

Measuring the Impact of Local Early Childhood Systems: Outcomes, Indicators, and System Performance

A Summary of the EC-LINC Outcomes & Metrics Initiative

Over the past decade, early childhood leaders across the country have been working to build systems with two distinct features. First, they take as their mission the well-being of all of the young children in the community, not just those enrolled in a specific program or service. Second, they bring together what have historically been very distinct sectors—notably, health care, early care and education, and family support—to develop and pursue common goals. Many of these systems are now well-established and well-regarded, while others have struggled to obtain sufficient funding and support. Early childhood leaders have sought tools that would help them measure the effects of these systems, improve their functioning, and tell the story of how they contribute to child well-being.

The Center for the Study of Social Policy (CSSP) and seven communities¹ that have been leaders in developing early childhood systems have worked together to develop two tools described in this paper.² The first is a set of Population-Level Outcomes and Indicators specifying the conditions of well-being for young children that communities seek to achieve, along with a short set of indicators that can be used to track progress towards those outcomes. The second is an Early Childhood System Performance Assessment Toolkit that describes four ways in which an effective early childhood system can contribute to improved outcomes, and identifies measures relevant to each of those four types of contribution. Many of these were developed by the project partners because they could not find existing measures that were feasible to use.

In this brief document, we seek to do three things:

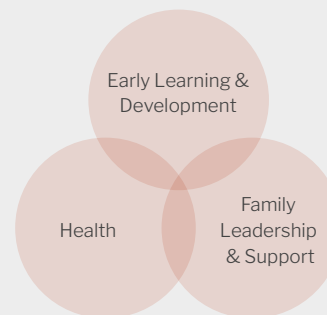
- ▶ Provide readers with sufficient background to understand why and how this work has been done;
- ▶ Set out, in summary form, the key products of the work, with links allowing interested readers to learn more and to download and use the tools; and
- ▶ Provide reflections on what we have learned that we hope will be useful to colleagues working in early childhood, including both practitioners and policymakers.

Overview of the Work

The EC-LINC network consists of CSSP and 14 communities³ that have worked to build early childhood systems, bringing together providers from multiple fields such as early care and education, pediatrics, and home visiting in an effort to improve results for all children in the community. While all EC-LINC communities already engage in considerable efforts to obtain and analyze good data, EC-LINC leaders expressed a desire to do more and to do it in common. They wanted to be able to use data to understand and improve their own performance; to learn from one another; and to tell the story of

An early childhood system has been defined as the “partnerships between interrelated and interdependent agencies and organizations representing physical and mental health, social services, families and caregivers, and early childhood education to develop seamless systems of care for children from birth to kindergarten entry.” (Health Resources and Services Administration, <https://mchb.hrsa.gov/earlychildhoodcomprehensivesystems>)

The graphic below displays the Build Initiative model of early childhood systems, showing that they are comprised of the three overlapping sectors of early learning and development, health, and family leadership and support, which collectively support thriving children and families.



Source: Build Initiative, The Early Childhood Systems Working Group (www.buildinitiative.org)

how early childhood systems contribute to child and family well-being. Accordingly, beginning in 2015 a work group established by the network has undertaken the series of activities described in this paper.

Participants in the work group early on decided to make a distinction between *outcomes* for children and families and *performance measures* focused on the early childhood system.⁴

- ▶ *Outcomes* are conditions of well-being, for example that children are healthy. Indicators, for example the percentage of children born at healthy weight, are used to measure progress towards the outcomes. The work group selected three outcomes: that pregnant women and young children are healthy; children are ready to succeed in school; and children live in safe, stable, and nurturing families and communities. Each outcome has three or four associated indicators. For each of the selected indicators, work group members gathered data for their own communities, allowing for a comparison of data across communities and an assessment of how challenging it would be, in various contexts, to access and monitor the data related to these indicators over time.

- ▶ *Performance measures* examine how an early childhood system contributes to outcomes, for example by establishing universal screening of young children to help parents and providers track their development and flag any developmental concerns for further assessment and support, or improving coordination between providers so families can get to the service they need more easily. In order to identify useful performance measures, participants first defined four important contributions of early childhood systems: a well-functioning system (1) reaches families with the help they need; (2) improves the coordination of services and supports; (3) promotes a climate of community support for early childhood; and (4) increases parent engagement and equity. In each of these four areas, the work group developed specific measures and data collection methods; the majority of the tools developed were piloted in one or more communities and refined based on feedback from those pilots.

Measures

Outcomes and Indicators

The complete list of *outcomes and indicators* is shown on page 4. This set of measures is, like any such set, imperfect. As discussed further in the observations section below, it includes some items (e.g. 1.3, obesity) for which data are not yet widely available, and others (e.g. 3.1, child maltreatment) that have inherent flaws (in the example cited, we know that maltreatment reports vary over time for many reasons, of which actual changes in maltreatment are only one).

Nevertheless, the work group developed, tested, and endorsed these outcomes and indicators as a valuable tool. The list is brief and easy to understand; it is focused on conditions that reflect important current challenges, including social determinants of health; it incorporates measures related to both family activities (e.g. parents reading or singing to their children) and formal service programs (e.g. high quality early childhood education); and, with the exceptions noted, communities were able to gather and analyze data with a reasonable amount of effort. Readers interested in learning more about the outcomes and indicators, including data sources, can review a report here: <https://cssp.org/resource/ec-linc-outcomes-indicators-report/>.

System Performance Measures

The *system performance measures* are shown on page 4. Work group members found this set of performance measures valuable in two ways. First, the four areas of contribution (reach, coordination, commitment, and equity) provide a useful organizing framework for discussions about how early childhood systems can make a difference in their communities. Second, the individual measures are supported by tools, most of which take the form of questions for self-evaluation and a process for having key stakeholders answer those questions and discuss the results. Developing these tools gave the group a practical set of steps to take to begin to measure system performance and plan for improvement, with an understanding that most communities will want to start slowly, choosing a few measures of particular importance to them rather than the entire set. More information, including downloadable tools, is available at <https://cssp.org/our-work/projects/shared-results-outcomes-metrics/>.

Observations

The EC-LINC network provided an extraordinary opportunity to work on early childhood metrics with a focus on practical utility to the communities doing the measuring. The challenge throughout this

work was not just to identify measures that are theoretically useful, but rather to find a set of measures that are worth the considerable effort always involved in collecting and analyzing data. From that perspective, we hope that the following observations will be useful to others working in early childhood.

General observations

1. *Value of work being led by communities.* There are dozens of sets of data elements related to early childhood, many of them created by funding bodies (government or philanthropic) which then require communities to collect and report on the data. This can lead to frustration at the community level, for example when an organization must report on slightly different measures for different funders, or when the measures have been developed with good intention but without testing the process of collecting and reporting on the data. In this effort, communities led the way in determining what data they care most about, and had sufficient time to test whether and how the data they wanted could actually be collected in a timely and reliable way.
2. *Value of the focus on system performance.* Early childhood outcomes generally change slowly, and they are affected by a host of factors beyond the control of early childhood systems. While participants found the effort to specify population-level outcomes and indicators useful, it was insufficient to help them assess how well they are doing and to demonstrate the value of their work. Accordingly, they generally concluded that the work on system performance measures turned out to be the most innovative and valuable part of the project. The group had to design and pilot many of the measures, and communities involved in piloting provided positive reports about both the data and the process used to obtain it.
3. *Importance and challenge of attending to equity.* Children of color and children in low-income families and communities are more likely to face challenges and less likely to have access to high-quality services; as a result, they do not do as well as other children across most areas of well-being. Highlighting these disparities, and tracking the progress of efforts to eliminate them, ought to be a fundamental part of any effort at measurement. The work group took up this effort in two ways. First, it attempted to develop a companion equity measure for each indicator, showing the size of the gap between the population sub-group facing the largest challenges (usually either African-American or Latino children) and the group with the strongest results (usually white and in some instances Asian-American children). In practice, however, data could only be broken down by race and socioeconomic status for a limited number of the indicators due to limitations in the data sources. Second, it also developed a system performance measure examining the extent to which systems are making progress in ten areas related to equity, for example whether culturally relevant services are accessible to all segments of the community. We believe that these are useful first steps, and that considerably more remains to be done to measure equity in ways that will enlighten community members and policymakers, and help systems understand where and how they are making progress.

Observations about the outcomes and indicators

4. *No universally applicable set of measures.* Creating a small set of outcomes and indicators, short enough to fit on a single page, was a valuable process. It allowed this particular group of communities to find a mutually acceptable way to describe the

results they aspire to, and it established a basis for comparing data across the communities. But this process also led the participants to conclude that there is no single set of measures that would be right for all communities, or for all initiatives that seek to improve results across communities. Local priorities matter. For example, an association of communities in one large state was interested in using the framework developed by EC-LINC, but decided that it needed to add an indicator relating to oral health, because that was a major policy focus in the state at the time they were doing the work. Moreover, there was real value in the group having to work out its priorities together, and this effort would not have been as valuable if they had simply taken up an existing framework created elsewhere.

5. *Significant challenges in obtaining important data.* Some of the data that work group members were most interested in simply cannot be obtained reliably—because the data do not exist, or are collected only intermittently, or are available at the state level but not at the local level. For example, childhood obesity is an important and growing health problem, but there is no source of timely, reliable information about it for all children, much less for young children in particular. The work group identified a number of areas in which a data development agenda, pursued by government and/or philanthropic leaders interested in early childhood, would be especially valuable.
6. *Caution in comparing data across locations.* One of the group's original goals was to be able to learn from one another, looking at results across multiple communities for the same measure and learning from those making the most progress. This remains an important aspiration, but work group members came to view comparisons with considerable caution, for several reasons. First, differences in performance may reflect differences in population characteristics (for example, a significantly higher rate of poverty in one jurisdiction compared to another, or a vastly different cost of living in two communities that makes comparisons using the federal poverty rate nearly meaningless). Second, even apparently identical measures may differ. For example, there are numerous ways to measure kindergarten readiness, and differences in results across jurisdictions may reflect differences in measurement tools rather than differences in performance. As a result, communities came to see greater value in examining their own performance over time. While comparing findings to those in other places remains a useful source of insight, work group members concluded that it would be difficult if not impossible to establish cross-community benchmarks for the indicators.
7. *Importance of including measures of the environments in which children grow up.* One important aspect of the outcomes and indicators chosen by the work group was their attention to the family and community conditions that shape children's experiences. Limited data was a particular source of frustration in this area. For example, the group included measures relating to child maltreatment, despite recognizing an inherent flaw (the number of allegations of abuse and neglect, or confirmed cases, varies over time for many reasons, and does not necessarily track the actual incidence of maltreatment). Members would

have greatly preferred to have a reliable population-level measure that is more nuanced, for example a measure of the strength of parent-child relationships or family strengths, but no such measure was available. Similarly, the group was unable to find strong measures of community safety or social cohesion. Nevertheless, work group members strongly believe that no effort to measure child well-being can be complete unless it attends to these family and community conditions.

Observations about system performance measures

8. *Raising core questions about the purpose of early childhood systems.* In order to develop system performance measures, work group members first had to examine their beliefs about why it is a good idea for a community to have an early childhood system. What value can such a system add, over and beyond the value of the individual services and supports it comprises? This was not a theoretical question, but rather one that participants needed to address with regard to their own work: how does our early childhood system make our community better? The four themes that emerged—reach, coordination, commitment, and equity—became the framework for developing system performance measures.
9. *Need for new sources of information.* Under the “reach” heading, existing data sources could be pieced together to provide information for most of the measures (for example, to find the percentage of new mothers who are screened for depression). For the other three areas, however, it was clear that new sources of data would be needed. Throughout these areas, the work group's approach was to promote self-evaluation by a broad group of stakeholders in each participating community, supported by data collection tools.
10. *Prioritizing quality improvement.* The data collected for each of the measures under headings 2 (Coordination), 3 (Commitment), and 4 (Equity) is to be discussed among the participants, leading to a rating of each measure on a four point scale, where 1 indicates roughly “just starting to pay attention to this” and 4 “routinely meeting our aspirations.” This is necessarily a subjective process, and two individuals looking at the same data may well draw different conclusions about what rating would be appropriate. The work group decided not to be concerned about this, because members believed that the major benefit of this process is not the rating, but rather the collective effort to gather and reflect on the data, and then to decide what further action, if any, to take.

While a good deal of testing and refinement remains to be done, the early experience of people participating in pilots suggests that these measures are a useful start in evaluating system performance in a way that promotes both learning and action. CSSP will continue to seek out opportunities to test and refine these tools, and would welcome hearing from those who put them to use in their communities. Please share your experiences with the tools, your findings, and any feedback on the tools by completing a form here: <https://tinyurl.com/ECsystemperformance>.

OUTCOMES AND INDICATORS

HEALTH:

Pregnant women and young children are healthy

- 1.1 LOW BIRTH WEIGHT:** Percentage of babies born below 2,500 grams or 5.5 pounds
- 1.2 ASTHMA:** Percentage of children 0-5 hospitalized due to asthma
- 1.3 OBESITY:** Percentage of children who are overweight or obese

LEARNING:

Children are ready to succeed in school

- 2.1 READ TO:** Percentage of children read to, had a story told to, or sung to daily
- 2.2 HIGH QUALITY EARLY CARE:** Percentage of early childhood education programs that are high quality⁵
- 2.3 KINDERGARTEN READINESS:** Percentage of children assessed as ready for kindergarten

ENVIRONMENT

Children live in safe, stable, and nurturing families and communities

- 3.1.1 MALTREATMENT REPORTS:** Reported cases of abuse and neglect
- 3.1.2 SUBSTANTIATED MALTREATMENT:** Substantiated cases of abuse and neglect
- 3.2 POVERTY:** Percentage of children living in poverty⁶
- 3.3 CHILD FRIENDLY COMMUNITIES:** Measures of child and family friendly neighborhoods

SYSTEM PERFORMANCE MEASURES

1

REACH: Young children and families receive services and supports to meet universal and identified needs

- 1.1 EARLY PRENATAL CARE:** Percentage of pregnant women receiving early prenatal care
- 1.2 MATERNAL DEPRESSION:⁷**
 - 1.2.1 SCREENING:** Percentage of pregnant and postpartum women screened for depression
 - 1.2.2 CONNECTION TO SERVICES:** Percentage of pregnant and postpartum women connected to mental health services when indicated*
- 1.3 CHILD DEVELOPMENT:**
 - 1.3.1 SCREENING:** Percentage of young children who have received a standardized developmental screening
 - 1.3.2 CONNECTION TO SERVICES:** Percentage of young children with identified concerns who are connected to services*
 - 1.3.3 EARLY IDENTIFICATION:** Percentage of children needing selected special education services in kindergarten who were not identified and connected to services prior to kindergarten⁸
- 1.4 EARLY CARE AND EDUCATION:** Percentage of infants, toddlers, and preschool age children with access to early childhood care and education services*
- 1.5 HOME VISITING:** Percentage of families with young children with access to home visiting services*

2

COORDINATION: Sectors within the system are coordinated to provide seamless services, support quality improvement, and avoid duplication

- 2.1 FAMILY ASSESSMENT:** Level at which service providers understand the full range of family strengths and needs
- 2.2 SYSTEM NAVIGATION:** Level at which the system helps connect families to the services and supports they need
- 2.3 WORKING TOGETHER:** Level at which the sectors work together when multiple service providers are involved with the same family
- 2.4 USING DATA:** Level at which system stakeholders use data, both for improved service coordination at the case level and to support planning and quality improvement at the system level
- 2.5 CAPACITY BUILDING:** Level at which the system supports professional development and organizational capacity building

3

COMMITMENT: Communities make early childhood a priority and act to support children's health, learning, and well-being

- 3.1 PUBLIC UNDERSTANDING:** Level at which early childhood systems effectively engage in efforts to increase public understanding of the importance of early childhood and the public's role in supporting children and families*
- 3.2 LEADERSHIP ENGAGEMENT:** Level at which community leadership is engaged in supporting children and families
- 3.3 POLICY CHANGE:** Level at which communities identify, advocate for, and achieve policy changes that improve conditions for young children and their families*

4

EQUITY: Parents are partners in creating a responsive and equitable early childhood system

- 4.1 PARENT ENGAGEMENT:** Level at which parents are engaged as partners and leaders in the early childhood system*
- 4.2 ADVANCING EQUITY:** Level at which attention is paid to ensuring that the early childhood system meets the needs of all young children and their families*

* Measure is in development (i.e., not piloted) but included due to its importance in measuring system performance.

Endnotes

¹ Central Vermont and Lamoille Valley Building Bright Futures; Children and Families Commission of Orange County, California; Children's Services Council of Palm Beach County, Florida; First 5 Alameda County, California; First 5 Los Angeles, California; First 5 Ventura County, California; United Way of Massachusetts Bay and Merrimack Valley.

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³ See <https://cssp.org/our-work/project/early-childhood-learning-and-innovation-network-for-communities/> for more about EC-LINC, including a list of all participating communities.

⁴ Adapted from Results-Based Accountability; see Mark Friedman, "Trying Hard is Not Good Enough" (2005).

⁵ This is an interim measure based on the data that most jurisdictions are currently able to collect; the longer-term goal is to measure the percentage of young children who attend high-quality programs.

⁶ 3.1 and 3.2 are intended to be temporary. The work group identified alternative indicators of safety that were preferable in many ways, but are not currently possible to track at the population level: for 3.1, the Parental Stress Index and a parent protective factor survey; and for 3.2, a Family Financial Stability Index.

⁷ In selecting maternal behavioral health with a focus on depression over other mental health conditions, the intent is not to exclude paternal mental health or other serious mental health conditions; rather, the intent is to align the measure to existing practices, which are typically focused on maternal depression screening due to the strong link to child outcomes.

⁸ While most measures in the toolkit are intentionally framed in positive terms, in this instance we have made an exception; our pilot showed that the measure was more easily understood when framed as the proportion of children the system *missed* prior to kindergarten, as opposed as the proportion of children the system identified early, before kindergarten.