Support for this report was provided by the Robert Wood Johnson Foundation. The views expressed here do not necessarily reflect the views of the Foundation.

THERE IS SO MUCH ENERGY invested in collecting and reporting data, yet so little use of that data. This is a common challenge in early childhood, just as it is in many other fields. Often the disjunction is felt most strongly by those closest to the front lines: the staff who work directly with young children and their families. They are responsible for collecting data, but may experience little benefit from doing so.

In the three case studies that follow, we profile communities using their early childhood data in clear and important ways to tailor more effective interventions and yield better results. The sites are diverse, as are the aspects of their work we have chosen to highlight. Taken together, they illuminate the remarkable range of benefits communities have begun to realize from careful and sustained efforts to collect, refine, analyze, and above all, use their data.

AN OVERVIEW OF THE CASE STUDIES AND KEY TAKEAWAYS

Organizing a community around a collective goal. When Indianola, MS was designated a Promise Neighborhood community, key stakeholders committed themselves to a set of goals, one of which was to have children ready to learn when they entered kindergarten. The stakeholders quickly realized that they would need better data in order to understand the challenges they faced and develop solutions. Working together, they not only identified the data they needed, but created a base of trust that allowed them to take on tough problems together.
The first profile describes that process and the encouraging results that have already been achieved.

**Improving the quality of early childhood services. Ventura County, CA**

Ventura County, CA collects a good deal of information about early childhood programs, much of it from parents. They wanted to use that information to drive improvements in the services and supports they offer families. To support that goal, they made two key decisions. First, they re-focused their evaluation efforts on the overall family experience, discarding most surveys of individual programs and replacing them with questions about whether family needs were being met. Second, they engaged a consultant to work with their neighborhood partners, helping each of those organizations identify an improvement question, gather and analyze relevant data, and test solutions. The second profile examines how this combination of system focus and local capacity building is producing promising early examples of data-driven change.

**Informing critical public policy decisions.** When a new Mayor committed to achieving universal, publicly-funded pre-kindergarten in Philadelphia, PA, the city faced a critical decision: which neighborhoods would get the initial allocation of new pre-kindergarten slots? Philadelphia’s long-term investment in an integrated data system provided the basis for an approach that addressed both policy goals and political realities. The Data Management Office created a research-based risk index that identified neighborhoods with both a high concentration of young children at risk of poor outcomes and a low supply of quality pre-kindergarten. The result was a widely supported plan that allowed the first phase of the Mayor’s new initiative to focus primarily on the places where it had the potential to do the most good.

One theme that cuts across all three profiles is the importance of a respected “backbone” organization to oversee data collection and support data use efforts. The type of organization varies substantially in each profile: a respected local provider, the Delta Health Alliance, that convened stakeholders in Indianola; an independent, publicly-created entity that controls a defined pool of resources, First 5 Ventura County; and an arm of the Mayor’s office in Philadelphia. But all three have done both the high-level work (convening stakeholders, building relationships and trust, identifying key messages about the data) and the detailed operational work (for example, creating data-sharing agreements) needed to support improved use of data.

Equally as important, these backbone organizations have fostered relationship-building amid a myriad of partners. Rather than seeing one another as competitors, local organizations have come to see each other as collaborators, each working towards a common goal. Data are not used to rate performance, but rather to learn and support efforts to improve.
IN THE HEART OF SUNFLOWER COUNTY lies the crown of the Mississippi Delta—Indianola, one of the birthplaces of the blues. Unfortunately, Indianola has long struggled with access to appropriate services, poor health outcomes, and intergenerational poverty. More recently, unemployment has increased as many agricultural and manufacturing jobs have become obsolete or moved overseas. As a result, the community faces a decreasing population (down 16.5 percent since 2000) and an estimated mean household income of $27,282, with 43.3 percent of children living below the poverty level.

Despite these challenges, the community has increased the rate of kindergarten readiness by nearly 25 percent. They have done so by working with the Indianola Promise Community (IPC) to build better early childhood programs, services and family supports that benefit all residents. IPC consists of nearly 30 programs and initiatives that work together to expand the health care and educational opportunities for Indianola children and their families. IPC unites health care, education, government, community, and faith-based organizations to develop a “pipeline” of academic, family, and community resources from prenatal care through high school graduation, creating a path for students to gain meaningful careers and earn financial independence.
Created in 2009 and modeled on the successful Harlem Children’s Zone in New York City, the IPC initiative offers a collective approach, with agencies and services complementing one another as the community works together toward shared goals. Recognizing that the earlier children enter and receive services, the better the outcome, the Early Education Collaborative of the IPC (IPCEEC) focuses on improving the lives of children ages 0 to 8 by delivering safe, nurturing, and supportive services throughout the community. At the center of this critical work is the use of data to strategically align early childhood strategies around shared goals and to track performance measures and targets with partners to ensure that all young people in Indianola arrive at kindergarten ready to learn. Mayor Steven Rosenthal comments, “Historically, the people at the state and local level haven’t funded the early childhood programs because they said that these programs don’t make a difference. The data has been able to show that these programs DO make a difference. The early childhood system DOES make a difference. The data has changed the conversation.”

**PART 2: TRANSFORMING THE CULTURE OF DATA**

Working to broaden educational and health opportunities for families in Indianola, IPC serves approximately 2,800 children per year from birth to 24 years of age with 7,000 unique participants since full implementation in 2013. They do so with the help of the Delta Health Alliance (DHA), which serves as a backbone organization, here defined as an organization dedicated to coordinating the various dimensions and collaborators involved in an initiative. The Indianola community has embraced DHA, relying on their coordination and longitudinal data to drive decision-making. Key drivers of Indianola’s success include: involving partners from the beginning; collaboratively setting goals and measures; and sharing data monthly in order to evaluate impact. However, these key elements did not just ‘happen.’ Relationships and trust had to be built with partners and families. According to DHA’s President and CEO Karen Mathews, this capacity building took at least a three-year investment. The effort was well worth it: Carolyn Willis, DHA Vice President for Education Programs, notes, “Data use has led to mutual respect as it shows how educators all along the continuum play a role in the success of the child. Data hasn’t been used to throw out programs or partners. Rather it has been used to get people on the same page.”

In addition to changing the data culture from a punitive one to one focused on continuous quality improvement, DHA has also increased transparency. By sharing with the community what data are being collected and how those data are being used, DHA garners trust, which in turn leads to higher-quality data. These high-quality data are then shared with the community.
With DHA’s guidance, partners mapped out a collaborative process and identified data which could be shared monthly to increase accountability. This new process was piloted on a small scale, fine-tuned, and is now being used across the entire early childhood system. IPCEEC and DHA held its first meeting in September 2014 to strategize on improving kindergarten readiness and bringing together childcare providers, parents, policymakers, community members, school district leaders, and Head Start programs. During the meeting, participants conducted a “data walk” to review data regarding the state of early childhood and kindergarten readiness in Indianola.

As a result, IPC staff knew they had to do a better job of collecting data at all phases of child development. DHA hired a small team of researchers to build a new system that allows data to be collected, uploaded, and shared through a digital “passport” that follows children from school to school and from birth through their high school graduation. IPCEEC implemented a common performance measurement software, a scorecard system, and a shared case-management database (Efforts to Outcomes), so that data could be captured and shared as children progressed.

By the fall of 2014 the system was in use, and it created a foundation for the improvement efforts that followed. According to IPCEEC partners and DHA staff, having higher-quality data and a mechanism for visualizing results were the first key steps to working more strategically with partners across the early childhood system.

IPCEEC embraces its data culture by holding monthly accountability meetings; quarterly meetings with a community advisory board, and biannual social events with food, artistic performances, and data presentations. This new data culture has resulted in a financial savings since resources no longer need to be spent on gaining buy-in or increasing data quality. By using data in real time to implement programs with fidelity, the community has improved the quality and frequency of data collection.
However, it is not enough to streamline data collection and build relationships. Partners and stakeholders must also continuously use data supplied to quickly inform what works and what does not, what can be scaled, whose voice is missing from discussions, and which next steps are required for improvement.

For example, Willis explains that in the Early Head Start Child Care Partnership program, assessments and CLASS® scores from different teachers are analyzed to see which teachers are making the most gains with their children. These teachers are studied so the teacher performance and teacher/child interactions can be replicated. In another example, childcare programs are using data to design professional development opportunities. Coaches from DHA visit childcare centers monthly to observe processes and procedures, and then rate each teacher individually. One DHA Education Manager for the Early Head Start Child Care Partnership, Geisha Forrest, explains, “We use this information to coach and set goals with our teachers; we have a relationship with the staff that has led to tremendous growth in our teachers—that is so rewarding.”

**CASE STUDY ONE  Indianola, Mississippi**

We have a professional development component in the school district that includes peer learning and data. The entire first year the data was introduced was spent on learning how to use it. Today the conversation is how do we use it better.”

**DAPHNE HEFLIN, LOCKARD ELEMENTARY SCHOOL PRINCIPAL**

**PART 3:**

**SHARING DATA WITH PARENTS IN THE SUNFLOWER CONSOLIDATED SCHOOL DISTRICT**

Data is not just being used to inform kindergarten readiness within the early childhood sector. Rather, data use continues into elementary school. The Data Manager for Sunflower County Consolidated School District, Dylan Jones, explains that historically, education staff within the community were afraid of data. Daphne Heflin, Lockard Elementary School Principal, expands upon this theme, explaining, “We had to remove the thorns and stickiness, so staff would use the data at the classroom level. Establishing data culture norms—such as data isn’t used punitively and, no matter whether their scores are (high or low), they can be improved—has contributed to our ability to move the needle [on kindergarten readiness]. There is a clear message in the district that we are all in this together. If you win, I win.”

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1 Classroom Assessment Scoring System (CLASS® Pre-K Teacher-Child Observation Instrument)
The district created a tracker that each teacher, principal, superintendent, school, and district uses. The tracker data are used to see which students need extra support; targeted interventions are then customized to meet students’ needs. The school district also regularly sends data cards home to families and provides activities to help parents interpret the data. In an effort to increase understanding, each teacher is asked to find parents willing to share data and their implications within the community.

Jackie Allen, Education Manager for Save the Children Head Start, stresses that data must be shared back with families in language they understand. As the Education Manager, Allen builds a relationship with each family by orientating them at the beginning of the year to what data will be collected and how that data will be used. Conversations with families are ongoing to build trust and communicate that everyone is working to meet the individual needs of the child.

"As families understand and see data is truly private and confidential, they are more willing to share data. We now have a 93 percent rate of parental consent for data sharing."
Karen Mathews, President and CEO
Delta Health Alliance

CULTIVATING COLLABORATION TO IMPROVE KINDERGARTEN READINESS

In 2013, only 25 percent of Indianola children were entering kindergarten ready to learn. Leveraging its newfound data culture, DHA shared this troubling statistic with its early childhood partners in hopes of beginning the work of improving kindergarten readiness with a common understanding of the challenges ahead. Together, DHA and its partners set an ambitious goal of 75 percent of Indianola children deemed school-ready, as assessed by the school district, by 2017.
As a result of these discussions, Indianola employed the following Kindergarten Readiness Strategies:

1. Since 2014, a concentrated effort has been ongoing to identify and enroll children in more than one program or service. By connecting with families participating in programs such as Imagination Library, a book gifting program that mails free books to children from birth until they begin school, Parents as Teachers, SPARK, Head Start, childcare centers, and LINKS, IPCEEC have been able to sustain a dual enrollment rate above 95 percent.

2. Since 2014, most early childhood providers have aligned their curricula and now use Creative Curriculum and Teaching Strategies Gold, a curriculum sufficiently challenging to prepare students for kindergarten. Head Start staff provide joint training and professional development opportunities.

3. Since 2016, children participate in summer transition camps to close identified gaps before beginning kindergarten. Children are assessed using Renaissance STAR Early Literacy and assigned to specific cohorts/groups to better individualize and accelerate learning. Kindergarten and Head Start teachers work together during the summer camps resulting in smoother transitions.

4. Since 2016, messaging has been developed and disseminated to parents highlighting the importance of early brain development and focusing on the STAR Early Literacy assessment domains. This includes the development of a kindergarten readiness workbook that is distributed during home visitation programs or mailed directly to every incoming kindergarten student.

As a result of these efforts, there was an increase in children being enrolled in programs that could help prepare them better for kindergarten (shown in Figure 1).

“...we focus on growth over proficiency”

DYLAN JONES, SUNFLOWER CONSOLIDATED SCHOOL DISTRICT DATA MANAGER
The strong partnerships that have emerged from this experience have led to increased communication among teachers, early childhood partners and parents. As Karen Mathews, President and CEO of the Delta Health Alliance, explains, “Historically, parents didn't interact with teachers or even come to the schools. We used that data to get funding and support to create parent focused support programs and resources.” In other words, data use in Indianola has led to greater parental involvement.

In general, all those involved report having more discussions about how to deploy current resources as efficiently and effectively as possible, how to plan for the future, and how to maintain and improve population-level results and organizational performance measures.

Source: Sunflower County Consolidated School District, STAR Early Literacy, September 2013-2017
RESULTS AND NEXT STEPS

Having the entire Indianola community focus on kindergarten readiness has increased the reach of those programs and services. For example, in 2016, three out of four children entering kindergarten participated in a community program or service, and over a third participated in a targeted or specialized program.

INDIANOLA IS TURNING THE CURVE ON KINDERGARTEN READINESS

In 2017, 51 percent of entering kindergarten students met or exceeded the assessment level that is used to predict whether a student will be reading at grade-level by the end of the third grade. Although this fell short of their initial goal of 55 percent, the community has nearly doubled the proportion of children who meet this standard over previous years.

For Indianola, the key to this success has been a combination of two main factors: strengthening relationships by holding quarterly sessions in which community members set targets and discuss ideas; and partnering with programs that better prepare children for kindergarten, including intensive summer camp preparation programs, home visitation programs, and Imagination Library.

The Indianola community recognizes no single program or service can adequately address all of a family’s needs. Therefore, IPCEEC strategically offers a variety of services that complement rather than compete, building on each other to make the strongest impact.

“It isn’t about one program. It is about system level work that is needed to change population level outcomes. Relationships have to be constantly redefined and reorganized. We have to work together—from the policy level to the service provider.”

CAROLYN G. WILLIS, VICE PRESIDENT FOR EDUCATION PROGRAMS, DELTA HEALTH ALLIANCE
In 2016, the IPC early childhood system served nine out of every 10 children entering kindergarten; over 60 percent were enrolled in three or more complementary programs. Further, Indianola kindergarteners with a history of participating in multiple IPC programs scored higher on literacy tests. Participating in one IPC program helps, but participating in two or three programs pushes young students over the benchmark score that indicates an academic readiness for kindergarten. Indianola’s IPCEEC strategic approach to kindergarten readiness is working. IPCEEC kindergartners outperformed their peers from other counties in several ways. These children more rapidly adjusted to school and progressively improved on assessments. Armed with this knowledge, Mayor Rosenthal says Indianola is now hoping to find and support the children who are not entering the early childcare system until kindergarten. IPC is also seeking additional funding to sustain their work until longitudinal data can show long-term impact and a return on investment. (See figure 3)

DHA has made great gains building relationships, reducing early childhood system competition, and embedding data into courageous conversations and decision-making. A data culture is now entrenched in the early childhood system; however, DHA has created a growing need for more resources, including staff.
and funding to sustain this work. “We need to continue to build staff capacity to meet the growing demands of the consumer,” says Willis.

To that end, DHA is actively seeking resources to continue building their infrastructure, such as hiring staff with programing and coding experience, and creating more resources for parents. This benefit is not lost on Sunflower County school district’s Data Manager Dylan Jones. He recognizes that data support would take Indianola to the next level. For example, algorithms could be written that would identify the children eligible for special education services before they start kindergarten.

DHA is also anxious to share its knowledge and results across the Mississippi Delta, the state, and the nation. They know this model, including the Summer Transition Programs, is replicable and that, ultimately, this project has the long-term potential to break the cycle of poverty. This model worked in Harlem; Indianola demonstrates, with data, that it can work in rural settings, too.

Sha’Ketta Davis, Assistant Director and ERSEA\(^2\) Coordinator for the Early Head Start Child Care Partnership, speaks to the importance of using this model for their work: “We are moving families from one level to the next level. We are helping them achieve goals and dreams they didn’t feel were possible,” Pooh Bear Daycare Center Infant and Toddler Teacher Tawanna Sophus agrees, “We are saving someone’s child. We are keeping them from falling through the cracks”.

\(^2\)ERSEA stands for Enrollment, Recruitment, Selection, Eligibility and Attendance for Early Head Start.
### TIPS FROM INDIANOLA

| 1. Continually train staff on collecting, analyzing and using high-quality data. |
| 2. Use data to show a return on investment to change policies and procedures. |
| 3. Results Based Accountability will bring the right stakeholders to the table. |
| 4. Health and education cannot be siloed. Bridge the two for the best outcomes for children and families. |
| 5. Doing the right thing is non-partisan. |
| 6. Never approach the work as the expert, telling people what to do. Build capacity and work with your community. |
| 7. Success is dependent on relationships and trust. |
| 8. Show data in a non-intimidating way and help people understand it at an individual, community, state, and national level. |
| 9. Hold data walks at community settings (e.g. libraries, schools). |
| 10. Ask families how they see the data; ask for their feedback on inputs and next steps. |
VENTURA COUNTY, with a population of more than 800,000, sits on the California coast about 70 miles north of Los Angeles. The economic situation of people living in Ventura varies widely, from high-income residents living in very expensive housing, especially in the parts of the county closer to Los Angeles, to areas where many residents are seasonal agricultural workers and one child in three is growing up in poverty. About 40 percent of the population identifies as Hispanic or Latino, which includes a significant number of Mixtecos (indigenous people from Mexico).

The early childhood system in Ventura is led by First 5 Ventura County (F5VC). Like similar organizations in counties throughout the state, F5VC was created in 1998 after California voters approved a tobacco tax dedicated to improving the lives of children under five and their families. At its peak, the tax provided Ventura with about $11 million per year, but revenue has been declining over time and is expected to drop to $6.5 million by 2020. F5VC has identified four strategic priorities for helping all children thrive in healthy, supported environments: children grow up healthy; children enter school ready to learn, cognitively, socially, emotionally, and physically; parents have the knowledge and resources they need to provide a nurturing environment; and communities are engaged
in supporting and prioritizing children. In partnership with parents, school districts, community leaders, and social and healthcare agencies, F5VC works to fill the gaps through a network of essential services for young children and their families.

Ventura decided in the early years of First 5 that it would take an approach somewhat different from counties in other parts of California. Rather than simply increasing the availability of specific services like pre-school and home visiting, it would invest in a network of neighborhood-based early childhood hubs. These 11 “Neighborhoods for Learning” (NfL’s) run a total of 25 family resource centers, which feature Parent and Child Together programs aimed at building parents’ knowledge and social connections and children’s developing skills, all in the context of play. The centers also help parents access health insurance, oral health care, pre-school, and other supports.

**PART 2: A NEW APPROACH TO EVALUATION AND IMPROVEMENT**

In 2014 and 2015, recalls Petra Puls, who leads F5VC, “we really tweaked our evaluation thinking.” Until then, the organization had contracted each year for an evaluation report, which was based primarily on the results of surveys filled out by parents. These surveys were specific to distinct services within funded programs. These annual evaluations consistently produced positive findings. But F5VC wanted to encourage everyone involved in early childhood in the county to take a holistic view of families, working together to identify and meet their full range of needs rather than just focusing on the specific issue that might lead a family to contact a provider. Now they have a new approach to evaluation and performance improvement that reflects this holistic approach.

**FIGURE 4**

**NUMBER AND MIX OF SERVICES RECEIVED**

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent and Child Together</td>
<td>33%</td>
</tr>
<tr>
<td>Service Coordination</td>
<td>27%</td>
</tr>
<tr>
<td>Other Family Support</td>
<td>18%</td>
</tr>
<tr>
<td>Parenting Education</td>
<td>18%</td>
</tr>
<tr>
<td>Preschool</td>
<td>16%</td>
</tr>
<tr>
<td>Developmental Screening</td>
<td>11%</td>
</tr>
<tr>
<td>Kindergarten Transition</td>
<td>9%</td>
</tr>
<tr>
<td>Family Literacy</td>
<td>6%</td>
</tr>
<tr>
<td>Triple P Level</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: First 5 Ventura County Evaluation Report: Findings from the 2016 Parent Survey
The first decision was a big one: “We threw out our multitude of variable questionnaires from different sites.” says Puls. All providers would now use a single survey, asking parents about their parenting knowledge, attitudes and behavior, and whether their needs were being met. This shifted the focus of attention from individual services and programs to the early childhood system as a whole. Because the system had invested in a common intake form and common identifier for families, it could ensure that each family only had to respond once, and it could link answers to information in its database about service utilization in order to gain insights about what factors were associated with better results.

This common intake form still had room for evaluation of particular programs types within the system. F5VC and its partners identified three types of services that engage families substantially enough to permit segmenting the evaluation: parent and child together classes, parenting education programs, and the case management and coordination services provided by the family resource centers. They designed a brief survey section specific to each of the service types to be used by all providers who offered those services. This led to the second big decision: these surveys are only used to support provider learning. “These truly are for our funded partners to use for learning and improvement,” says Puls. These surveys do not contribute their data to annual evaluation reports. F5VC was sufficiently confident in its existing accountability structures to use these surveys primarily for the purpose of promoting additional learning by providers, and encouraging reflection on improving performance, rather than as another accountability tool.

Two years later, the common parent survey was widely considered a success. The annual evaluation continued to show strong results in most areas, ranging from children having health insurance and a medical home to progress in developing the skills needed at kindergarten entry. It also helped identify areas of concern, including such issues as access to oral health care (up to 78 percent, but still...
below the target); reducing young children’s “screen time”; and healthy diets. Moreover, the evaluators could determine which patterns of service utilization were associated with higher or lower levels of desired results, such as reading to children daily. Findings like these create opportunities for partners to design new approaches to improvement.

The three programmatic surveys, however, had not yet produced similar value. Programs were diligently collecting the data, but there was little evidence that they used what they found to improve performance. Changing this was the next step. And to do that, the providers would need some help.

**PART 3: CONTINUOUS QUALITY IMPROVEMENT (CQI) IN THE NEIGHBORHOODS FOR LEARNING**

The core work done by the Neighborhoods for Learning (NfL) consists of both providing services to families and reaching out to families that might need help. Each NfL has a small number of staff members, with professional experience typically in education or social services, few of whom have much background in or comfort with using data. F5VC decided to find someone who could work with the NfL’s, both as a group and individually, to build and practice the skills they would need to use data for quality improvement.

They contracted with Diane Kellegrew, PhD, to provide technical assistance. Dr. Kellegrew developed a plan that was deliberately brief and simple: an introductory group training on quality improvement, which included a format for planning a CQI project; two or three individual sessions with each NfL, helping them choose a project, decide what data to review, and analyze their data; and then a final group session to consolidate learning. “We were always working on literacy, but the project motivated us to look more closely at our data and to make the time to do something about it,” says Amie Mills, director of the Conejo Valley NfL. Kellegrew’s approach “made something complicated seem simple and doable,” says Cynthia Torres, CEO of New Dawn Counseling and Consulting.

“Everybody began in a different place,” notes Kellegrew. She decided to ask them each to start by asking themselves very basic questions: “What’s working? How could it be better?” This invited each of First 5’s funded partners to identify an issue that matters to them, explore data to understand the issue, come up with improvement ideas to test, and then take another look at the data to see what changed. Along the way, Kellegrew could provide guidance on framing questions clearly and avoiding ambiguity, “asking what you really wanted to ask,” says Rafaela Fausto, who leads the Pleasant Valley NfL.
PROJECT ONE

The Conejo Valley NFL chose to focus on an issue that emerged in responses to the annual parent survey: although this NFL held many activities focused on literacy, only 23 percent of parents said that they read to their children daily. In order to drive that number higher, NFL staff would need first to understand the sources of the challenge: did parents not understand the importance of reading to their children, or did they lack adequate resources to do so?

Conejo surveyed parents to get additional information, asking questions about how important parents thought it was to read every day or almost every day, and about barriers to daily reading. They then decided on three strategies. First, they would reinforce the importance of daily reading, both in the content of parent education classes and by enlisting community leaders to read to children at public events. Second, after learning that some parents had limited access to books, they developed tips on how to use the same book repeatedly. Finally, they instituted a written record—a “library card”—on which parents could record the days they read to a child, providing important data and allowing them to reinforce the desired behavior with small rewards.

Early follow-up suggests that these strategies are having an effect. One hundred percent of parents now value reading at home as “very important” or “extremely important,” and the proportion of parents who report reading three or more times per week to their children has risen from 71 percent to 88 percent.
**FIGURE 5**
PERCENTAGE OF FAMILIES THAT READ AT LEAST THREE TIMES A WEEK TO THEIR CHILDREN

**By Program Participation**

- **Parent and Child Together (PACT) Only**: 86%
- **PACT & Parenting Education**: 85%
- **Preschool Only**: 83%
- **Average**: 74%
- **PACT, Service Coordination/Case Management & Parenting Education**: 73%
- **Kindergarten Transition Only**: 72%
- **Developmental Assessments Only**: 71%
- **Service Coordination/Case Management & Family Literacy**: 69%
- **PACT & Service Coordination/Case Management**: 57%
- **Service Coordination/Case Management Only**: 36%

**By Parental Education**

- **Less Than High School**: 59%
- **High School Diploma/GED**: 74%
- **Some College/Associate’s Degree**: 85%
- **Bachelor’s Degree or Higher**: 92%

**By Household Income**

- **Less Than $10k**: 68%
- **$10k Less Than $20k**: 68%
- **$20k Less Than $30k**: 73%
- **$30k Less Than $40k**: 73%
- **$40k Less Than $50k**: 80%
- **$50k Less Than $75k**: 89%
- **$75k Less Than $100k**: 91%
- **More Than $100k**: 97%

Source: First 5 Ventura County Evaluation Report: Findings from the 2016 Parent Survey
PROJECT TWO

The Port Hueneme NfL decided to learn more about the efficacy of their follow-up when a developmental screening identified a concern. Staff were routinely conducting screenings and discussing the results with parents, and when children needed a boost or parents had concerns, they provided a well-regarded set of materials (“First 5 Learning Activities,” created by the developer of the Ages and Stages Questionnaire used as a developmental screen) tailored to the specific child’s needs. But, as NfL Director Melissa Staley says, “We just sort of stopped there.” They didn’t know how often parents used the learning activities, or what their experience with them was like.

The NfL created a brief survey, and found that in fact the activities were not being used routinely by the majority of parents. Some didn’t remember receiving them, didn’t understand the importance of the activities, or found them daunting and were reluctant to try them.

Staley reports that this inquiry “changed everything.” The NfL responded to the findings by incorporating the ASQ activities into its regular programming. Now a parent attending a Parents and Children Together class could see an activity modeled by a teacher, then try it out in class with their own child, in preparation for doing it at home. Early Literacy Workshops became “Make and Take” sessions, with parents practicing working on a skill with a child, and then receiving the materials they’d need to repeat the activities at home. And teachers began to ask routinely about who had tried activities at home, rewarding children who had with a sticker, a way both to build enthusiasm and monitor uptake.

A follow-up survey a few months later showed that all parents now reported that they had the materials, knew how to choose activities that met their child’s needs, and understood, with a teacher’s help, how to do the activities at home. The NFL will continue to track whether these changes in knowledge and preparation lead to an increase in the frequency with which parents do the activities.
**PROJECT THREE**

**New Dawn** is an organization that runs a county-wide parenting education program, using the well-regarded Triple-P model. (Positive Parenting Program®: a parenting and family support system designed to prevent, as well as treat, behavioral and emotional problems in children). They decided to explore the issue of retention: what could they do to get as many parents as possible to remain in the program all the way through to the end?

A first task was to organize their data. Cynthia Torres of New Dawn notes that they had, “separate pockets of information,” each containing a single kind of data e.g., sign-in sheets from parenting classes) that they didn’t know how to bring together until they got help. New Dawn then began to analyze the data. They found that 44 percent of parents entering the program attended at least six of the eight sessions, and that the most significant drop-off in participation appeared after the third and fourth sessions of the curriculum. They also found differences in completion based on where the program was held, with rates highest for offerings at schools and in places where parents involved with the child welfare system were receiving other services that they were required to participate in.

New Dawn then developed some hypotheses—for example, that building cohesion among parents would support retaining people in the program—and began to test them. At the end of each session, they asked participants about what they liked and wanted to see more of, and provided a brief forecast of what to expect at the next session. They also developed simple tools, like a short set of feedback questions asked of parents at the end of each session to help them learn more. The next data cycle will help New Dawn determine what effect these measures have had and, if necessary, to develop additional ideas that they can then test.

Diane Kellegrew observes that, while the three NfL’s pursued very different questions, their CQI activities have at least two features in common. The first is a focus on “fidelity of intervention.” We often hear about “fidelity” in the context of evidence-based programs, where it refers to how well staff adhere to the treatment approach set out in the program’s manual. Here she uses the term more broadly. Understanding fidelity begins with identifying the actions that are expected to lead to a result, and finding out whether those actions (e.g. parents reading to a child daily, or parents using the F5VC learning activities with their children) are actually happening. The second common element is to “build in checkpoints” (e.g. the “library card” in Conejo, or repeat analysis of data on program completion at New Dawn) to see if the desired behavior is changing.
Each of the three examples presented in the last section is small in scale and has produced modest results to date. Taken together with the overall approach being pursued by F5VC, however, this work has implications for a wide range of efforts to improve outcomes for young children and their families, including the following:

1. **The value of an early childhood system.** Individual programs can do wonderful work, but only a system can take a broad view of the needs of an entire population. Moreover, the effective use of data in Ventura has been made possible by system-building efforts (including the development of a common intake form and a common database) that took sustained work over a period of years to implement.

2. **A holistic view of families.** A program is doing well if it effectively delivers the specific set of services it has contracted to provide, but a system is doing well only if families are receiving the services and supports they need. F5VC’s decision to focus evaluation on that larger question was a turning point in the effort to use data to drive improvements in the lives of young children and their families.

3. **From having data to using data.** Many places collect a great deal of information. Much of that information will be used to meet various accountability mandates—for example, to report on the volume of services provided—while some may never be used at all. Despite everyone’s good intentions, this was the case in Ventura until F5VC and its partners made a deliberate decision to prioritize the use of data and created the means to do so.
4. From data for accountability (only) to data for learning and improvement. Systems need to have accountability; they count things to make sure that they are getting what they pay for. Those whose work is being evaluated therefore have an incentive to put forth the data that makes them look good. Improvement, however, requires the identification of a gap between current performance and desired results, and acknowledging that gap may not seem consistent with looking good. In Ventura, two factors helped mitigate this tension. The first was the trust built up over years of working together, and the second was F5VC’s decision to allow the program surveys to be “for the programs to utilize” rather than tools of accountability.

5. The value of focused, local capacity-building. For the first two years of the new approach to evaluation, both F5VC and the funded programs had good intentions but little capacity to act on them. Change required the introduction of a consultant who could help programs both conceptually (re ways of thinking about what they were trying to accomplish and how they might use data to improve) and technically (how to get and analyze that data).

6. The value of modest early expectations. “It’s a different muscle we’re exercising,” as Petra Puls says. The CQI work in Ventura called on people to be curious about what they see, to ask different questions from the ones they were used to, and to resist the temptation to jump to solutions before examining the data. These are new behaviors; it would be unrealistic to expect huge improvements based on initial efforts.

7. The challenge of making improvement routine. Because these behaviors are new, they have to be practiced and built up over time before they can become routine ways of working. As this work continues in Ventura, some of the programs may well require some continued technical assistance in order to be able first to replicate their CQI work with regard to a new question, and then to make this a regular part of how they work.
Philadelphia, the fifth largest city in the United States, is home to Independence Hall, the Liberty Bell, and 1,526,006 residents, 22 percent of which are under the age of 18. Demographically, this is a young city, with 15- to 34-year olds comprising the largest portion of the population, and birth rates increasing over the past decade.

Philadelphia is also racially and ethnically diverse, with an almost even split of black (41 percent) and non-Hispanic white (35 percent) residents. The city is also approximately 12 percent Hispanic and 6 percent Asian. However, thirty-seven percent of children ages 0 to 5 live in poverty. The vast majority of these children do not have access to high-quality pre-kindergarten programs. With so many children living in poverty, and limited resources, Philadelphia’s leaders understand the need to support all children, but especially those in greatest need. This is especially important as Philadelphia looks to tackle racial and ethnic disparities among Philadelphia youth, particularly for boys and young men of color.

The City of Philadelphia’s Data Management Office (DMO) is a central component of the Office of Deputy Managing Director of Health and Human Services, which oversees the operating departments that support the most vulnerable Philadelphians. These include Behavioral Health & Intellectual disAbility Services, Public Health, Human Services (child welfare), Homeless Services and Community...
Empowerment & Opportunity (anti-poverty). DMO operates and maintains the CARES integrated data system (IDS), which integrates data from 11 unique sources, which encompass 16 components (Figure 6). By collecting, analyzing, and reporting social services data, the DMO helps public officials, policymakers, and practitioners make data-driven decisions, coordinate client services across agencies, and supports research projects within the academic community. Examples of data available includes: client demographics, client/family relationships, case histories, case manager(s), service provider(s), services, date of services, and other characteristics of clients and services. Uniform, high quality data attributes from CARES are combined with external data sources to produce population-based data on children in Philadelphia, including their risk exposure and service contacts with municipal government.

INTEGRATED DATA SYSTEMS (IDS)

An IDS brings together multiple data sources so they can be used to inform policy and practice. A legal framework ensures compliance and data security by protecting personally identifiable information, while further procedures govern data retrieval, cleaning, and sharing. This allows cities like Philadelphia to safely link key administrative data extracts across multiple agencies. IDS integrates 5200 variables, allowing the city to monitor social programs and note unexpected developments.
correlations between, for example, building code violations and truancy, or lead paint and kindergarten readiness. With this holistic, longitudinal data, stakeholders can test social policy innovations through high speed, low-cost randomized control trials (RCTs) and quasi-experimental approaches. IDS also help with continuous quality improvement efforts and benefit/cost analyses.

With IDS, Philadelphia has “ready to use information that can support decision making,” says Katherine Barghaus, Senior Research Associate, University of Pennsylvania. Integrated data provides a more holistic view of the early childhood landscape: by looking at cross-agency efforts, the city can more quickly see which families are not connected to services. Using integrated data also helps programs make the case for state and federal funding in neighborhoods with the greatest needs.

An example of how IDS can help service providers is that by leveraging data from emergency and transitional housing shelters, the Philadelphia Infant Toddler Early Intervention program has been able to identify young children potentially eligible for various interventions, such as speech and language therapy, physical or occupational therapy, and hearing (audiology) or vision services. This has improved efficiencies in the early intervention intake work flow, resulting in higher success rate of referrals. According to Jeanette Newman, the Planning and Policy Specialist for Infant Toddler Early Intervention at the Department of Behavioral Health and Intellectual disAbility Services, having a current referral success rate of 83 percent improves the odds for children's future success and leads to higher quality early childhood systems. Furthermore, this process has also helped the Infant Toddler Intervention Program find new partners and collaborators.
A Sampling of Philadelphia Programs Using Integrated Data

**A Running Start Health for Every Child**
This program coordinates public, private and non-profit partners to improve the health of young children (birth to age 5) by promoting 10 critical interventions targeting eight key risks. This helps prevent adverse outcomes in childhood and later in life, such as delayed development. The effort uses integrated data for an automatic referral based on identification of children with known risks, such as prematurity and/or exposure to lead.

**Actionable Intelligence for Social Policy Network (AISP)**
The AISP Network uses the functioning IDS to produce actionable intelligence to guide policy and practice decision-making through linked administrative data across government agencies. Partners are using this data to have a better understanding of the needs of individuals and communities and to improve programs and practices through evidence-based collaboration.

**Maternity Care Coalition (MCC)**
The MCC is a community-based nonprofit organization serving pregnant and postpartum women and families in underserved communities in Southeastern Pennsylvania. MCC communities use the Early Childhood Risk and Response data system to ensure services are available to families that need them most.

**People’s Emergency Center (PCC)**
The PEC offers more than 235 affordable housing units, job training, parenting and early childhood education, financial education and planning, life skills, and technology classes. Using data describing the status of children under the age of five living in shelters, the PEC has been able to advocate for policy change.

**Philadelphia Infant Toddler Early Intervention**
Early Intervention for Infants and Toddlers improves child development, reduces behavior that interferes with learning, and helps parent and caregiver confidence. This program is expanding its use of integrated data to plan, coordinate, and conduct Child Find to directly link families with young children eligible for services and for coordination of those services.

**Together We Thrive**
Led by the city’s Health and Human Services Cabinet, integrated data on the state of the city were leveraged to create a framework for the health and well-being of the most vulnerable Philadelphians, creating the foundation for further growth. In 2017, data highlighted improvement on 20 of 35 metrics as well as gaps in services, which contributed to the addition of 48 city initiatives.

**West Philadelphia Action for Early Learning Initiative**
This is a collaborative initiative to support quality early childhood education in the 19104-zip code. It is led by Drexel University with the People’s Emergency Center, Local Initiatives Support Corp and the Delaware Valley Association for the Education of Young Children.

**West Philadelphia Promise Neighborhood (WPPN)**
The WPPN aims to create a continuum of support for children who live or attend school in the West Philadelphia Promise Zone, as well as their families and communities. The goal of the WPPN Data and Research Core is to create a longitudinal, integrated data system to support the delivery and measure the impact of WPPN. Neighborhood and school-level data collection documents what is happening and what is improving at the school and neighborhood level from the perspective of parents, teachers and students.
In Philadelphia, research conducted by the Penn Child Research Center at the University of Pennsylvania’s Graduate School of Education indicates that seven early childhood risks tracked by public agencies have independent and cumulative negative effects on early school outcomes. These seven evidence-based risks are low birth weight, preterm birth, inadequate prenatal care, teen mother, low maternal education, homelessness, lead exposure and child maltreatment. Armed with this information, the DMO, with consultation from Penn Child Research Center, created a data model that tracks these evidence-based early risk experiences for children 0 to 5 years of age.

These data were then analyzed to show the percent of children by age with multiple risk factors and the geographic distribution of these children across the city. This highlighted where the children with the greatest need resided, and which neighborhood schools were most likely to have one to two kindergarten classrooms made up entirely of children with multiple early childhood risks. The data visualization also brought focus to several pockets in the city where the sheer concentration of children with multiple risks caused alarm. Newly attentive, government and nonprofit organizations began collaborating to determine whether these pockets had adequate services, and to increase the concentration of evidence-based interventions for at-risk children.

The data made clear the scope of the challenges facing Philadelphia. The prevalence rates for early childhood risks were higher than national rates in every single category in 2012, with one third of all five-year olds experiencing at least one early childhood risk, and about one quarter experiencing multiple risk factors.
Inadequate prenatal care, lead exposure, and child maltreatment were five to six times the national rate. The most common combination of multiple early childhood risks was low maternal education paired with inadequate prenatal care.

The data highlights some good news: since 2008 the city has seen a decrease in lead exposure (from 7.6 percent to 3.4 percent), child maltreatment (from 5.6 percent to 4.8 percent), and low maternal education (from 22.0 percent to 20.3 percent). However, homeless shelter stays have increased. By looking at which risk factors have improved and which have not, researchers can more easily see which activities should be scaled up and which activities should be adjusted.

Buoyed by the success of using this integrated data, the DMO is partnering with the Mayor’s Office, the University of Pennsylvania, and other external organizations to expand the use of this data model, with the goal of improving and expanding services that benefit the well-being and school readiness of children experiencing multiple early childhood risks.

Real-time information was needed for strategic pre-kindergarten planning and decision making. IDS research data was not only used to inform this issue but was incorporated into Philadelphia’s administrative records. This helped show the Pre-K Commission where limited resources should be focused and helped them target pre-kindergarten access to the most high-need children in the city. As a result, the money raised by taxing sodas and other sugary beverages is being spent to open 1,000 to 2,000 new pre-kindergarten slots per year over the next five years, for a total of 6,500 slots by 2021.

Data not only helps providers and city officials understand where services are needed; it also plays a role in communication. As Vicky Visconto, director of Children’s Playhouse, explains, “The data helps different audiences understand what early childhood is and why it is important.” Jeanette Newman, the Planning & Policy Specialist for Infant Toddler Early Intervention at the Department of Behavioral Health and Intellectual disAbility Services, adds that having a “data driven mindset” contributes to both child and early childhood system success.

High quality early childhood systems are especially important for children living in poverty. Knowing this, and concerned with the high child poverty rate in Philadelphia, city leaders and others using IDS identified a need for more access to quality early childhood programs. Specifically, there were not enough high-quality slots in this city to serve all 3- and 4-year-old children.
This Universal Pre-K Program will increase access for Philadelphia’s most vulnerable children by identifying where children with multiple risk factors reside.

To identify where to place these quality, publicly funded pre-kindergarten slots, the early childhood risk factors data were combined with data on the existing supply of high-quality pre-kindergarten slots across the City, defined as those NAEYC (National Association for the Education of Young Children) or NAFCC (National Association for the Education of Young Children) accredited, participating in Head Start or Pennsylvania’s Pre-K Counts program, or highly rated by Pennsylvania’s Quality Rating and Improvement System (STAR 3 and 4). These data identified 23 neighborhoods where there were above-average rates of children living with multiple risk factors and below-average rates of high-quality slots.

For example, the Kingsessing neighborhood in West Philadelphia had a risk concentration of approximately 32 percent. In this neighborhood there were 237 three- and four-year-old children with at least two risk factors. Again, utilizing the integrated data, DMO was able to show that there were only enough high-quality slots to cover eight percent of the three- and four-year old children living in the Kingsessing neighborhood. To serve all children in this neighborhood, the area would need an additional 34 high-quality pre-kindergarten classrooms, indicating an enormous shortage of high-quality education. This neighborhood was flagged as an ideal target for additional pre-kindergarten slots, and so, with the use of integrated data and expansion funds, 68 additional pre-kindergarten slots were created.

“Our table is set with great data—we just have to decide how to use it to support our strategies and interventions.”

EVA GLADSTEIN, DEPUTY MANAGING DIRECTOR OF HEALTH & HUMAN SERVICES
As of December 2017, the Mayor’s Office of Education reported that all 2000 pre-kindergarten slots were filled, with 413 more children on the waiting list. Due to the additional slots, five neighborhoods are no longer considered pre-kindergarten “deserts,” and quality is improving. Approximately 486 pre-kindergarten slots have moved to a “quality” rating in the state’s Quality Rating and Improvement System. In West Philadelphia, almost half (48 percent) of Action for Early Learning providers also improved their quality rating. Plus, parent confidence in their child’s readiness and preparedness for school is reported at 97 percent and 98 percent of parents report being satisfied with the overall quality of their pre-kindergarten program.

While the ultimate goal is to provide early education to every child in Philadelphia, financial, infrastructure, and workforce constraints necessitate a more gradual and targeted implementation for children most in need of these programs and services. Early childhood leaders will continue to use IDS to strategically address pressing policy questions. Eva Gladstein, Deputy Managing Director of Health & Human Services, sums it up best: “Our table is set with great data. We just have to decide how to use it to support our strategies and interventions.” Philadelphia will also continue to bring new partners and data sources into the IDS while getting the data into more leaders’ hands.

Given Philadelphia’s success using an IDS, they offer some recommendations based on lessons learned for others working to integrate data:

1. Develop integrated data sets to respond to questions of multiple stakeholders; indicators only provide a single piece of information without reflecting the whole person or context.
2. Build relationships; focus on building trust.
3. Use consistent and open communication, especially with people using the data and decision makers.
4. Gather data definitions and build data dictionaries.
5. Develop a data governance structure.
6. Consider using neighborhood boundaries; zip codes and census tracks do not always provide the most useful boundaries for decision making.
7. Use evidence-based metrics.
8. Collect data and measure results to share accountability.
By using an integrated data system, the city was able to quickly identify neighborhoods in dire need of resources—in this example, more high-quality pre-kindergarten classrooms.

Philadelphia is engaged in a national network of jurisdictions with IDS (the Actionable Intelligence for Social Policy Network) and is connecting with others across the country who are using IDS to help support the nation’s youngest children. Philadelphia’s experience using an integrated data system can offer a model process for monitoring and measuring how well government entities serve the people they are designed to serve; and using IDS to inform important policy questions quickly, efficiently and seamlessly to economically coordinate and collaborate across early childhood agencies in order to better serve vulnerable children.
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