MEASURING WHAT MATTERS:
Using Data to Support Family Progress
Overview (Revised)

Introduction

Head Start and Early Head Start (HS/EHS) programs have a long history of partnering with families to achieve family goals and lasting positive change for children and families. As programs build continuous learning and improvement into everyday operations, HS/EHS staff are working strategically to measure progress on family outcomes. The Office of Head Start expects grantees to use data to track progress over time. For guidance about these expectations and the five-year project period, see Foundations for Excellence: Planning in Head Start (Office of Head Start National Centers, 2014).

To make the most of their efforts, staff need to know how to use data to answer important questions, such as:

"How do we measure families’ progress toward reaching their goals?"

"How is our program making a difference in the lives of parents and children?"

"What changes can programs make to support progress toward family outcomes?"

"How can we tell our story about how our efforts are contributing to better outcomes for families?"

Over the years, the Office of Head Start (OHS) and the National Centers have developed many useful materials about how programs can use data to support decision-making (See References and Resources at the end of this document). The National Center on Parent, Family, and Community Engagement (NCPFCE) is pleased to add this resource, the first in a series called Measuring What Matters: Using Data to Support Family Progress.

This resource provides you with an overview of how HS/EHS programs can use data to engage families and support progress toward the OHS Parent, Family, and Community Engagement (PFCE) Framework Family Outcomes. Specifically, it describes two helpful approaches for using family related data. The first is a set of guiding principles— (Responsible, Respectful, Relevant, and Relationship-based). The second is a cycle of data activities— (Prepare, Collect, Aggregate and Analyze, Use and Share). These principles and activities build on current knowledge about using data in a cycle of continuous learning and improvement (National Center on Program Management and Fiscal Operations [NCPMFO], 2013a) while focusing on measuring family progress toward the seven Family Outcomes of the PFCE Framework.

Families come to HS/EHS with a range of perspectives, experiences, and circumstances. Since each family is different, progress toward the seven Family Outcomes of the OHS PFCE Framework will vary across families. As a result, programs collect and use a variety of family related data. Data can tell a story about families that is accurate or respectful—or not. This is why programs need guiding principles and specific ways to collect, analyze, share, and use data with families that includes their voices and honors their diverse perspectives.
The PFCE Framework shows how family engagement strategies can be systemic, integrated, and comprehensive across services and systems in line with the Head Start Performance Standards (HSPS). Each of its seven Program Foundations and Impact Areas may be involved in data-driven PFCE to achieve the seven Family Outcomes. For example, family-related data can:

- help staff to better understand families’ perspectives, interests, and needs (Family Partnerships),
- support staff by identifying areas where they can build their family engagement knowledge, skills, and actions (Professional Development),
- give staff practical information about children and families to help them develop engagement strategies (Family Partnerships and Teaching and Learning),
- provide information about program strategies that work best for making progress toward Family Outcomes (Program Leadership and Continuous Improvement),
- offer families information about themselves, their children, the program, and their community that they can use to improve their well-being and prepare their children for school (Continuous Improvement), and
- boost community partnerships that promote family outcomes (Community Partnerships and Continuous Improvement) (NCPFCE, 2013).
Creating a Data-Driven Program Culture

Creating a data-driven program culture does not happen overnight. It takes a commitment to using data to improve program systems and services. It also takes a planned approach to measuring program efforts and child and family progress. In a data-driven program culture, HS/EHS leaders place a high value on professional development that promotes curiosity and learning—from successes as well as from mistakes. Programs share data with both staff and families in understandable and meaningful ways. When a program is truly data-driven, staff and families find data useful in their everyday work with each other.

For more guidance about creating a positive, data-driven program culture, see Data in Head Start and Early Head Start: Creating a culture that embraces data (NCPMFO, 2013b) at:


“We have found that, by reflecting on data, we are able to engage in a more constructive conversation with families and staff and can become more innovative in our work. It takes us in new and unexpected directions that make a difference for the families and move them along the developmental process of engagement. We are moving to a place where data is understood and used to enhance effectiveness. The data is helping to bring us to another level of practice.”

Southwest Human Development - Educare Phoenix, AZ

“We involve families and staff in data conversations so that we can all work together to understand what we are learning and how to change course.”

Clayton Early Learning - Educare Denver, CO
The Four R Approach to Support Family Progress: Responsible, Respectful, Relevant, and Relationship-Based

The Four R Approach provides guiding principles for making decisions, evaluating program progress, and identifying changes that can improve program effectiveness as part of a data-driven program culture. Staff can use these principles when partnering with families, setting program, school readiness, and family goals, and assessing progress toward these goals over a five-year project period.

**Responsible:** Are you using data Responsibly?

Using data in a responsible way means using high quality data to guide program decisions that support family progress and staff growth. High quality data:

- offer an accurate picture of the child, family, staff, program, and/or community strengths and challenges,
- are used in a timely manner,
- are collected in ways that maximize information while minimizing the time and effort families and staff must invest in the process, and
- include information about the appropriate uses and limitations of the data (Kisker et al., 2003; Migrant and Seasonal Head Start Technical Assistance Center, 2006).

**Respectful:** Are you using data Respectfully?

Using data in a respectful way begins with staff’s full appreciation of each family’s beliefs, values, and cultural backgrounds, as well as parents’ wish to be the best parents they can be. Program leaders model respect for family and staff beliefs, values, cultures, and circumstances (Early Head Start National Resource Center [EHSNRC], 2000; Snow & Van Hemel, 2008) and create opportunities for staff and families to learn how to use data in their work together.

By prioritizing family input, staff can use the data collection process to affirm that parents are the experts on their children. For example, you can communicate respect for parents by making sure that all questionnaires, focus groups, and other data gathering methods are presented in the language that is most comfortable for each family. When asking families for written responses (e.g., to survey questions), programs can offer options such as help with reading and writing, or offer a verbal interview as an alternative to a written survey. When given such options, families can choose to provide information in the ways that are most comfortable for them. In turn, the information they provide is more likely to be accurate and useful.

Another way to show respect is to invite family members to share their thoughts when talking about what the data show. Staff will often find that families have different understandings or feelings about the information shared with them. As in other situations, family members may feel confused, judged, misunderstood, or mistreated when their perspectives are not honored.

“**The school staff are always impressed by the questions that our parents raise, their depth of knowledge about their child, and their strong advocacy.”**

Clayton Early Learning uses data on children’s progress at the aggregate (summary) level to spur regular conversations with a mixed group of community and family about children’s school readiness. By engaging in these conversations, parents become increasingly thoughtful consumers and can effectively advocate for their child.
**The Four R Approach (cont)**

Respectful use of data includes staff and families working together to decide how to interpret the data. When agreement cannot be reached, a respectful approach prepares staff and families to acknowledge each other’s differing views and to make plans for next steps.

**Relevant: Are you using data that is Relevant?**

Using data that are relevant means collecting data by using tools or measures that:
- answer the specific questions that are being asked related to program goals, objectives, and expected outcomes,
- produce information that is meaningful to staff and families’ everyday work with each other,
- are reliable (provide dependable and consistent information),
- are valid (measure what they are supposed to measure), and
- are culturally sensitive.

Programs will need to be flexible in their approach to collecting individual, family, program, and community data so that the information gathered has meaning and value to those with whom it is shared and used (Caldwell et al., 1992; EHSNRC, 2000; Kisker et al., 2003; Migrant and Seasonal Head Start Technical Assistance Center, 2006). Speaking with other programs and consulting individuals with expertise in using reliable, valid, and culturally relevant tools and measures with young children and their families can be useful for gathering and interpreting data in ways that are relevant to the program population.

**Relationship-based: Are you using data in a Relationship-based way?**

Programs can use a relationship-based approach to data use through a mutual process of engaging families and community partners to develop program plans, collect information, analyze and interpret the information collected, and decide on next steps. As a part of this process, program staff use family engagement practices in their data work with families (e.g., communication, flexibility, responsiveness, respect, self-reflection, attention to family strengths) (Meisels, 2000; Office of Planning, Research, and Evaluation [OPRE], 2011). Building relationships with and among families is a top priority for programs, and the data process can reinforce that effort. For example, staff can encourage parent leaders to help other parents learn about data use. When done in a responsible, respectful, and relevant way, data-driven conversations about child and family progress will enhance relationships with families and community partners. These conversations help everyone create a shared understanding of what is going on for children, families, and the program.

When staff continually ask themselves whether the information that a program collects, analyzes, and shares is responsible, respectful, relevant, and relationship-based, they foster a data-driven program culture. In a data-driven program culture, staff and families see all strengths and challenges revealed through data activities as opportunities for positive change (NCPMFO, 2013b).
Together with The Four R Approach, programs can use The Four Data Activities in a cycle of continuous learning and improvement to make progress toward family outcomes. Measuring family, staff, and program progress involves:
1) systematic preparation and planning,
2) collection of family-related data,
3) aggregating and analyzing the information collected, and
4) using and sharing the results (NCPMFO, 2013a).

You can use this cycle of activities to support progress on family outcomes in two ways. First, you can use the activities to help staff and parents monitor current progress toward family goals, share the information with one another, and plan future steps. Second, you can use this cycle of activities to improve the program’s family and community engagement practices toward lasting positive change. The benefits of The Four Data Activities are greatest when HS/EHS programs and their partners use them to plan and track progress toward five-year goals, and to make annual adjustments based on continuous data analysis and use.
1. Prepare

Develop goals, objectives, and expected outcomes

Begin your preparation process by identifying goals, objectives, and expected outcomes for the five-year project period. For detailed information on developing goals, objectives, and expected outcomes, see Foundations for Excellence: Planning in Head Start: Program Planning and Parent, Family, and Community Engagement (Office of Head Start National Centers, 2014).

Identify the information that will let you know you’ve accomplished your objectives and expected outcomes.

Work with staff and families to identify the information you will need to demonstrate progress toward your selected goals, objectives, and expected outcomes. Information related to your objectives will focus on the effort your program has put into reaching your goal. For example, if your objectives are to increase the number of parent meetings and to use an evidence-based parenting approach at most of those meetings, the information you will need will include data about the number of parent meetings you held, how many parents attended those meetings, and how many of those meetings included use of the evidence-based approach.

Information related to your expected outcomes will focus on the effect your program’s efforts have on achieving your goals. If your expected outcome is that parents will increase their parenting knowledge and skills, the information you will need to track your progress will include data about what parents know about parenting young children and what skills they have to parent effectively. Because your program wants to know whether these skills increased, your program might collect this information both before and after the parent meetings.

Create questions to fit your program’s objectives and expected outcomes.

One good way to figure out what information your program will need to know to track your progress toward your goals is to develop questions related to your objectives and expected outcomes. Questions about program effort ask about what a program actually does (i.e., activities that a program succeeds in implementing). For example, effort questions about a series of parent-child reading workshops might include “How many workshops were held this year?” or “How many parents participated in these workshops?” Effort questions typically ask for counts or descriptions of services offered.

Questions about program effect ask about results—how a program impacts the knowledge, skills, or behaviors of children, families, staff, and community members. For example, an effect
1. **Prepare** (cont)

A question about parent-child reading workshops is “Did the workshops impact the number of times a parent reads to their child at home?” One way to measure the effect of parent-child reading workshops would be to ask parents before and after the workshop series how often they read to their children.

Questions can collect counts and scores, or provide descriptions and explanations.

- To gather **quantitative data** (numbers or counts), use questions like “How many months have you received food stamps?” or “On a scale of 1 to 5, rate how well your income covers your food, clothing, shelter, and medical needs.”
- To gather **qualitative data** (explanation or description), use questions like “What are your family’s financial goals right now?” or “What are your child's strengths?”
- Consider collecting both quantitative and qualitative data to create a well-rounded picture of the progress your program is making toward achieving goals, objectives, and expected outcomes.

Questions can ask for general or limited information.

- Questions that gather **descriptive data** (descriptions) use an open-ended approach where there is no “correct” or single-word answer. Examples are: “What are your child’s favorite activities?” or “What are your goals for your child while he/she is in this program?”
- Questions that gather **discrete data** (yes/no, choices from a list, single answer) focus on collecting particular information such as “How many hours of supervision do you have per month?” or “What agencies does your program partner with in the community?”
- Questions can ask for information about a program’s effort or effect.

Develop and check goals, objectives, and expected outcomes with staff, families, and community partners.

The range of experiences, perspectives, and goals of staff, families, and community members may help them to think of important goals, objectives, and expected outcomes that have not been considered. Asking for input from families and community partners can increase participation in data activities and lead to broader interest in the results. Input from different groups can also help assure that the related questions you prepare to track progress and continuously improve are responsible, respectful, relevant, and relationship-based.
2. Collect Data

**HS/EHS programs already collect many types of data.**

Programs gather data for goal-setting, decision-making, and program planning. For example, programs collect family and community data in the annual self-assessment process and when measuring individual families’ progress toward their goals. Programs collect data for the Program Information Report (PIR), presentations at Policy Council meetings, and tracking goals and progress as part of five-year project cycle. They also gather data to identify opportunities for staff and parent education, to assess program progress and make needed changes, engage parents in conversations about children's development, conduct community assessments, and meet with community service providers.

There are different methods for collecting data.

You are collecting data when you observe interactions among families, or among staff and community partners, and when you ask people what they think. You are also collecting data when you use a developmental screening tool to assess a child. In some cases, staff or outside evaluators collect data by using structured tools to assess a person, event, or setting. Some categories of tools include:

- Self-report tools that ask individuals to give information about themselves and their beliefs, thoughts, and opinions (e.g., surveys, interviews, or focus groups).
- Parent-report and teacher-report tools that ask parents or teachers to give information about children, staff, parents, the program, or community partners (e.g., a parent or teacher reports about a child’s behavior, a teacher reports about the classroom climate).
- Observation tools that require someone (often staff or researchers) to watch children, staff, and families carefully and to provide information about them (often using a specific checklist, rating scale, or other systematic approach).

Primary data is information that programs collect directly for a specific purpose. Secondary data is information that was collected in the past for another purpose and then used to meet the program's current data needs (e.g., using U.S. Census Bureau data for a Head Start program application).

The kind of data your program collects will depend on the questions you are trying to answer. You may want to use interviews or focus groups to collect stories from families, staff, or community members about your efforts to achieve objectives. You can also use these methods to find out how your efforts have affected them. Or, you may want to use surveys or observation tools to measure changes in families’ knowledge, skills, or behavior. Sometimes, the most useful data are existing (secondary) data that were collected for another purpose, but will help you track your progress and make continuous program improvements.
2. Collect Data (cont)

Programs use many different tools or measures in organized and purposeful ways to collect data.

Tools, or measures, are instruments that help collect and make sense of data. Examples include intake applications, family portfolios, and standardized measures and surveys. Some measures collect information about particular people (e.g., parent, child, staff), or individual level data. Individual level data may be about a child (e.g., scores from the Ages & Stages Questionnaire [ASQ]), a family (e.g., scores from the Family Map or PICCOLO) or staff (e.g., scores from the Home Visit Rating Scale or the Parent-Caregiver Relationship Scale). Other measures may collect information about a program, or program level data (e.g., PIR, Annual Self-Assessment) or community level data (Community Assessment).

Tools and measures can offer an excellent method for collecting data systematically when those tools are valid and reliable, and individuals are well-trained in how to use them. This requires an investment by programs in training and time for staff to administer the tools that a program has chosen.

No tool or measure is perfect or works equally well with every individual or group. Many tools have not been tested or have not been found to be effective across different cultural groups. When this is the case, begin with the following questions: “What do we want to learn or better understand?” “Will this tool help us to better understand and identify strengths and challenges experienced by our families?” “Does it respect their culture and context?” “Is it available in the languages our families speak?” Share these questions with other HS/EHS programs and staff to find out what tools work best in different contexts. Many programs have come up with innovative solutions to making measurement relevant to their families.

Depending on what your program is trying to measure, you can also consult Tracking progress in early care and education: Program, staff, and family measurement tools (NCPFCE, 2015), which provides detailed information about a range of tools that measure different aspects of PFCE Family Outcomes.

Consulting a research or evaluation expert also may be helpful when it is difficult to identify an appropriate tool. Also, keep in mind that when parents are struggling with multiple adversities, strong partnerships lead to information sharing that may be more important than any tool or measure.

Develop a system for recording, organizing, and storing the data.

It is important to record data in a systematic way, such as entering them into a database or a Management Information System (MIS), so that information can be used as effectively and efficiently as possible. Well-organized data are easier to use, produce more meaningful information, and improve staff’s ability to work with families to achieve their goals, and to meet program requirements and continuous learning goals.
3. Aggregate and Analyze Data

Analyzing data can be done in many ways.

Data analysis is about making meaning from the information you have collected. Whether your data are numbers or words or both, your program will want a way to make sense of it all. Examples of analyzing data include generating reports on the number of families enrolled, or looking closely at information provided in family strengths assessments and portfolios. The best approach to data analysis is to decide (before collecting the data) on a systematic way to examine the information. If your program works with an information system provider, it may be helpful to consult them early in the process.

Methods of data analysis should help staff explore answers to the program’s original questions.

How you analyze data depends on your goals, objectives, and expected outcomes and the information you have collected to track your progress at meeting those. Are you looking at individual goals, program goals, or school readiness goals? Are you trying to measure effort or effect? For example, data analysis can help you understand a specific family’s or individual’s progress. Or, instead, data about children, families, or staff can be grouped together (aggregated) to look for patterns in a larger group. This informs programs about the nature, needs, and strengths of individual families in the program as a whole, and can show overall trends in meeting family, child, or program goals.

The type of information you collect will also determine how you will analyze it. You can start to analyze quantitative data (numbers) by counting and using descriptive statistics (e.g., means/averages, medians, and ranges). You can also analyze quantitative data by using more complex statistics that can help you see the difference between groups or help you see if your efforts are related to your effects. You can begin to analyze qualitative data by finding common themes or patterns in narratives (e.g., people’s stories, observations).

Data analysis can take many different forms.

Data analysis can be relatively simple (e.g., calculating the mean/average, median, and range for child language scores on a developmental assessment at age three) or highly complex (e.g., determining the impact of the program on child language skills over time). Consulting trained professionals (e.g., program evaluators, researchers) before you begin collecting data, or as early in the process as possible, can be helpful to developing a sound data analysis plan. For more information on data analysis see Introduction to data analysis handbook by Migrant and Seasonal Head Start Technical Assistance Center at: http://ece.aed.org/publications/mshs/dataanalysis/WebDataAnalysis.pdf.

Aggregate (summary) data is information combined from multiple sources to create a summary about groups of individuals (e.g., average education level of staff, total number of referrals among parents who participated in a mental health intervention, range in cognitive scores for children under two years of age).

“When leadership at the Educare Schools looked at data in the aggregate, they noticed that many parents were experiencing food insecurity. Knowing this, staff were able to have direct conversations with parents about food and were able to connect them with local food pantries. Some programs even created their own food pantries on site so that needs could be met immediately.”

Educare Leadership
4. Use and Share Data

**Develop a data-sharing plan before data collection begins.**

Sharing findings and using them to improve your program can strengthen your partnerships with families, but first you need a well thought-out plan. Your plan can specify with whom the data will be shared, (e.g., parents, teachers, family service workers, program managers, Policy Council members, the Governing Board, community partners). How, when, and what data to share are also key elements of a data sharing plan. How to share data depends on several factors, including the knowledge, skills, languages, literacy, interests, and needs of those with whom it will be shared. In most cases, it is important to share data when it is still relevant, and still can be acted upon. Think carefully about what your purpose is for sharing data as you develop your plan.

**Determine what information to share based on how useful it is to families, staff, programs, and community members, and on confidentiality policies.**

Data can be shared about a particular person (*individual-level data*), a family (*family-level data*), or a group (*aggregate data*). Sharing aggregate data highlights group patterns (e.g., for all children in a classroom, or all the families in a program). If an audience does not need to know (or is not legally entitled to know) details about an individual or family, group data may be shared instead. Identifying information should be removed when it is not needed and when confidentiality requirements prohibit its disclosure.

**Convey the limitations of the data you present to your audience.**

No matter how carefully data are collected, they never present a complete picture of a person, family, program, or community. For example, information about family outcomes at any one point in time represents only a single snapshot among many different ones that might be taken at other times. No matter how expertly it is interpreted, one set of data may lead to a wide range of equally plausible interpretations. In fact, sharing data often raises as many questions as it answers, leading you back to the beginning of The Four Data Activities cycle.
4. Use and Share Data (cont)

One of the key purposes of data collection, analysis, and use in HS/EHS is to share your progress and support continuous program learning and improvement.

Tracking and reporting your progress toward meeting identified goals, objectives, and expected outcomes are important uses of the data you collect and analyze. HS/EHS programs are also continually working to move beyond the minimum requirements of the HSPS to improve their work with families. Effective ways to make the most out of data for continuous program learning and improvement include:

- sharing and using feedback from parents and community members to plan for the future,
- focusing on the “big picture” and developing strategies to make progress toward family outcomes,
- strengthening and building data systems that support data analysis related to family outcomes,
- highlighting specific evidence of program improvement,
- using data to make decisions about program changes that support continuous improvement,
- using the data to tell your program’s story about progress toward better outcomes for families and children, and
- documenting the annual program self-assessment process. (See NCPMFO (2013c) and Rosenberg (2013) for more information.)

HS/EHS staff collect information on the PFCE Family Outcomes every day. In a data-driven culture, programs can carry out The Four Data Activities in a responsible, respectful, relevant, and relationship-based way to support family progress toward outcomes. The goal of these efforts is to make data more meaningful and useful to programs, staff, families, and communities alike. In this way, everyone can use data to contribute to continuous learning and improvement. Staff and families can see for themselves how using data can deepen staff-family relationships, build on family, staff, program, and community strengths, enhance family outcomes, and promote children’s school readiness.

Conclusion

HS/EHS staff collect information on the PFCE Family Outcomes every day. In a data-driven culture, programs can carry out The Four Data Activities in a responsible, respectful, relevant, and relationship-based way to support family progress toward outcomes. The goal of these efforts is to make data more meaningful and useful to programs, staff, families, and communities alike. In this way, everyone can use data to contribute to continuous learning and improvement. Staff and families can see for themselves how using data can deepen staff-family relationships, build on family, staff, program, and community strengths, enhance family outcomes, and promote children’s school readiness.
The Four Data Activities: Guiding Questions

Prepare

What goals, objectives, and expected outcomes do you want to achieve?
What questions will you ask to know you’ve succeeded?
• About individual children?
• About families?
• About program efforts?
What information will help you answer these questions?
How do these questions connect to school readiness, school success, and healthy children and families?

Collect

How will you collect the information?
• Who will collect it?
• What tools will you use?
• Is the tool appropriate for the cultural and linguistic background of our families?
Who will you collect it from? When and where? How often?
How will you store and retrieve it?
• Do you have a data system?
• What data systems could you use that store and retrieve data in useful ways?

Use and Share

How will you share the information?
How will you know what it means?
How will you use it to support continuous improvement and change?
How will you use it to track progress toward goals, objectives, and expected outcomes?

Aggregate and Analyze

How will you analyze the information? Will you aggregate (summarize) the information?
• Will you use counts, tally a score, summarize themes?
• How will you tell a family’s story?
• How will you examine your data to understand family or program progress?
References & Resources


The remaining resources in this series describe each of The Four Data Activities in more detail. They offer specific examples of how staff can use these steps to effectively partner with families to reach their goals. In addition, the series is intended to answer the following questions that HS/EHS staff have been asking about data on Family Outcomes:

- How do we include families in the process from the beginning?
- What tools and measures are most useful for assessing the PFCE Family Outcomes?
- How do we make sure that tools and measures are culturally sensitive?
- What do we do with the data once we have collected them?
- How can we share data and still respect individual and family confidentiality?
- Once we gather data, how do we use them to set goals with families and follow-up with them?
- How can we use data to show continuous program progress?