

How Do We Use Data?

To assist with learning how to use data, here is a list of 8 data use essentials (adapted from Learning Point Associates):

1. Develop a leadership team
2. Collect various types of data
3. Analyze data patterns
4. Generate hypotheses
5. Develop goal-setting guidelines
6. Design specific strategies
7. Define evaluation criteria
8. Make the commitment

1. Develop a Leadership Team

In order for data to be successfully incorporated into the continuous improvement cycle, communities or a group of service providers should form a team. A team (rather than an individual or small group) is ideally suited for this work for the following reasons:

- The steps to incorporate data into the continuous improvement cycle take a lot of work and require the commitment of many individuals.
- Data come from a variety of sources. It is important to have representatives with different perspectives to ensure that various sources of vital data are not overlooked.
- Discussions are richer and more diverse with numerous points of view and insights.
- Dissemination of information is much easier when there are multiple people who can remember and share experiences.

2. Collect Different Types of Data

Collecting the data should be a planned, purposeful process. Valuable data will guide your leadership team in developing improvement goals for the benefit of all children and families. Your team should review and select from available sources of data. To do this successfully, the team needs to develop a plan that will set forth processes to collect important data. This data collection plan should form a blueprint for gathering key descriptive information.

3. Analyze Data Patterns

When all the data are compiled and brought together, clear patterns can appear that help in developing improvement plans and strategies. The goal is to uncover patterns and relationships among the data. Although analyses can be conducted with statistical programs and electronic data tools, another process cannot be overemphasized: digging through the data, finding patterns, diagramming observations, and collaborating about what is seen. It is a powerful process. Working in a team, individuals can discover new ideas and views by collaborating with their teammates—discoveries they would never have made on their own.

After you have analyzed your team's data, it is time to pull all of the observations together—to move from looking at details to stepping back and looking at it all from a distance. This step is the transition from analysis to interpretation. To do this, your team must summarize observed strengths, and summarize and rank observed

problems across all data. To summarize all problems and strengths, use the following guiding question: Based on all the data we have studied and the patterns we have observed, what is the sum of problems/strengths that have emerged from the data?

4. Generate Hypotheses

Formulating questions in response to the data (e.g., Why are our children scoring lower on the EDI than children in other communities?) and considering responses to these questions, often by consulting additional data, may lead to possible explanations for observed data patterns. These explanations are called *hypotheses*. The goal of this process is to get closer to the root causes of why children in your community are achieving certain outcomes. This goal enables you to take specific actions to help achieve the outcomes your community desires for children and families. The posing of hypotheses can be encouraged and recorded during the data-analysis phase but should also receive special attention after the data patterns are sorted.

During this phase, the team should use the following guiding questions and first steps:

- How can we explain the outcomes related to children in our community?
- What in our system of practices and programs is causing these outcomes?

First Step:

- **Record hypotheses and then accept or reject those hypotheses.** For each problem statement, have a team member write ideas on a chart. As these hypotheses are generated and listed, label them as “accepted” or “rejected” and indicate the reasons for doing so.

5. Develop Goal-Setting Guidelines

Now that data patterns have been analyzed, problem areas prioritized, and hypotheses generated, your team is ready to develop goals for improvement. Your team should work both on long-range goals (five years from now) and on short-range goals (those that are to be achieved within one year). The first step is to focus on the most urgent problem and its’ hypothesis. Considering that problem, your team should use the following guiding question and first steps:

- What outcome of improvement will we set for our students regarding this problem?

First Steps:

- Discuss the *outcome* you want for your children and families *five years* from now.
- Project *one year* toward that goal. What outcome will you set for yourselves to attain within a year?
- Think about the capacities in your community and the barriers that must be overcome.
- Discuss the level of commitment (e.g., time, finances, and so on) necessary to reach this outcome. During this discussion, avoid talking about specific strategies and instead focus on the goal.
- Discuss what your data will look like a year from now when you’ve achieved this goal.

Second Step:

The second step is to develop a one-year goal statement about your most urgent problem. Your team should remain focused on this goal until consensus is reached

about the exact wording of the goal. Drafting successful goals can be a challenge if the team members have many different ideas on how improvement will be achieved. Make sure the goals are “SMART” goals. This acronym contains many of the key guidelines in a manner that may be easier to remember:

Specific
Measurable
Achievable
Research based
Time Sensitive

6. Design Specific Strategies

Goals are meaningless unless action backs up the commitment. This part of the improvement-planning process moves forward the hypotheses set forth by the team. Time must be allowed to do a careful, thorough job when designing these strategies. When clear goals are developed and are listed as top priorities, team members should begin to think about research or information they may have regarding that issue. For example, if there is a goal regarding improvement in low birth weight, team members should bring their own materials regarding that subject to the meeting to use as a reference in designing strategies. To define a strategy for a particular goal, use the following guiding question and first steps: What specific actions will we take to achieve this improvement goal?

First Steps:

- **Brainstorm:** Your team must focus on the actions you can take to turn outcomes for children and families around to meet a particular goal. While brainstorming strategies, think *action*. What specific actions will you take to achieve your improvement goals? What specifically can you *do* in your community to make a real, measurable difference for children?
- **Use the hypotheses:** Specific strategies can come naturally from the hypotheses that were accepted as possibilities.
- **Design several strategies:** There is a much better chance of reaching a goal when multiple related strategies are implemented.

Guiding Questions for Defining Specific Strategies

Is this strategy:

- Clear and understandable to all readers and users?
- Dependent on other activities? (If so, be sure to describe the sequence of actions.)
- Based on best practices?
- Observable and measurable?
- An action that will make a positive difference?
- One specific action or activity?
- An activity that will definitely lead to accomplishing the goal?
- One that all team members endorse?
- Assignable to specific persons?
- Doable – one that can be implemented?

If your team is clear about the problem but uncertain about strategies, the most important action to propose is one of researching best practices. Your team can build in

a systematic process to investigate what other successful communities have done to meet a similar problem. The caution here is to conduct the research as quickly as possible so that subsequent actions can be added to the plan.

7. Define Evaluation Criteria

In preparation for data analysis, the team should be prepared to evaluate the success of its improvement efforts. Clearly defining the criteria at the beginning of the process will be of great benefit.

One area of goal setting that often gets left behind is building in an evaluation plan from the start. It's one thing to set goals, but it's quite another to deliberately evaluate your success— using data as your guide—against the initial goal.

To develop an evaluation plan for specific strategies, team members should lay out the measures that will be used to examine the effectiveness of each strategy. Use the following guiding questions:

- How will we know if our strategies are successful?
- What evidence will we have to show the success of our action?

8. Make the Commitment

The final step is ensuring a commitment to the continuous improvement plan. Team members and responsible parties should sign a commitment statement for the improvement plan. This statement is their agreement to work toward fulfilling the strategies clearly outlined. Signing a piece of paper at a leadership meeting, however, may easily be forgotten. To help solidify their commitment, teams can simply add their own commitment statement to each improvement plan. At one of the leadership meetings, teams should allocate time and devote it to the rollout of the plan to the rest of the community.

Key principles to consider when working with communities can be found at: <http://www.communityplanning.net>. Adopt and adapt as appropriate.