians, primary care doctors, or school professionals. The supports that parents described receiving to help their child included getting an individualized education program (IEP) at school, having the child participate in various

²⁸ Spencer, T. J. (2006). ADHD and comorbidity in childhood. *Journal of Clinical Psychiatry*, 67, 27–31.

therapies (such as occupational, speech, or behavioral), using medication, and participating in school-based interventions.

Exhibit 31. Summary of Kindergarten Cohort 1's Reported Developmental Conditions

Family	Focal child and age	Child conditions	Services notes
Clark family	Not focus child, 14 years	ADHD, behavioral issues	Oldest takes medication and receives occupational therapy
	Not focus child, 8 years	ADHD	No services received
	Focus Child , 7 years	Oppositional Defiant Disorder, ADHD*	No services received
Lopez family	Focus Child , 9 years	ADHD, speech disorder, learning disorders	IEP in school for more individualized support; speech pathology services
	Not focus child, 10 years	Gifted, Emotional issues*	No services received
Thomas family	Not focus child, 12 years	Autism Spectrum Disorder (ASD)	Has IEP that affords additional time for assignments and specialized reading support; receives speech therapy in school
	Not focus child, 11 years	ADHD*	No services received
	Focus Child , 8 years	ADHD*, speech disorder (stuttering)	Speech therapy
Williams family	Not focus child, 19 years	ADHD	Unknown
	Focus Child , 8 years	ADHD Anxiety Emotional outbursts related to trauma experiences	School accommodations (extra time and modified curriculum, unclear if IEP) Cognitive behavioral therapy (to address emotional trauma)
Smith family	Not focus child, 13 years	ADHD* PTSD Behavioral issues	Occupational therapy
Johnson family	Focus Child , 8 years	ADHD*, Emotional disorders	Receives behavioral therapy at school to address emotional trauma

*Condition suspected by the parent, but the parent shared the child has not received a formal assessment and diagnosis.

Note. Bold font indicates when the study focus child is the subject of concerns. The table reflects the children's ages during the family's final interview in their 30-month participation.

Several families had concerns about conditions that impacted their child's learning and behavior but did not pursue or receive formal diagnoses. In some cases, families had older children with similar issues, which helped them recognize similar symptoms in their younger children and shaped their views on how to address these issues. For example, Demi Williams mentioned noticing some "signs of ADHD" in her child Luna when she was four, including having a hard time keeping still. Demi recognized these signs because they were like what her older child Nicole went through when she was diagnosed with ADHD. Demi found a therapist covered by SoonerCare that helped address Luna's ADHD-related issues without medication. She wanted to avoid medication for Luna due to negative experiences with medication with her older daughter.

Across the Birth and Kindergarten Cohorts, parents are attuned to and frequently seek support for developmental concerns about their children. Among the Birth Cohort, parents were more likely to highlight developmental concerns that emerge earlier, including gross motor and speech delays, while families in the Kindergarten Cohort began to flag developmental differences in children's learning and behavior. Families receive support for these concerns from a multitude of places, but they most often make use of services through SoonerCare and their children's school. Overall, families are able to seek and receive adequate help in navigating developmental concerns and challenges.

Birth and Kindergarten EFI Scores Related to Child Development Topics

In Exhibit 32, we provide average quarterly scores for EFI items related to child development for the period of October 2023 through October 2024. Based on their conversations with families, interviewers first score each item as low, medium, or high and then assign a numerical ranking on a 9-point scale (0–2 = *low*, 3–5 = *medium*, 6–8 = *high*). Despite the child conditions and concerns expressed by parents described above, analysis of EFI scores on child development-related items suggests that families did not find it difficult caring for children and did not spend a lot of time and effort looking for information on child development. Families across both cohorts scored in the low range on level of difficulty in caring for the target child. Regarding level of difficulty in caring for other children, families in Kindergarten Cohort 1 scored slightly higher than families in Birth Cohort 1, but both cohorts scored in the low range.

The EFI scores also suggest that families had low-to-moderate involvement in their children's school activities and moderate daily involvement in schoolwork. Kindergarten parents generally scored in the low range regarding the current involvement of caregiver or other family

members in school activities, suggesting light involvement. Parents in Birth Cohort 1 scored slightly higher on these items, suggesting a more moderate level of involvement in school activities for their older children.

Exhibit 32. EFI Quarterly Scores for Parent Involvement and Child Care

EFI item	Average score, Kindergarten Cohort	Average score, Birth Cohort
<i>Parent Involvement</i>		
Current involvement of primary caregiver or other family members in school activities	2.52	3.34
Family works daily on schoolwork	4.92	5.20
Level of family activity currently focused on accessing sources of information on child development and/or child’s level of functioning	2.80	3.42
<i>Domestic Workload and Child Care</i>		
How difficult is it to care for the target child?	1.08	1.22
How difficult is it to care for other child/children in the family?	2.92	1.22

Parents in Birth Cohort 1 scored slightly higher (3.42) than parents in Kindergarten Cohort 1 (2.8) on level of family activity currently focused on accessing sources of information on child development, suggesting they spend more time and effort looking for sources of information regarding developmental tools for their child. This may be related to the specific needs and pace of development of infants and younger children, which may lead parents to spend more effort looking for information. On the whole, EFI ratings on parental involvement and child care workload suggest that despite the prevalence of developmental concerns, families across both cohorts felt relatively well supported in caring for their children. The following profile demonstrates the ways in which one family is navigating developmental and academic challenges with the support of the child’s school and other resources.

The Lopez Family: *Marisa, the key study child, was 6 years old when she and her family started to participate in the ethnography study. Her mother, Victoria, is a full-time caseworker at a social service organization. Victoria has another child in addition to Marisa, Miguel, who is 8 years old. Victoria expressed concerns about Miguel having “big emotions” and being sensitive to teasing by peers, but he does well in his gifted program at school with no behavioral issues reported. However, Marisa has experienced academic difficulties with reading and comprehension, leading Victoria to have her assessed for a potential learning disorder. Marisa was formally diagnosed with ADHD and received an IEP in prekindergarten and kindergarten, but in first grade was told she was no longer eligible for IEP services. Victoria supports Marisa’s learning at home with reading activities, hired a private tutor, and Marisa’s teacher still provides her with extra support.*

Recruitment of Cohort 2 Sample

We recruited 20 families for the Cohort 2 ethnography study in 2025—families who are also part of the Cohort 2 outcome/impact study sample (10 Birth Cohort 2 families and 10 Kindergarten Cohort 2 families). The demographics of Cohort 2 families are presented in Exhibits 33 and 34. Of the Cohort 2 ethnography study families, 30% of the birth cohort families and 20% of the kindergarten cohort families identify as Hispanic and primarily speak Spanish in the home. In the birth cohort, the average number of children in the household is two; in the kindergarten cohort, the average is four.

Cohort 2 Sample Characteristics

- 15% of the parents identify as Black
- 10% of the parents are American Indian/Alaskan Native
- 30% of the parents are Mexican, Mexican American, or Hispanic
- 45% of the parents are White
- 25% of families speak Spanish as their primary language
- Families have an average of 3 children, with range of 1 to 7
- 65% of the parents are married or living with a partner
- 35% of children are in single-parent households

Exhibit 33. Birth Ethnography Cohort 2 Sample Descriptives

Family name	Parent's racial/ethnic identity	Marital status	Number of children	Primary language
Bowers Family	American Indian or Alaska Native	Widowed	3	English
Blackburn Family	White, Non-Hispanic	Partnered or Married	3	English
Canelas Family	Hispanic; Mexican, Mexican American, Chicano	Single	2	Spanish
Clements Family	White, Non-Hispanic	Partnered or Married	3	English
Moreno Family	Hispanic; Mexican, Mexican American, Chicano	Partnered or Married	1	Spanish
Ortiz Family	Hispanic; Mexican, Mexican American, Chicano	Partnered or Married	2	Spanish
Quinn Family	White; Non-Hispanic	Single	1	English
Stewart Family	White; Non-Hispanic	Partnered or Married	1	English
Thompson Family	Black or African American	Single	3	English
Turner Family	Black or African American	Partnered or Married	3	English

Note. All names are pseudonyms.

Exhibit 34. Kindergarten Ethnography Cohort 2 Sample Descriptives

Family name	Parent's racial/ethnic identity	Marital status	Number of children	Primary language
Blake Family	White, Non-Hispanic	Partnered or Married	1	English
Gray Family	White, Non-Hispanic	Single	2	English
Edwards Family	Black or African American	Single	3	English
Webb Family	Black or African American	Partnered or Married	5	English
Taylor Family	White, Non-Hispanic	Partnered or Married	2	English
Ramos Family	Hispanic; Mexican, Mexican American, Chicano	Partnered or Married	5	Spanish
Herrera Family	Hispanic; Mexican, Mexican American, Chicano	Partnered or Married	6	Spanish
Garrett Family	White; Non-Hispanic	Partnered or Married	3	English
Waller Family	White; Non-Hispanic	Partnered or Married	2	English
Anderson Family	American Indian or Alaska Native	Single	7	English

Note. All names are pseudonyms.

Conducting Ethnographic Interviews with Cohort 2

As noted above, the ethnography study uses the EFI, an approach to ethnography research that uses conversations with parents about how they organize their family’s everyday routines. For Cohort 2, interviewing began in May 2025; to date, 127 interviews and 24 EFI scoring protocols were completed. In the following sections, we will provide ethnography findings from both Birth and Kindergarten samples. We present initial ethnographic findings based on interview data gathered on two EFI domains: (a) Family Subsistence and Work and (b) Services.

Cohort 2: Initial Ethnographic Findings—Family Subsistence and Work

The ethnographic data gathered thus far from Cohort 2 illuminates a range of circumstances and supports that families negotiate to attempt to create a sustainable routine for their children and household. As detailed in Exhibit 35, the majority of families in Cohort 2 had at least one parent working full-time in the household (75%, *n* = 15). Notable is that all parents who want to be employed are working. There are no parents in Cohort 2 unemployed, actively looking for work and unable to find a job.

Example Occupations Held by Caregivers in the Ethnography Study

- Stay-at-home parent
- Legal technician
- Ordained minister
- Nail technician
- Licensed Practical Nurse
- Banker
- Restaurant worker
- Factory worker
- Hospitality manager
- Painting contractor
- Janitor
- House cleaner
- Welder
- Youth program director
- Construction worker
- English teacher
- Bike Mechanic

Exhibit 35. Cohort 2 Employment Status of All Parents in the Household

Employment status	Number (%)
Full-time employment	15 (75%)
Part-time employment	7 (35%)
Not working but looking	0
Stay-at-home parent	8 (40%)

Of the 15 families with at least one parent with full-time employment, three families had both parents working full time, two families had one parent working full time and the other working part time, and two families were single-parent families. Full-time occupations included banker, English teacher, restaurant worker, factory worker, ER nurse, and hospitality manager.

Of the seven families in the sample with one parent working part-time, five families were single-parent families. Part-time occupations included retail jobs (Dollar General, Target) or roles as a nail technician, hair stylist, or licensed practical nurse at a nursing home.

Eight families in the sample had one parent staying at home. All of these families had another parent who was working full-time. In most of these families, the father worked full-time and the mother stayed at home, but two families had the opposite arrangement: the mother worked full-time while the father stayed at home.

The 20 selected ethnography families from Cohort 2 had a wide range of occupations and work arrangements. The types of occupations that parents described are listed in the sidebar shown above. Occupations did seem to vary based on whether parents were single or partnered.

- **In married/partnered households**, some parents work traditional full-time jobs in fields such as hospitality, education, health care, banking, and nonprofit management, while others are employed in retail, construction, or food service. For families where both caregivers work outside the home, many had flexible schedules or part-time work.
- **In families with a stay-at-home parent**, the other parent typically works full-time, often with predictable hours.
- **All single parents** (all of them mothers) are employed in the service industry in sectors such as retail, house cleaning, or food service, or they are temporarily unemployed due to disability or child care needs. Many single parents juggle multiple jobs or rely on informal work to support their families.

Across the sample, families have found ways to adapt work schedules to accommodate children's needs, in some cases relying on extended family members for child care during working hours. However, some families still felt stretched thin as they tried to provide financially for their families and sustain family routines. We will explore child care arrangements and supports more deeply in future years.

Quarterly EFI scores on Work and Subsistence provide additional insight into families' financial situations, including perceptions of financial stability, satisfaction with income base, and job flexibility. Interviewers scored each item as low, medium, or high and then assigned a numerical ranking on a 9-point scale (0–2 = *low*, 3–5 = *medium*, 6–8 = *high*). In Exhibit 36 we present the first Cohort 2 average quarterly scores for five EFI items in the family subsistence and work domain for 12 families with a complete protocol.²⁹

²⁹ We have only begun interviewing Cohort 2 ethnographic sample, so only 12 of the 20 recruited families have an initial EFI scoring protocol completed: 5 Birth Cohort 2 families and 7 Kindergarten Cohort 2 families.

**Exhibit 36. Partial EFI Quarterly Scores on Work and Subsistence for Cohort 2
(Spring/Summer 2025)**

EFI Item	Scores
Amount of income for basic items	5.5
Amount of money for unexpected expenses	3.5
Predictability of income	5.8
Overall satisfaction with current availability of income/subsistence base	4.8
Flexibility of parent's/caregiver's current work or school schedule	6.0

The 12 families with completed EFI scores generally score in the medium to high range (5.5) for amount of income for basic items, suggesting that on average, families can pay basic expenses such as rent/mortgage, but may run out of money at the end of the month and rely on credit to make ends meet. This average score reflects a range of financial situations among Cohort 2 families, ranging from families scored at 2 who struggle to afford basic items and rely heavily on social services to families rated at 6 and 7, who can meet basic payments, save for emergencies, and afford vacations on a regular basis.

On average, families scored in the medium-low range (3.5) for amount of money for unexpected expenses. This means that families may be able to pay for unexpected expenses, but it may be a struggle to figure out how. Families rated lower (2-4) on this item generally mentioned that they relied on family, friends, or credit cards for unexpected expenses. Compared to unexpected expenses, families scored a bit higher on predictability of income (5.8), suggesting that most families had at least one family member with a steady job and predictable number of hours. A couple of families had lower scores on this item due to unemployment or seasonal employment.

Families showed a moderate level of satisfaction (4.8) with their current availability of income, indicating that they were satisfied with some aspects of their financial situation and unsatisfied with others. Some of the points of dissatisfaction mentioned by families included living paycheck to paycheck, having student loan debt, not having enough savings, not getting enough hours at work, and not getting child support.

In relation to flexibility of work schedules, families generally scored in the low end of the high range (6), suggesting their work schedules were fairly flexible. Some dual career families had one caregiver working part-time to allow more flexibility for child care. In other families where both caregivers worked full-time, one had a job that was more flexible and allowed them to be available for child care-related needs. The few families with less flexible work schedules

mentioned strategies such as using PTO or trading shifts with other employees when needed to accommodate child care needs. To note, Families' flexibility of work schedules are interconnected with their predictability of income and financial resources for unexpected expenses. While most families can cover basic expenses, they may have limited savings and low capacity to handle unexpected costs, resulting in ongoing financial strain and shaping their mixed satisfaction with their financial situation.

Cohort 2: Initial Ethnographic Findings—Services Use

The EFI's Services Use domain summarizes the types of government and community supports families access and the level of effort required to obtain them. These include services from BEST partners used by Cohort 2 families in their first few months in the study. Exhibit 37 lists the services that families mentioned using across the Birth Cohort 2 and Kindergarten Cohort 2 ethnography samples. Services sought by the ethnography Cohort 2 sample were primarily focused on support for accessing food or health care. SoonerCare (Medicaid), SNAP, and WIC were the most widely used services. About half of families in the birth cohort and half in the kindergarten cohort used child care assistance, with about a third of families accessing Emergency Infant Services and food pantries.

Exhibit 37. Number of Families in Cohort 2 Using Various Services

Service	Birth cohort N = 10	Kindergarten cohort N = 10	Total N (% of total families)
SoonerCare (Medicaid)	9	6	75%
SNAP	7	4	55%
WIC*	6	3	45%
Department of Human Services child care assistance	4	3	35%
Emergency Infant Services*	3	4	35%
Food pantries	3	3	30%
Free Breakfast and Lunch program	1	6	35%
Educare*	2	2	20%
211 helpline to connect to resources	3	2	25%
Low Income Home Energy Assistance Program	1	1	10%
Family Connects*	1	0	5%
ConnectFirst (Tulsa Health Dept.)	1	1	10%
Hunger Free Oklahoma*	1	2	15%

Service	Birth cohort N = 10	Kindergarten cohort N = 10	Total N (% of total families)
Lactation Consultants (Tulsa Health Dept.)*	2	0	10%
El Centro New Sanctuary Empowerment Center*	1	0	5%
La Cosecha*	1	1	10%
CAP Tulsa*	0	1	5%

*A BEST partner.

Exhibit 38 provides the average service EFI scores for Cohort 2 families with a complete EFI. Interviewers scored each item as low, medium, or high and then assigned a numerical ranking on a 9-point scale (0–2 = *low*, 3–5 = *medium*, 6–8 = *high*). Families scored an average of 3.19 on the level of activity currently focused on getting and using government services, indicating a relatively low level of activity on getting and using social services. In Birth Cohort 2, all but one family uses government services including SoonerCare and WIC. In Kindergarten Cohort 2, three of seven families do not qualify for or access services due to their higher income level. Those who do qualify rely heavily on government services and mentioned using food stamps, DHS support, Section 8 housing, and SoonerCare.

Exhibit 38. EFI Quarterly Scores on Services Use for Cohort 2

Services EFI item	Total average score	Birth cohort average score	Kindergarten cohort average score
Level of activity currently focused on getting and using government services	3.19	3.29	3.11
Level of household activity currently focused on getting and using services from community-based agencies	2.19	1.86	2.44
Level of household activity focused on getting, using, and/or paying for health care for children	1.69	0.43	2.78
Level of household activity focused on getting, using, and/or paying for health care for other family members	2.44	2.29	2.56

EFI scores for the level of household activity currently focused on getting and using services from community-based agencies (total average score of 2.19) are lower than the EFI scores for level of effort used to access government services. There is a difference, again, between the birth cohort and kindergarten cohort samples. Within Birth Cohort 2, most families do not seek support from community services, even if they sought government services support; only one parent in this cohort (a mother) mentioned accessing local food pantries and emergency infant services for diapers. In Kindergarten Cohort 2, four of the seven families mentioned accessing community services. The three families from this cohort that did not access government services also did not seek community services. Families who did access community services noted using food pantries, information from the library and the 'Tulsa weekly' – a news source reported by a cohort family, a free YMCA membership, emergency infant services, and a parent resource center. The difference in seeking government or community services across cohorts may be representative of the developmental needs of the child. The needs of families in the birth cohort may be effectively addressed through government services such as WIC and SoonerCare that are tailored to support families with newborns and toddlers, eliminating the need to seek additional community support. In contrast, families in the kindergarten cohort may be faced with navigating school-related and childcare concerns that government services may not effectively address.

For both the birth and kindergarten cohorts, the level of household activity focused on getting and using health care for children is relatively low; the total average score was 1.69. Typically, across families this represents either a very low or very high level of effort. In Birth Cohort 2, three families have SoonerCare for children, one family is not insured, and one family is covered through private insurance. In Kindergarten Cohort 2, most families (four out of seven) have SoonerCare for their children, two families have private insurance, and one family reports having no insurance.

Last, the level of family activity focused on getting health care for other family members was also on the low end (total average score of 2.44). Most commonly, this was either because the family had insurance through an employer or was accessing insurance through SoonerCare. In Birth Cohort 2, one family has no insurance, two families have private insurance, and one family has SoonerCare for the mother. In Kindergarten Cohort 2, two families have insurance for other family members through their employer, two families do not have or do not use insurance, one family receives health care services through a grant-funded program, and one family has insurance for all children and the mother through SoonerCare.

Lessons Learned and Next Steps

Key lessons from the ethnography study this year are:

- In Cohort 1, many families across both the birth and kindergarten groups reported concerns about the development of their children during monthly interviews. Birth Cohort 1 families' concerns revolved around developmental delays related to gross motor, language/speech, social-emotional, behavioral and neurodivergent development, while Kindergarten Cohort 1 families' concerns focused primarily on ADHD. Families relied on various forms of therapy, school-based interventions, medication, and services such as CAP Tulsa and Educare to address these needs.
- There is range of employment status among Cohort 2 families, with most families having at least one caregiver working full time. It is notable that all parents who want to be employed are working.
- Initial EFI scores indicate that, on average, Cohort 2 families can pay basic expenses such as rent/mortgage but may struggle to cover unexpected expenses. On average, Cohort 2 families' incomes were predictable, and families were moderately satisfied with their income base. However, these averages include a range of financial situations, and some families in the sample felt stretched thin as they tried to sustain their families financially.
- Data from the first few months of Cohort 2 interviews suggest that many families in our sample rely on social services to sustain their families' routines and well-being. Services sought for the Cohort 2 sample were primarily focused on accessing food and healthcare. The most widely used services were SoonerCare, SNAP, and WIC.

In 2026, AIR will continue to collect ethnography data to better understand how both Cohort 1 and Cohort 2 families sustain their daily routines as they raise their children in Tulsa. To date, all families who concluded the 2.5-year participation period ($n = 17$) continue to participate in biannual interviews. Along with continuing to facilitate monthly and biannual interviews with ethnography families, the project team will continue to analyze that data across key EFI domains such as Work and Subsistence, Social Services, and Informal Supports. The team will also continue to explore synergies between the ethnography and other study components.

Conclusion

We designed the BEST study to be responsive to the requirements of a participatory evaluation that is durable even when policy and historical events occur. We will continue to actively seek feedback and suggestions for improvement from BEST partners, community members, and the GKFF-BEST team.

- The workforce survey in the **process study** continues to yield useful annual data on institutional and workforce changes among the BEST partners and in the larger Tulsa early childhood sector. The workforce survey is a great source of evidence on proximal, system-level outcomes, which are an important part of the logic models and theory of change underlying the BEST initiative. Since the workforce survey was first administered in 2020, the study team has purposely adapted the survey to capture change across time, from a panel of individuals in the Tulsa early childhood workforce (repeated observations) and cross-sectionally from a representative sample of staff members at service agencies across Tulsa in each year.
- The **outcome/impact study's** efforts are increasingly focused on analyses of our cohort study data, and we continue analyses of new baseline measures using extant data. We have shifted away from using a multiple-city comparison design for the CITS to instead focus only on Oklahoma City.
- The **ethnography study** data collection continues to gather in-depth longitudinal information about the experiences and outcomes of participating families, selected to broadly represent the Tulsa child–parent population. As we continue to follow the experiences of Cohort 1 families through biannual interviews and Cohort 2 families through monthly interviews, we will continue to explore how families sustain daily routines and interact with systems and service providers in Tulsa. We have included special topics in monthly and biannual interviews to investigate how changes in the services landscape (such as the 2025 government shutdown or new eligibility requirements for government services) affect families' access to services and family functioning.

The Tulsa BEST initiative focuses on improving the collaboration, coordination, and community leadership of dozens of partner organizations working in the birth through age 8 continuum. BEST aims to transform the service system; partner organizations are helping providers effectively collaborate with one another to create an integrated set of supports for young children and their families. Because of this structure and set of goals, the success of BEST depends on the collaboration of many partners and the synergy resulting from such collaboration. Evaluating a place-based intervention like BEST is challenging because the

“intervention” is not precisely defined; the full range of outcomes is difficult to measure; and the communitywide, multistage growth of BEST eliminates the traditional impact study designs with a control and treatment group. As such, the BEST study’s ongoing multiprong evaluation approach, including a wide range of data points, will be critical for documenting and tracking this impact at the child, family, partner, and community levels.

Appendix A. Information on Data Sources, School Sample, and Background for Vaccination-Rate Analyses

Data Sources

We used data from the Common Core of Data (CCD), the U.S. Department of Education's annual census of all public elementary and secondary schools and school districts.³⁰ The data include information on the enrollment and demographic composition of students in each school. Specifically for each school in TPS and OKCPS, we use the percentage of kindergarten students by race/ethnicity, and the percentage of students in the school eligible for free or reduced-price lunch (FRPL), to look at vaccination rates by school demographic characteristics.³¹

School Sample

Exhibit A–1 provides information about the sample of schools in the vaccination-rate analyses presented in the outcome/impact section of the main report body (p. 20). We assembled data from two sources—the Oklahoma State Department of Health’s Oklahoma Kindergarten Immunization Surveys and data from the Common Core of Data, the U.S. Department of Education's annual census of all public elementary and secondary schools and school districts. Our sample comprises all TPS and OKCPS schools that submitted the Immunization Survey between 2017–18 and 2023–24. The number of schools that provided data from the Immunization Survey in each school year is detailed in Exhibit A–1. We also present the number of kindergarten-serving schools in each district (based on CCD data). With only two exceptions, the sample used in this analysis covers at least 91% of kindergarten students in each district. The two exceptions are in OKCPS in 2020, when we captured only about 69% of kindergarten students, and in 2022 in TPS, when we captured about 87% of kindergarten students. In most cases, the kindergarten-serving schools that we are missing in our sample serve small numbers of kindergarten students. We also note that OKCPS closed or consolidated many of their elementary schools, resulting in far fewer schools in 2020 than in the two prior years.

³⁰ U.S. Department of Education. (2025). *Common Core of Data files*. <https://nces.ed.gov/ccd/files.asp>.

³¹ While the first two measures are kindergarten-student specific, the share of students eligible for FRPL is based on all students in the school.

Exhibit A–1. TPS and OKCPS Kindergarten School Sample and Kindergarten-Serving Schools, 2018–2024

School district	Level of Analysis	2018	2019	2020	2021	2022	2023	2024
Tulsa Public Schools (TPS)	Schools in sample (completed Immunization Survey)	49	49	48	43	39	44	43
	Total kindergarten-serving schools in district (in Common Core of Data)	52	53	51	46	46	46	46
	Percentage of total kindergarten students in sample	98%	96%	98%	97%	87%	98%	95%
Oklahoma City Public Schools (OKCPS)	Schools in sample (completed Immunization Survey)	54	54	21	30	29	31	29
	Total kindergarten-serving schools in district (in Common Core of Data)	56	55	32	32	32	32	31
	Percentage of total kindergarten students in sample	100%	100%	69%	97%	91%	100%	97%

Note. The top row for each district is the number of schools that completed the Immunization Survey and are included in our sample; middle row is the number of kindergarten-serving schools in the district in a given year. Bottom row for each district indicates the percentage of kindergarten students in the sample based on kindergarten enrollment information in the Common Core of Data. Schools missing from our sample have small numbers of kindergarten students. Bolded values highlight years with coverage rates less than 90%.

Source. Data are from the Oklahoma State Department of Health Kindergarten Immunization Survey and the Common Core of Data.

Vaccination Requirements

States and local jurisdictions set the specific vaccination requirements for childcare center and school attendance. In general, the vaccines required to attend childcare centers or public, charter, or private schools, referred to as the “4:3:2:3:2:1 series,” include the Diphtheria, Tetanus and Pertussis (whooping cough) (DTP/DTaP), Poliomyelitis (polio), Measles, Mumps and Rubella (MMR), Hepatitis B, Hepatitis A, and Varicella (chickenpox) vaccines. The numbers refer to the number of doses required for each vaccine to be up to date (e.g., four doses of

DTaP, three doses of Poliomyelitis). We refer to the vaccine series interchangeably as vaccination or immunization requirements.

Variability in Vaccination Coverage

Multiple structural barriers to completing vaccination requirements have been identified in the literature, such as moving across state lines, having more children in the household, and not having medical insurance coverage.³² In addition, children living in lower-income households or in rented homes were less likely to have completed the multidose vaccine series. Racial/ethnic disparities also exist—for example, non-Hispanic Black children were at greater risk of not completing the multidose vaccine series compared with non-Hispanic White children. Lower maternal education level and having more vaccine providers, as in receiving immunizations from multiple different health care practices, also emerged as a unique predictor of not starting a given vaccination series.

Restricted access to health care and preventative medical visits is a key driver of declining vaccination coverage. Regular visits to the doctor help foster trusting relationships between families and primary care providers, provide health education and counteract misinformation, and can help reduce hospitalizations.³³ Many children were reported to have missed preventative medical visits during the pandemic years, and these rates were significantly higher for children in Black and Latino/a/x households compared with White households.³⁴ Another key driver of declining vaccination coverage is vaccination hesitancy, which has been estimated to explain 6% to 31% of the cases in which children were not vaccinated before 2021. This became more salient during the pandemic and in years following.³⁵

³² Michels, S. Y., Niccolai, L. M., Hadler, J. L., Freeman, R. E., Albers, A. N., Glanz, J. M., Daley, M. F., & Newcomer, S. R. (2023). Failure to complete multidose vaccine series in early childhood. *Pediatrics*, 152(2), Article e2022059844. <https://doi.org/10.1542/peds.2022-059844>.

³³ Wolf, E. R., O'Neil, J., Pecsok, J., Etz, R. S., Opel, D. J., Wasserman R., & Krist, A. H. (2020). Caregiver and clinician perspectives on missed well-child visits. *Annals of Family Medicine*, 18(1), 30–34. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7227475/>.

³⁴ Rosenthal, J. (2023). *Reversing the decline in routine childhood immunization rates is good health, equity, and economic policy*. Center for American Progress. <https://www.americanprogress.org/article/reversing-the-decline-in-routine-childhood-immunization-rates-is-good-health-equity-and-economic-policy/>.

³⁵ Rosenthal, J. (2023). *Reversing the decline in routine childhood immunization rates is good health, equity, and economic policy*. Center for American Progress. <https://www.americanprogress.org/article/reversing-the-decline-in-routine-childhood-immunization-rates-is-good-health-equity-and-economic-policy/>.

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