What Is Quality Data for Programs Serving Infants and Toddlers?

Head Start programs

serving infants and toddlers collect data – lots of data…

Children develop rapidly during the first three years of life. Families' needs change just as rapidly. To ensure that programs are responsive to children's and families' evolving needs and that they are adequately supported in reaching their goals, staff collect and track a substantial amount of information or "data". These data are used to inform program planning and decision-making at the child and program levels. (See Head Start Performance Standards 45 CFR § 1302.102(b)(2) (2016)).

But is it quality data – and why is that important?

With the passage of the Improving Head Start for School Readiness Act of 2007 and the revised Head Start Program Performance Standards, all Head Start programs, including those that serve infants and toddlers, have been asked to shift toward a more "data-driven decision-making" culture. In other words, programs are expected to use data in even more meaningful ways to plan and make decisions. This involves using a combination of qualitative and quantitative data. Qualitative information comes from sources such as interviews, open-ended questionnaire items, and focus groups that is represented in verbal or narrative form or anecdotes. Qualitative data are expressed in numerical terms. It also involves integrating the use of data and data analysis in planning systems to track child progress and improve overall services to infants, toddlers, and their families, including pregnant women and expectant families.

To make the most effective and meaningful decisions and improvement plans, programs need quality data. Quality data provide a foundation for sound decision-making and play a critical role in providing objective information for assessing child progress as well as identifying program successes and challenges. When used effectively, quality data can provide programs with compelling information for improving services to very young children and their families and documenting and sharing their success stories.

Examples of Data Collected by Programs

- Developmental screenings and ongoing assessments of child progress, including progress toward school readiness goals and early intervention outcomes for infants and toddlers with disabilities

- Home visit and group care quality

- Child and family demographics, including pregnant women and expectant families

- Family Partnership Agreement goals and families' progress toward achieving them

- Staff qualifications and performance appraisals

- Attendance (child, staff, family) and length of time in program

- Pregnant mother, child, and family physical, oral, and mental health, and nutrition

- Safety checks (e.g., indoor/outdoor environments, buses used to transport children, fire or other drills)

- Community resources (e.g., through community assessments and partnerships with community resources)

- Family referrals to and use of community resources

- Program self-assessment results and federal monitoring reports

- Finance and budgets

Migrant and Seasonal Head Start Technical Assistance Center, Introduction to Data Analysis Handbook, 7. Ibid., 8.

What makes data "quality"?

There are many definitions of quality data. In this information sheet, we identify six quality data characteristics: *relevant, timely, accurate, complete, valid,* and *reliable*. These characteristics complement each other and build a picture of data that is useful in planning.

Characteristic	Examples
RELEVANT – Relevant data is information that is connected to the reason it is being collected. In other words, there must be an appropriate purpose for collecting the data. The data should be connected to questions about how well the program is supporting infants, toddlers, and families, including expectant families, and to a program's analysis and decision-making processes. Programs have an abundance of data available to them, so it is important to identify which data are most relevant and useful to answer questions to determine effectiveness in enhancing quality practices.	At the child level, teachers, home visitors, and family child care providers may want to know how each child's receptive and expressive language skills are developing (language and literacy domain); the information collected should be specific to these aspects of language development. At the program level, because a grantee knows that the quality of group care or home visits impacts child outcomes data on language development, the grantee would collect and analyze group care and home visit data on how adults engage with children.
TIMELY – Current data are important to lending credibility to the program's process of data analysis and decision-making. Data should be captured as quickly as possible after the activity and made available for use in program improvement.	Web-based management information systems (MIS) enable programs to capture and share real-time information. Health care information, such as the number of children who are up to date on immunizations and well-baby check-ups, once entered into the MIS, can be quickly shared and reported to key staff in the organization. This improves the program's ability to ensure children receive timely health care. Program Information Report (PIR) data on health care services from previous years are valuable when looking at trends and assessing improvement. However, if a program does not have ready access to its current-year data, it will not be able to fully assess its current reality relative to progress. Timely collection of child assessment data is key. Because infants and toddlers grow so rapidly, having current information about children's development is critical for providing an educational program that is tailored to their interests, needs, and abilities. Appropriately supporting a 6-month-old means having assessment data showing where the child is developmentally at 6 months, not where the child was at 4 months.

Characteristic	Examples
ACCURATE – Data are correct for the desired purpose, free from error, clear, and in adequate detail. Accurate data represent real situations. And, timely data are more likely to be accurate.	Staff who work directly with infants, toddlers, and families and conduct observations write notes as one of their data-gathering methods. To be accurate, written observation notes should reflect only facts, capture events in the order they occur, and include details such as time of day, location, how long child engages in play or with a particular object or person, and routines and experiences during which the observation occurs. This information should be captured either during the observation or as close to the actual observation time as possible. If observation data is intended to inform a formal assessment tool, the staff must score the assessment tool accurately, using the observation data as evidence supporting the score or rating.
COMPLETE – A program's data collection system should be monitored regularly so that all required pieces of information (or data elements) are there. Missing information and incomplete records can adversely impact a program's effectiveness in evaluating the strengths of the organization as well as discovering the most important issues in improving services. While some data might be missing because of timing (e.g., children and families enrolling at different times during a program year, new staff hires), programs should still aim to have all required data elements.	If some staff are not collecting and recording information regarding children's progress toward school readiness goals in the physical development and health domain, the program will not have a complete picture of child progress across all the domains. If staff files do not contain all the necessary documentation on staff degree attainment, the program will not be able to assess compliance with related staff qualification requirements.

What about Valid and Reliable Data?

Valid and **reliable** data can come from valid and reliable tools. In the early childhood field, the terms "**valid**" and "**reliable**" are typically associated with tools for screening and ongoing child assessment; assessing parenting, the home environment, and parent well-being; and measuring program implementation and quality. Validity and reliability are important to data quality because they ensure that the tool:

- Measures what it was intended to measure (validity)
- Provides dependable and consistent information (reliability)

For programs serving infants and toddlers, using tools that are valid and reliable, along with using them in the prescribed manner and for the purpose they were developed, ensures the information the tools provide is meaningful and trustworthy. There are different types of validity and reliability. See Section 3 of Resources for Measuring Outcomes in Head Start Programs Serving Infants and Toddlers from the Office of Planning, Research and Evaluation to learn more about them.

Questions to consider in managing quality data

As mentioned above, programs serving infants and toddlers collect and use multiple sources of data to
- Direct continuous improvement activities at the child level
- Create effective and meaningful program improvement and training and technical assistance plans
- Strengthen the program's foundation, support program excellence, and lead to improved outcomes for very young children and their families

As part of this important work, programs need to think about how to manage the data they have collected and plan systems to track child progress and improve overall program services. The charts below provide some questions to help programs get started in managing data and planning systems.

Managing Data	Thought Prompters Some questions to get started…	What Are We Doing Well?	What Do We Need to Strengthen?
Data Collection (General)	What data do we need to collect to determine program strengths and areas needing attention?		
	Do we have formal written policies in place regarding the collection and use of data?		
	Is the staff aware of the purpose for collecting data and how it will be used?		
	Who collects the data?		
	Who inputs the data?		
	Do staff who enter data receive adequate training and oversight?		
	Do we regularly check for data accuracy and completeness and correct problems in a timely manner?		
Child Assessment	Do we use a variety of methods to help us gather data on child progress, including information from families?		
	Are our ongoing assessment tools aligned with the Head Start Early Learning Outcomes Framework and school readiness goals?		
	Do we understand the difference between screening and ongoing assessment?		

Managing Data	Thought Prompters Some questions to get started…	What Are We Doing Well?	What Do We Need to Strengthen?
Child Assessment	Are we confident that our assessment tools can effectively measure the growth and development of our infants and toddlers?		
	Can the data from our assessment system be easily aggregated into groups of children (e.g., by age, language, program option, etc.)?		
	Are staff adequately trained in how to assess children?		
Management Information System (MIS)	How up to date is our computer hardware? Can it support data collection and tracking efforts?		
	Do we have a plan for providing computer access to essential staff and regularly updating computer hardware and other equipment?		
	How effective is our software or web-based system?		
	Can our system generate reports that are easily customizable to provide information in a way that is meaningful to our stakeholders? Can reports be generated in "real time"?		
	Do we understand the reports?		
	What is our expertise in managing the hardware, software, and/or web-based system?		
	Have we designated someone with the necessary expertise to oversee this system?		
	What support (e.g., financial, human, logistical, and technological) do we need to strengthen this system?		
Planning	Are multiple sources of data gathered and analyzed, including data from the community assessment and annual self-assessment findings, to develop program goals and objectives? Do the Policy Council and governing board have regular opportunities to review program and use it to conduct their responsibilities?		

Managing Data	Thought Prompters Some questions to get started…	What Are We Doing Well?	What Do We Need to Strengthen?
Communication	How do we inform our staff, families, Policy Council, governing board, and community about our data? Does our communication system include regular opportunities to obtain input and feedback from them?		
Data and Evaluation	Is periodic data collection scheduled throughout the year?		
	Do we aggregate and analyze child assessment data multiple times during the program's operating period? Do we aggregate and analyze other program data multiple times during the program's operating period?		
Ongoing Monitoring	Does our ongoing monitoring system include regular opportunities to analyze data and use that information to make course corrections and revise plans?		
	Do we track children's attendance in centers and family child care homes, and child and family attendance in home visits and socializations? Do we analyze causes and patterns of chronic absenteeism and provide appropriate child and family supports as needed?		
Community and Self-Assessment	Do we use data from our community assessment to develop recruitment strategies and eligibility/selection criteria? Do we analyze findings (data) from our annual self-assessment? Do we use data from our self-assessment to determine program effectiveness and progress toward meeting program goals?		
Human Resources	Do we have a plan for training staff on using our data systems, including training for new staff and ongoing "refresher" trainings? Are multiple staff trained on essential data-related tasks? What data do we need/use to develop professional development plans for staff?		
Fiscal Management	Are data used to review financial priorities?		

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