Digging into Data for Responsive Programs

Introduction

Welcome to Digging into Data. Do you sometimes wonder how you can use your program's data to decide on new priorities? Are you frequently stumped by questions from governing body or Policy Council members about program activities? Do you get easily overwhelmed by the statistics in reports from your information management system? Do you wonder how you can better use your annual report and presentations in the community to tell your program's story? If you answered yes to any of these questions, this interactive training module is for you.

To build your data-use skills, Digging into Data uses life-like scenarios that Head Start and Early Head Start leaders typically face.

1. **Activity 1: Select the Right Data** presents three email requests for information. Build your response to each email by reviewing, attaching, and commenting on data.
2. **Activity 2: Avoid Data Collection Problems** provides an opportunity to review a variety of data sources for accuracy. Can you find the red flags?
3. **Activity 3: Change Your View** identifies four techniques for looking at data to see how each view tells a different story: aggregate; disaggregate; compare; and find mean, median, mode, and range.
4. **Activity 4: Draw Conclusions** consists of three scenarios in which management team members review a hypothesis, identify and present related data, engage in discussion, and draw conclusions.
5. **Activity 5: Take Action** shares a methodology for considering and prioritizing actions based on data.
6. **Activity 6: Share Data** shows how the same data can be effectively shared with different audiences. It also offers some approaches for responding to tough questions.

The six activities may be completed in any order. Select activities that best match your interest, knowledge, and skills in using data. A beginner may want to go through the modules in order. Data experts might decide they are already masters of concepts such as aggregate and disaggregate and skip Change Your View, which defines and illustrates these basic terms. Even a data ace will gain some new tips for data use through the activities in the module.

Activity 1: Select the Right Data

This activity presents three email requests for information. Build your response to each email by reviewing, attaching, and commenting on data.

Activity 1: Select the Right Data

1. What!? More Data?

Selecting data can seem overwhelming when you feel you're already drowning in it. However, selecting data is not always about finding new data. More often, it is about finding the right data. Instead of sifting through stacks of paper looking for answers to vague questions, you want to focus your questions so they lead you directly to only the most helpful data.

All data analysis should start with the question, "What do I want to know?" This will help you focus your search and keep you from getting bogged down by irrelevant data.

2. Selecting Data

Your email inbox has several requests for information. In this activity, you will read and create replies to each request. Follow the steps below to respond to an email:

1. Select your opening paragraph
2. Review the three charts you will attach
3. Select the most appropriate description of each chart to include in your response
4. Attach the files
5. Select a closing statement

At the end, you will have your completed email with the attachments. You may then return to your inbox to respond to the other messages.

First Email: Family Engagement Process

From: Ramon Gonzalez, chair, Governing Body Early Childhood Advisory Committee

Subject: Progress on Family Engagement Goal

Second Email: Staff Training Follow-Up

From: Althea Jones, executive director, Sleep Away, Inc.

Subject: How was the training?

Third Email: Parent Workshops

From: Mariella Montrose, Policy Council chair, ACE Head Start Program

Subject: Parent Workshops

2.1.1. Selecting Data: Family Engagement Process

Read the email below.

> Subject: Progress on Family Engagement Goal

At our governing body meeting last September, we discussed the goal of increasing family engagement in the program.

How is that going? Do you have some information on progress?

Ramon Gonzalez
Chair, Governing Body
Early Childhood Advisory Committee

2.1.2. Selecting Data: Family Engagement Process

Create your reply. Please select one of the following three options to start the email.

1. RE: Progress on Family Engagement Goal

   Ramon,
   We've done so much in the past seven months! I'm going to send you everything we have up to this point.

   There are a lot of files.

2. RE: Progress on Family Engagement Goal

   Ramon,
   We have plenty of data. I'm sending you data that show trends for parent volunteers and attendance at parent meetings over the past seven months.

3. RE: Progress on Family Engagement Goal

   Ramon,
   We have plenty of data. I'm wondering if you would like to see last month's parent meeting and volunteer reports by classroom?

Feedback

If you selected **Response 1**:

You might be tempted to send all the data to Ramon, but this may overwhelm him and may not answer his specific question.

If you selected **Response 2**:

Great. You have provided Ramon with the data to answer his specific question. Sending the data for the past seven months lets him see the trends.

If you selected **Response 3**:

You have asked Ramon a question to help clarify the exact information he needs, but sending him reports for only the last month will not show any trends or progress towards achieving your goal.

2.1.3. Selecting Data: Family Engagement Process

A line chart and two bar chart files will be attached to the email. Select a chart and pick the best possible observation to include.

2.1.3.1. Selecting Data: Family Engagement Process

The following line chart will be attached to the email.

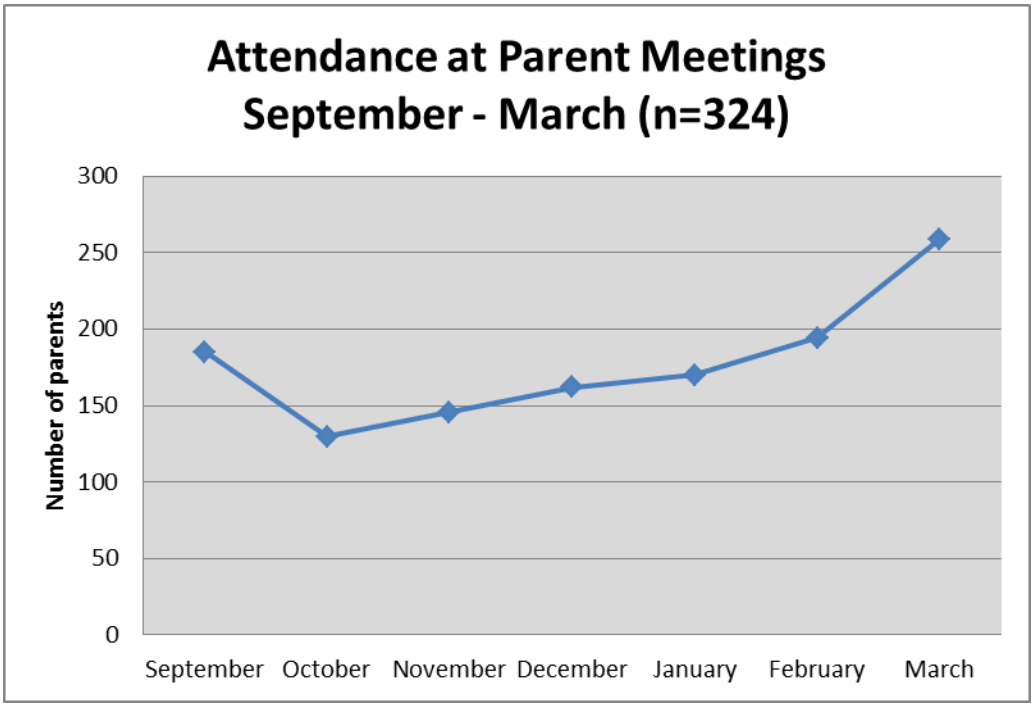

Figure 1. Line chart showing attendance at parent meetings

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. Out of a total of 324 parents in the program, the number of attendees at parent meetings increased from 185 in September to 259 in March. One of our strategies involves having teachers personally invite the parents to attend meetings as they are dropping off or picking up their children. The numbers show this strategy is working!
2. The chart reveals that a large number of parents attended the September meeting: 185 out of a total of 324 parents in the program. After a drop to 130 at the October meeting, attendance showed a steady increase over the next five months to 259 in March.
3. It looks as though our strategy of serving dinner at parent meetings has resulted in a large increase in attendance from September to March.

Feedback

If you selected **Response 1**:

Stick to the facts. This chart shows an increase in attendance at parent meetings during the period from September to March, with a drop in October. Your response suggests a reason, but charts show "what" not "why."

If you selected **Response 2**:

You're right. You gave a non-judgmental narrative description of the chart. You correctly stated several important facts:

- The total number of parents
- Specific numbers for the first and last month
- The drop in October
- The upward trend between November and March

If you selected **Response 3**:

Stick to the facts. This chart shows an increase in attendance at parent meetings during the period from September to March, with a drop in October. Your response suggests a reason, but charts show "what" not "why."

2.1.3.2. Selecting Data: Family Engagement Process

The following bar chart will be attached to the email.

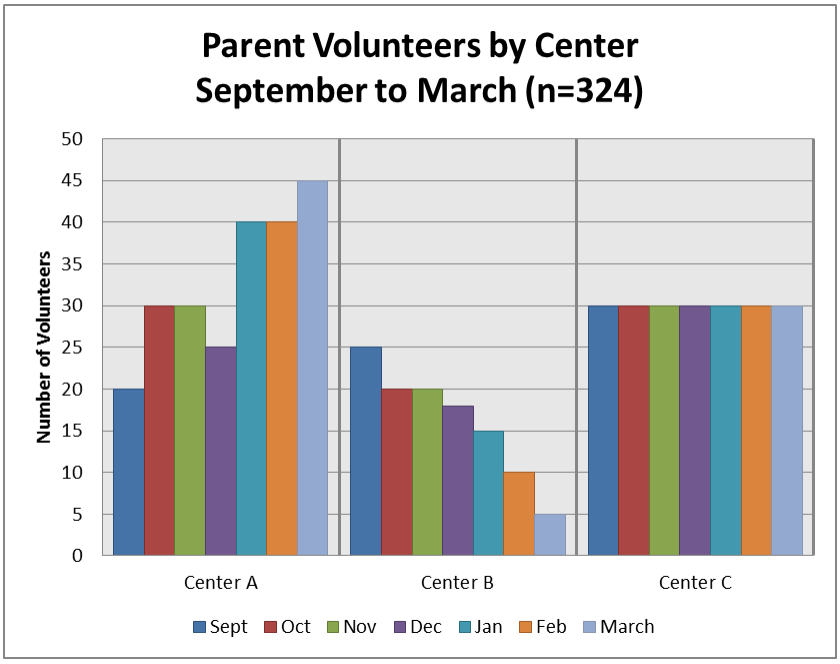

Figure 2. Bar chart showing parent volunteers by center

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. Center A has increased its number of parent volunteers from 20 in September to 45 in March.

Center B shows a decrease from 25 to five parent volunteers. Center C has stayed constant at 30 volunteers each month during this period.

2. Center A increased its number of parent volunteers from 20 in September to 45 in March. Center B shows a significant decrease. Center C shows no change.

3. Center A had 45 parent volunteers in March, Center B had 5, and Center C had 30.

Feedback

If you selected **Response 1**:

Correct. You provided the actual number of volunteers by center and identified trends across a seven-month period.

If you selected **Response 2**:

The first part of this observation provides the actual increase in numbers for Classroom A, which is helpful; but the second part references Center B's decrease and Center C's remaining constant without providing numbers. This could be confusing to Ramon.

If you selected **Response 3**:

Look again. This statement looks only at the past month's data rather than observing trends across the seven-month period.

2.1.3.3. Selecting Data: Family Engagement Process

The following bar chart will be attached to the email.

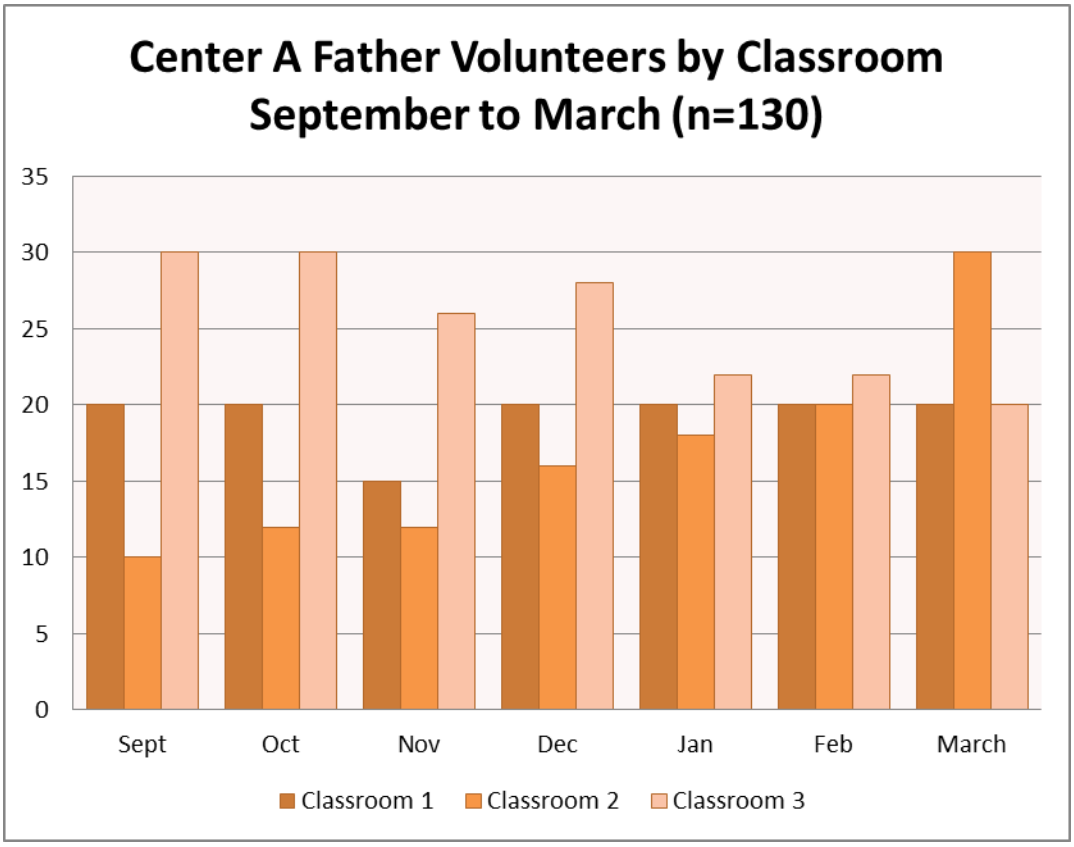

Figure 3. Bar chart showing father volunteers by classroom for center A

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. The chart shows that the number of father volunteers in Classroom 1 has stayed level at 20. Center A shows a mixture of increasing and decreasing numbers of father volunteers during this time period.

2. I think the number of father volunteers in Classroom 3 decreased due to teacherturnover.

3. The chart shows that Classroom 1 has remained steady at close to 20 father volunteers during this time period. Classroom 2 shows an increase from 10 father volunteers in September to 30 in March. Classroom C has decreased from 30 to 20.

Feedback

If you selected **Response 1**:

Try again. You provided the number to support the statement for Classroom 1, but you mentioned an

overall variation in increases and decreases across the center without supplying any numbers. Ramon won't know what to do with this.

If you selected **Response 2**:

Try another answer. You neglected to provide the numerical data and made an assumption about the reasons for the decrease. Stick to the facts.

If you selected **Response 3**:

You're right! This observation accurately states the facts. It makes a narrative statement about what the chart shows without jumping to conclusions about the reasons. Remember, when you look at a graph or chart, you can tell what happened but not why. Use words such as "I see" or "the data show" rather than "I think" or "I feel."

2.1.4. Selecting Data: Family Engagement Process

So far, your email has the three charts attached and includes the opening statement below. Now, select a closing statement from one of the three options listed.

Ramon,

> We have plenty of data. I'm sending you data that shows trends for attendance at parent meetings over the past seven months.

1. The numbers reveal an overall increase in attendance at parent meetings. However, the numbers also show that some centers and classrooms had issues implementing recruitment strategies for parent volunteers.

2. I'm concerned that, although we have increased attendance at parent meetings across the program, we are not using the right strategies to increase parent volunteer participation, especially among fathers, in some centers and classrooms.

3. The data we've gathered show an overall increase in attendance at parent meetings and mixed results for parent volunteers, including father volunteers, by center and classroom.

Feedback

If you selected **Response 1**:

Your summary of the data is accurate, but you've made the assumption that there are issues with staff implementation without knowing if that is the case.

If you selected **Response 2**:

Not quite. You summarized the parent meeting attendance data accurately, but then you speculated about causes for the variations among parent volunteer data rather than providing the actual data. Try another answer.

If you selected **Response 3**:

Correct. You've summarized the facts without jumping to any conclusions.

2.1.5. Selecting Data: Family Engagement Process

Please review the email to be sent to Ramon. It will have the three charts attached. The text of the email is given below.

> Ramon,
>
> We have plenty of data. I'm sending you data that shows trends for attendance at parent meetings over the past seven months.
>
> The data we've gathered show an overall increase in attendance at parent meetings and mixed results for parent volunteers, including father volunteers, by center and classroom.

2.2.1. Selecting Data: Staff Training Follow-Up

Please read the email below.

> Subject: How was the training?
>
> I'm writing to follow up on the training Julie provided in May to your staff on sound sleeping practices. We always check with program directors a few months after a training session is conducted by any of our staff to see if they were satisfied or if changes to the training are needed.
>
> How did the training go?
>
> Althea Jones
> Executive Director
> Sleep Away, Inc.

2.2.2. Selecting Data: Staff Training Follow-Up

Create your reply. Please select from one of the following three options as a way to begin the email.

1. The management team members all said their staff liked the training. I'll attach the notes from our recent meeting that includes all their comments.

2. The staff evaluations were mostly positive. I've attached all of them.

3. We have data from classroom observations that indicate whether or not there were changes in practice by the teachers after the training. Would you like to see that?

Feedback

If you selected **Response 1**:

Not quite. You have anecdotal evidence from the management team that their staff found the training helpful, but that alone does not show whether or not the training was effective.

If you selected **Response 2**:

You have evaluation data indicating staff found the training useful, but that alone does not show whether or not the training was effective.

If you selected **Response 3**:

Right! Good focusing question. Your classroom observation data will indicate whether or not participation in the training had an impact on teachers' practice. This is more important than satisfaction with the training.

2.2.3. Selecting Data: Staff Training Follow-Up

Three bar chart files will be attached to the email. Select each one and pick the best possible observation to include.

2.2.3.1. Selecting Data: Staff Training Follow-Up

The following horizontal bar chart will be attached to the email.

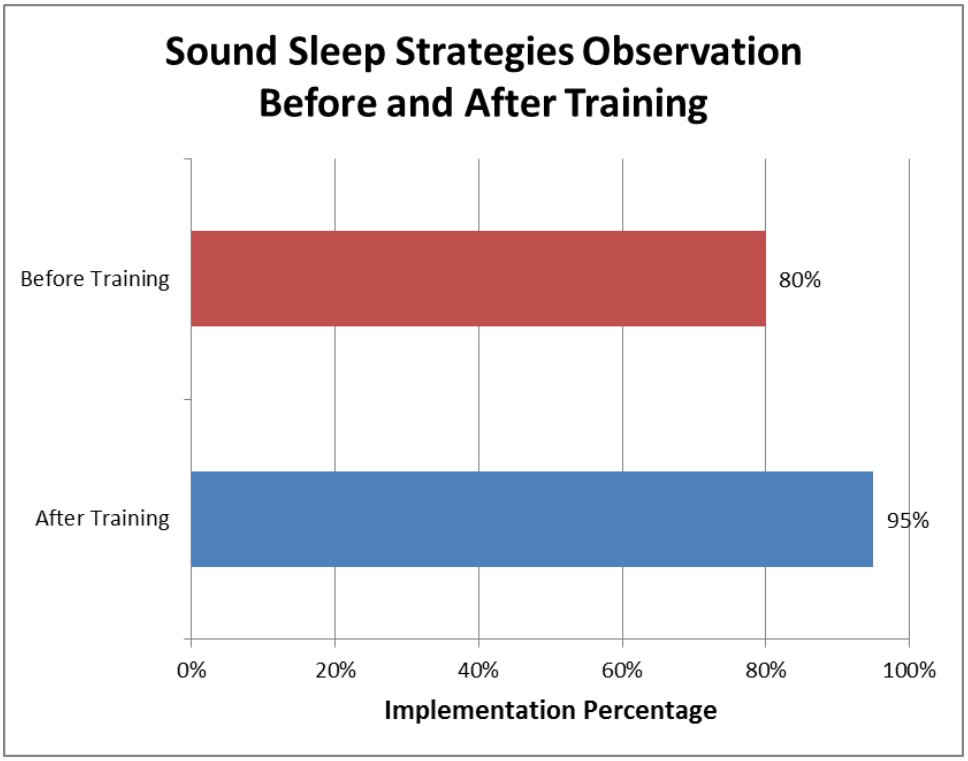

Figure 4. Bar chart showing sound sleep strategies before and after training

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. The numbers reveal that staff have been implementing sound sleep strategies 95% of the time since attending Julie's training.

2. I see that staff have been implementing sound sleep strategies 95% of the time since attending Julie's training, compared to 80% of the time before the training.

3. I feel there has been a significant increase in the percentage of staff implementing sound sleep strategies since Julie's training.

Feedback

If you selected **Response 1**:

Take another look. You shared the data gathered after Julie's training but did not compare it to the data gathered before the training to see if there was a change. Make another selection.

If you selected **Response 2**:

Correct. You compared data gathered before and after Julie's training to see if there was an impact on practice, and you identified the increase.

If you selected **Response 3**:

Think again. You correctly stated there was an observed increase in teacher implementation since the training, but you did not provide numerical data. Make another choice.

Selecting Data: Staff Training Follow-Up

The following bar chart will be attached to the email.

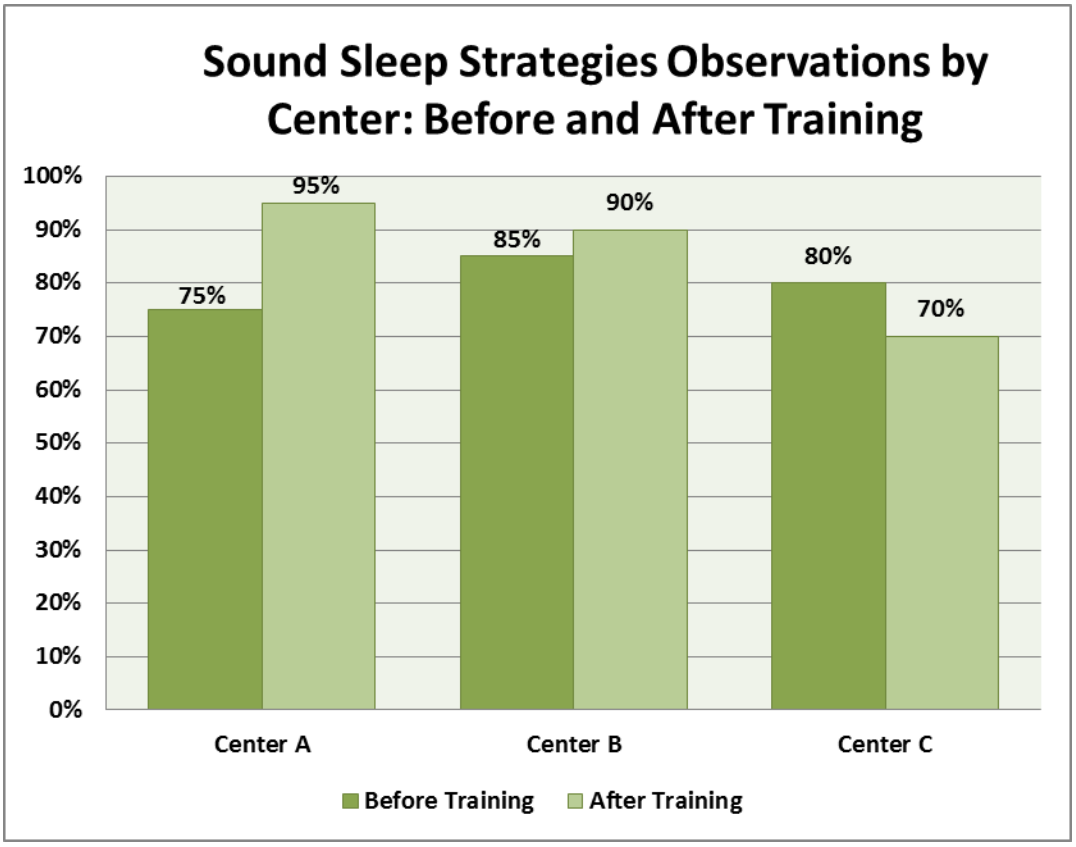

Figure 5. Bar chart showing sound sleep strategies before and after training by center

Please select an observation about this chart to include in your email. Choose from the three options listed below.

4. I see that Center A staff had the greatest increase in implementation rate, from 75% before to 95% after the training. Center B's implementation rate increased from 85% before to 90% after. Center C's rate actually decreased after the training, from 80% before to 70% after.

5. Centers A and B showed an increase in implementation after the training. Implementation in Center C actually decreased after training.

6. Compared to Centers A and B, I think that Center C staff did not benefit from the training because their implementation rate actually decreased by 10 percentage points afterward.

Feedback

If you selected **Response 1**:

Correct! You summarized the data and provided the increase or decrease in percentages for each of the centers. You used the words "I see" to start your narrative observation rather than "I feel" or "I think."

If you selected **Response 2**:

You correctly stated that Centers A and B showed an increase in implementation and that Center C showed a decrease, but you did not provide the percentages.

If you selected **Response 3**:

Just the facts. You correctly stated that Center C implementation decreased by 10 percentage points in contrast to the other centers' increases, but you did not provide actual percentages. You also speculated about the reason. Try again.

2.2.3.2. Selecting Data: Staff Training Follow-Up

The following bar chart will be attached to the email.

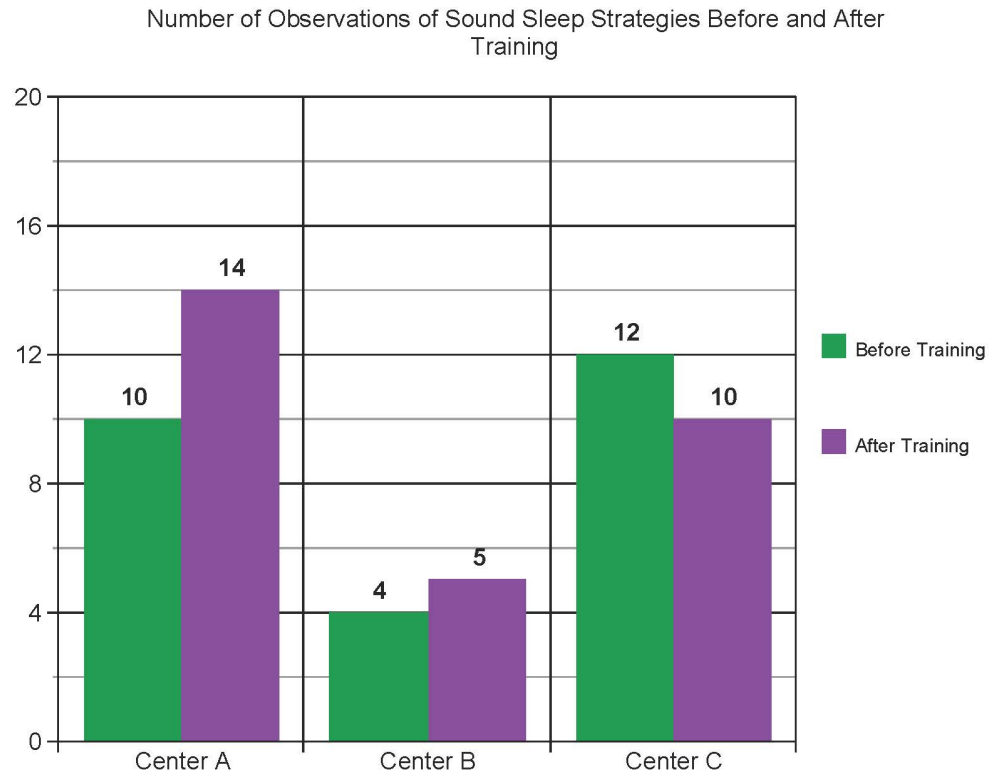

Figure 6. Bar chart showing number of observations of sound sleep strategies by center before and after training

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. Centers A and C completed more observations than Center B. Overall, in the program there were 26 observations completed prior to the training and 29 after the training.
2. Center B staff did not have adequate time to complete as many observations as Centers A and C staff.

3. Overall, there were more observations completed after the training than before; however, I feel that Center B did not provide the expected number of observations.

Feedback

If you selected **Response 1**:

You're right. Your observation provided a summary of the data and included actual numbers.

If you selected **Response 2**:

Rather than saying staff at one center did not have enough time to complete observations, give more specific information about your expectations. Maybe, "Our goal was for each center to complete eight observations prior to and after the training."

If you selected **Response 3**:

Think again. You correctly stated that there were more observations completed after the training, but you did not provide numerical data. Words such as "I see" or "I notice" are better choices than "I feel."

2.2.4. Selecting Data: Staff Training Follow-Up

Please select a closing statement for your email.

The email has the three charts attached and starts as follows:

> Althea,
>
> We have data from classroom observations that indicate whether or not there were changes in practice by the teachers after the training. Would you like to see that?

Please select one of these three options as the closing statement for the email.

1. I'm not sure how effective the training was because the results varied by center.

2. Center A increased its implementation rate from 75 to 95%, Center B increased from 85 to 90%, and Center C decreased from 80 to 70%.

3. We saw an average increase from 80 to 85% program-wide in the implementation of sound sleep strategies after the training. Results varied by center, with Centers A and B showing increases and Center C showing a decrease. I will work with my management team to see if we can determine why these results varied and will get back to you with more information that might inform future training.

Feedback

If you selected **Option 1**:
You made general statements rather than providing actual numerical information to support your statement.

If you selected **Option 2**:

You shared the individual data but did not provide a program-wide summary.

If you selected **Option 3**:

Correct! You summarized and provided actual numbers from the program-wide data that showed an increase in implementation. You communicated that the training showed some positive results. You also indicated you would further investigate the differences in implementation rates and get back to the trainer with additional feedback to enhance future training sessions.

2.2.5. Selecting Data: Staff Training Follow-Up

Please review the email to be sent to Althea. It will have three charts attached. The text of the email is given below.

> Althea,
>
> We have data from classroom observations that indicate whether or not there were changes in practice by the teachers after the training. Would you like to see that?
>
> We saw an average increase from 80 to 85% program-wide in the implementation of sound sleep strategies after the training. Results varied by center, with Centers A and B showing increases and Center C showing a decrease. I will work with my management team to see if we can determine why these results varied and will get back to you with more information that might inform future training.

2.3.1. Selecting Data: Parent Workshops

Please read the email below.

> Subject: Parent Workshops
>
> You recently showed us a chart indicating that the majority of parents liked the workshops offered by the program this year. But at last night's Policy Council meeting, two parents said they had heard this year's parent workshops are not as good as last year's.
>
> What information do you have about how the workshops have been going so far this year? I'm sure the other Policy Council members would be interested in knowing this, as well.
>
> Regards,
>
> Mariella
> Policy Council Chairperson
> ACE Head Start Program

2.3.2. Selecting Data: Parent Workshops

Create your reply. Please select from one of the following three options as a way to begin the email.

1. As you know, we've had a lot more parent workshops this year than we did last year. I'm attaching a chart that shows the numbers for this year and last.

2. Are you interested in knowing what workshops were offered or if parents were satisfied with the workshops?

3. We added a lot more workshops this year, based on parent suggestions. I'm attaching the list of newly added ones for this year.

Feedback

If you selected **Option 1**:

Try again. The request seems to be related to parent feedback on workshops, not to how many workshops were offered.

If you selected **Option 2**:

That's right! The request seems to be related to parent feedback, so you're asking a question to determine what data will be relevant before you send it.

If you selected **Option 3**:

Try again. The request seems to be related to parent feedback on workshops, not to which workshops were offered.

2.3.1. Selecting Data: Parent Workshops

A pie chart and two tables will be attached to the email. Select each one and pick the best possible observation to include.

2.3.3.1. Selecting Data: Parent Workshops

The following pie chart will be attached to your email.

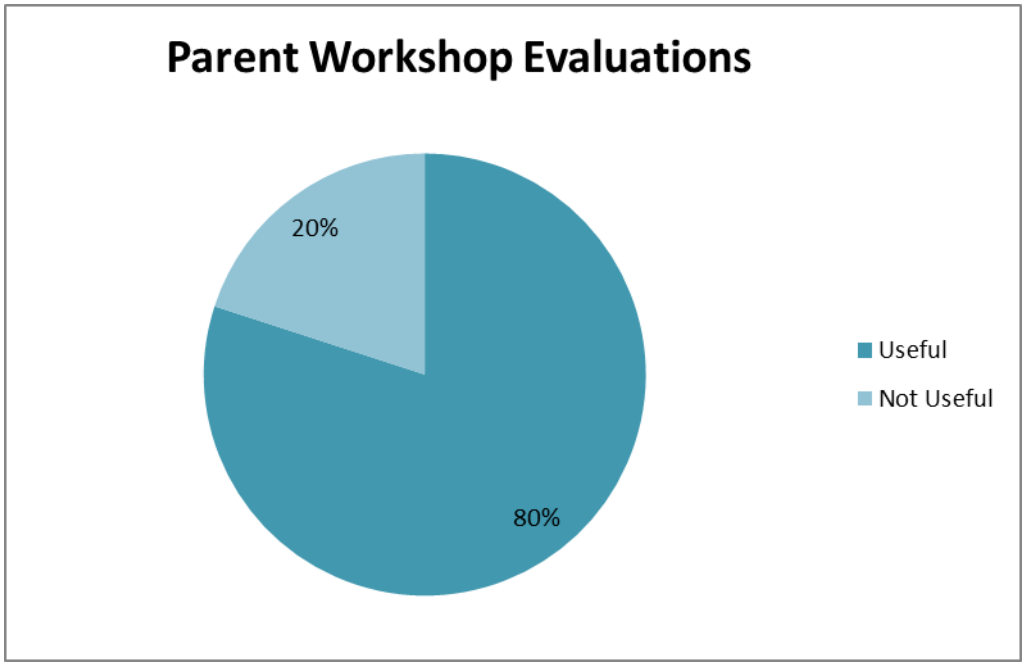

Figure 7. Pie chart showing percentage of "useful" versus "not useful" parent workshop evaluations

Please select an observation about this chart to include in your email. Choose from the three options listed below.

1. The numbers reveal that 80% of parents found the workshops to be useful.
2. I feel that most of the parents liked the workshops this year more than last year.
3. I'm concerned about the 20% of families that we don't seem to be able to reach. We need to look at why they don't find the workshops useful. I wonder if we need to change the topics or provide babysitting, transportation, or food.

Feedback

If you selected **Option 1**:

That's right! You provided specific numbers from the data you have.

If you selected **Option 2**:

Look again. You need to stick to the facts and provide the numbers. Avoid using phrases such as "I feel."

If you selected **Option 3**:

You accurately stated that 20% of parents indicated the workshops were not useful, but you jumped straight to solutions. Try another answer.

2.3.3.2. Selecting Data: Parent Workshops

The following table will be attached to your email.

Workshop Attendance and Evaluations Submitted

Workshop	1	2	3	4	5	6
Attendees	24	10	33	8	14	11
Evaluation forms	0	2	1	2	0	0
Useful	N/A	1	1	2	N/A	N/A
Not Useful	N/A	1	0	0	N/A	N/A

Figure 8. Table showing numbers for workshop attendance, evaluation forms submitted and ratings of "useful" or "not useful"

Please select an observation about this table to include in your email. Choose from the three options listed below.

1. I just found out from the family services coordinator that only five of the 100 parents who attended workshops completed the evaluations. Even with this small number, if they were the only ones interested enough to respond, this is still good data.

2. I just found out from the family services coordinator that only five of the 100 parents who attended workshops completed the evaluations. Why don't people just take a few minutes to do this?

3. I just found out from the family services coordinator that only five of the 100 parents who attended workshops completed the evaluations, meaning we don't have enough responses to make an assessment of parent satisfaction. Let's discuss strategies at our next meeting.

Feedback

If you selected **Option 1**:

Not quite. You shared a surprising and very important fact about your data, but you did not acknowledge that a sample size of 5% is too small. Try again.

If you selected **Option 2**:

Not quite. You shared the very important and surprising fact about the sample size of your data, but you included a question that is inappropriate. Try again.

If you selected **Option 3**:

Correct! You shared the surprising fact about your data and communicated that a sample size of only 5% is too small to be relied upon. Time to strategize about how to get more data.

2.3.3.3. Selecting Data: Parent Workshops

The following evaluation forms will be attached to your email.

Current Workshop Evaluation Form	Proposed New Workshop Evaluation Form
Workshop Name: _____	Workshop Name: _____ **We could pre-fill this information**
Date: _____	Date: _____
1. Did you find this workshop useful? (circle one) yes / no	1. Did you find this workshop useful? (circle one) yes / no **Replace y/n with 5-point Likert scale**
2. Comments:	2. Comments: **Keep as is**
3. I would be interested in workshops on:	3. I would be interested in workshops on: **Replace with checklist and write-in option**
4. Do you have any other suggestions?	4. Do you have any other suggestions? **Remove this question; already have a comments section**
Thank you! This information will be used to plan future workshops.	Thank you! This information will be used to plan future workshops.

Figure 9. Side by side comparison of current workshop evaluation and proposed new workshop evaluation

Please select an observation about these evaluation forms to include in your email from the three options listed below.

2. I've attached our current workshop evaluation form and a suggested revised version. I still don't understand why so few parents complete the existing form. It shouldn't take them more than five minutes!

3. I took another look at our workshop evaluation form. I've attached it, along with suggestions for revisions that make it less time-consuming to complete. We are also trying to revise the form so that it gathers additional useful data. Let's review this issue at our next meeting so we can figure out how to improve our response rate.

4. It seems like these workshop evaluations are a waste of time. Let's not bother with them. It would probably work better to just talk to a few parents at the end of the workshop to see what they think.

Feedback

If you selected **Option 1**:

You gave some thought to how to make the feedback form more user-friendly and quicker to complete. However, complaining about parents not completing the form is inappropriate and isn't going to fix the problem.

If you selected **Option 2**:

Nice job! You looked at the form to see if you could improve it and make it easier for more parents to complete. You made suggestions and you opened the door for a discussion at the next meeting.

If you selected **Option 3**:

Not a great idea. You still wouldn't have a very large sample size, and how would you choose which parents to talk to? We'd all be inclined to approach those with smiles on their faces, and we'd end up (probably unconsciously) cherry-picking data, which would give us a sample that isn't representative.

2.3.4. Selecting Data: Parent Workshops

Your email has the pie chart, table, and evaluation forms attached. It begins:

Mariella,

> Are you interested in knowing what workshops were offered or if parents were satisfied with the workshops?

Please select a closing statement from one of the three options listed below.

1. We have so little data about parent satisfaction with workshops. It's clear we need to work closely with the Policy Council to strategize about how best to get more feedback from parents.

2. I feel that if more parents had completed workshop evaluations this year we wouldn't be in this situation.

3. As so few parents completed the evaluation forms, maybe we need to revise our workshop offerings in addition to changing the form.

Feedback

If you selected **Option 1**:

That's right! You summarized the data, made suggestions for revising the form, and clearly invited Policy Council contributions to improve the situation.

If you selected **Option 2**:

Try again. "Feeling" does not rely on data and complaining about parents not completing the evaluations does not open the door to a constructive conversation with the Policy Council to improve the situation.

If you selected **Option 3**:

Not quite. Right now you want to focus on identifying strategies to resolve the low completion rates of workshop evaluations. You don't have enough data at this point to determine whether or not the workshop offerings should change. Try again.

2.3.5. Selecting Data: Parent Workshops

Please review the email to be sent to Mariella. It will have a pie chart, table, and evaluation forms attached. The text of the email is given below.

> Mariella,
>
> Are you interested in knowing what workshops were offered or if parents were satisfied with the workshops?
>
> We have so little data about parent satisfaction with workshops. It's clear we need to work closely with the Policy Council to strategize about how best to get more feedback from parents.

2.4. Conclusion

Consider these tips when deciding what data to select:

- Ask yourself, "What do we want to know?" Select data that will enable you to answer your significant questions
- Plan ahead. It you haven't collected data up front, it can be difficult or even impossible to retrieve it after the fact
- Only collect data you will use. Too much information can be overwhelming and lead to data paralysis. Too little information won't help you find the answers you're looking for

- Ask focusing questions that help pinpoint the information you need to provide
- Use a variety of methods to select data. You will want to have multiple sources of data to inform your decisions

Extend Your Learning

- Data in Head Start and Early Head Start:
  - Data Analysis Terms and Concepts [PDF, 424KB]
    Explore a glossary of commonly used terms for data and evaluation.
  - Annotated Bibliography [PDF, 335KB]
    Find link to useful resources on using data.
  - Attributes of a Good Data Display [PDF, 230KB]
    This handout includes a data display quality checklist and an example of a good and a poor data display.
- Head Start Father Engagement Birth to Five Programming Guide
  Head Start and Early Head Start staff will find this comprehensive guide to father engagement useful. It is organized around the Parent, Family, and Community Engagement (PFCE) Framework.
- Which Chart or Graph Is Right for You?
  Discover a variety of chart formats and learn when to use each.

Activity 2: Avoid Data Collection Problems

This activity provides an opportunity to review a variety of data sources for accuracy. Can you find the red flags?

Activity 2: Avoid Data Collection Problems

1. Avoid Data Collection Problems

Data collection is nothing more than planning for and obtaining useful information about the topics or processes that are important to you. Data can be especially helpful when making decisions and telling the story.

Often those data will already exist in reports available to you, but sometimes you will need to collect additional details to learn more about a specific or localized problem. You might also need to collect data if you want to test a hypothesis or measure the results of a change you implemented.

It is important to plan for how you will collect your data. It is easy to end up with information that is irrelevant, too broad, or otherwise flawed. In this activity, you will learn how to avoid common data collection problems to make sure you obtain useful data.

2. Avoid Data Collection Problems

Collecting data requires thoughtful planning and careful implementation. Speed through this process and you might find yourself in a data wreck!

In this activity, you are responsible for overseeing the collection of Child and Adult Care Food Program (CACFP) data in your program. You will try to spot potential hazards in the data collection process and avoid them.

Read each data collection scenario. Then, decide whether you want to stop and fix a problem or give the situation a green light.

Scenario: You ran a one-week trial of the data collection sheet you designed, a simple form into which staff can enter data by hand. Staff members then give the form to the person responsible for entering the data into the CACFP software on the computer. All forms were returned by the established deadline and were filled in completely.

1. CACFP Weekly Meal Count Report

	Number of Children (Breakfast)	Number of Children (Lunch)	Number of Children (Snack)
Monday	150	150	150
Tuesday	150	150	150
Wednesday	150	150	150
Thursday	150	150	150
Friday	150	150	150
Total	750	750	750

Figure 10. Table showing trial reporting of number of children receiving breakfast, lunch and snack by day of the week

What should you do?

- Stop. Time to fix a problem.
- Looks good. Go!

Feedback

If you chose "**Stop. Time to fix a problem**:"
You're right. It's time to put on the brakes and check things out. It was smart to do a test run of your check sheet. While you got great cooperation in filling out the data sheets, the data appear a little suspicious due to its absolute consistency.

Could the number of students eating breakfast, lunch, and snack really be the same every day for every

meal? It might be true, but those numbers much more likely indicate that those collecting the data were taking a shortcut and filling in all three columns at once. It's worth checking into before you continue. Remember, your CACFP reimbursement is at stake. CACFP requires meal counts to be made at point of service, meaning when and where meals and snacks are eaten.

If you chose "**Looks good. Go!**"

Sorry. You definitely wouldn't want to submit this data on your claim for reimbursement.

The CACFP official who reviews the claim would immediately be suspicious, and you should be, too. It's extremely unlikely that the same number of children were present for breakfast, lunch, and snack every day of the week.

Since CACFP meal counts must be made at point of service, when and where meals are eaten, the count must reflect the number of children who are actually present and eating the meal.

3. Avoid Data Collection Problems

Scenario: Based on your first trial run, you provided additional training and ran another trial of the data collection sheet you designed. Once again, staff members gave the form to the person responsible for entering the data into the CACFP software on the computer. All forms were returned by the established deadline and were filled in completely. See the example below.

2. CACFP Weekly Meal Count Report

	Number of Children (Breakfast)	Number of Children (Lunch)	Number of Children (Snack)
Monday	101	137	137
Tuesday	111	144	137
Wednesday	110	150	150
Thursday	125	133	132
Friday	105	133	133
Total	525	697	698

Figure 11. Table showing inaccurate total numbers of children receiving breakfast, lunch and snack by day of the week

What should you do?

- Stop. Time to fix a problem.
- Looks good. Go!

Feedback

If you chose "**Stop. Time to fix a problem**:"
Good catch. This may have taken a little time (and a calculator or spreadsheet) to find, but the totals are inaccurate. It looks as though whoever filled out the form might have been working too quickly and ended up transposing the totals in the first and third columns.

It's important to have either a very reliable system that totals your numbers automatically or a reviewer with patience and a good eye for details.

If you chose "**Looks good. Go!**"

Look again. Finding the mistake in this chart may take a little time, but if you look carefully you'll find the totals are inaccurate. It looks as though whoever filled out the form might have been working too quickly and ended up transposing the totals in the first and third columns.

That's why it's important to have either a very reliable system that totals your numbers automatically or a reviewer with patience and a good eye for details.

4. Avoid Data Collection Problems

Scenario: One of the ways you verify that meal counts are accurate is by cross-checking them with your attendance records. Each week, you select a random sample of classrooms to review. Here's what you found in one of the classrooms you sampled this week.

All of the other forms in your sample were completed in the same way as this example.

Weekly Attendance Sheet
Classroom A: April 1–5

	1	2	3	4	5
CB	X	X	X	X	X
SB	X	X	X	X	X
JD	X	X	X	X	X
DD	X	X	X	X	X
RD	X	X	X	X	X
SD	X	X	X	X	X
PF	X	X	X	X	X
DF	X	X	X	X	X
BH	X	X	X	X	X
KH		X	X	X	X
SK	X	X	X	X	X
AL	X	X	X	X	X
MM	X	X	X	X	X
JM	X	X	X	X	X
KP	X	X	X	X	
SR	X	X	X	X	X
JW	X	X	X	X	X
LZ	X	X	X	X	X
Tot	17	18	18	18	17

CACFP meal count form
Classroom A: April 1–5

	1			2			3			4			5		
	B	L	S	B	L	S	B	L	S	B	L	S	B	L	S
CB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
KH				X	X	X	X	X	X	X	X	X	X	X	X
SK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
KP	X	X	X	X	X	X	X	X	X	X	X	X			
SR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LZ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tot	17	17	17	18	18	18	18	18	18	18	18	18	17	17	17

Figure 12. Side-by-side tables comparing weekly attendance with weekly meal counts

What should you do?

- Stop. Time to fix a problem.
- Looks good. Go!

Feedback

If you chose "**Stop. Time to fix a problem**:"

While there is no problem here, it's always good to err on the side of caution and review. The meal count data appears to be accurate based on the number of children in attendance. Your data collection process appears to be solid. Clearly, your forms are user-friendly and easy for staff to complete in a timely manner.
Good thing, too. You don't want to "under claim" children and not receive the full amount of funding you are due. Nor do you want to have an "over claim" found during an audit, which would result in your program having to pay money back.

If you chose "**Looks good. Go!**"

You're right. The meal count data appears to be accurate based on the number of children in attendance. Good thing, too. You don't want to "under claim" children and not receive the full amount of funding you are due. Nor do you want to have an "over claim" found during an audit, which would result in your program having to pay money back.

Your data collection process appears to be solid here. Clearly, your forms are user-friendly and easy for staff to complete in a timely manner.

5. Avoid Data Collection Problems

Scenario: You've collected the meal counts from all of your sites for the month of July.

	July 1 – 5	July 8 – 12	July 15 – 19	July 22 – 26	July 29 – 31
Classroom A	√	√	√	√	
Classroom B	√	√	√	√	√
Classroom C	√	√		√	
Classroom D	√	√	√	√	√
Classroom E	√		√	√	√
Classroom F	√	√	√	√	
Classroom G	√	√	√	√	√
Classroom H	√	√	√	√	
Classroom I	√	√	√	√	√

Figure 13. Table showing weekly meal counts by classroom

What should you do?

- Stop. Time to fix a problem.
- Looks good. Go!

Feedback

If you chose "**Stop. Time to fix a problem**:"

Absolutely right. This chart is full of holes. Three of the classrooms are missing a week's worth of meal counts, and one didn't submit any meal count data for two weeks. You also are missing a great many reports for the week of July 29. Missing data could be important. Don't assume a report with missing data will show the same results as a report that contains all of the necessary data.

Having so much data missing indicates that you need to take a close look at your data collection and review process. Make sure:

- Data are collected by the people closest to the issue and that they:
    - Understand the importance of the data
    - Are well trained in data collection
- Your data collection forms are simple to use and require the least amount of effort to complete
- You have a quality control or review process

In this case, unless you find these missing reports, you won't be fully reimbursed through CACFP.

If you chose "**Looks good. Go!**"

Look again. This chart is full of holes. Three of the classrooms are missing a week's worth of meal counts, and one didn't submit meal count data for two weeks. You also are missing a great many reports for the week of July 29. Missing data could be important. Don't assume a report with missing data will show the same results as a report that contains all of the necessary data.

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    - Understand the importance of the data
    - Are well trained in data collection
- Your data collection forms are simple to use and require the least amount of effort to complete
- You have a quality control or review process

6. Avoid Data Collection Problems

Conclusion

To ensure you end up with relevant and accurate data, take these steps to avoid potential data collection problems:

- Have a well-defined data collection process that identifies when and how to collect the data, including how frequently data is collected
- Make collection forms user-friendly
- Use technology as much as you can
- Provide training on data collection and ask those closest to the issue to collect the data
- Enter the data as soon as it's available so you'll always have the most current data at hand
- Be on the lookout for indicators, or red flags, of inaccurate data
- Implement a quality control process to strengthen your ongoing monitoring system

Extend Your Learning

- Data in Head Start and Early Head Start:
    - Data Analysis Terms and Concepts [PDF, 462KB]
      Explore a comprehensive glossary of commonly used terms for data and evaluation.
    - Annotated Bibliography [PDF, 335KB]
      Find links to useful resources on using data.
- What Is Quality Data for Programs Serving Infants and Toddlers? [PDF, 961KB]
  Find out why quality data is important. This resource elaborates on and gives examples for the four characteristics of quality data: relevant, timely, accurate, and complete. It discusses reliability and validity and provides questions to consider in managing quality data.

Activity 3: Change Your View

This activity identifies four techniques for looking at data to see how each view tells a different story: aggregate; disaggregate; compare; and find mean, median, mode, and range.

Activity 3: Change Your View

1. What Story Does the Data Tell?

You may have heard the fable of six blind men who encounter an elephant for the first time. As each touched one part of the animal, he announced his discoveries. The man who touched the tail of the elephant said, "How thin! An elephant is like a rope." Another touched the trunk and said, "How round! An elephant is like a snake." A third man touched the tusk and said, "How sharp! An elephant is like a spear." And on it went. All six men had very different perceptions of the elephant.

The same concept holds true for data analysis. Each view of the data provides a unique insight. It's essential to look at the data from many perspectives to reveal the details and understand how all the parts fit together. It also is important to put all of the views together so you can see the entire elephant in the room.

This activity teaches common techniques for changing your view of data to reveal the full story. These

techniques are used during ongoing monitoring and self-assessment to help ensure compliance with the Head Start Program Performance Standards (HSPPS). They also measure progress toward your program goals and objectives. In this activity, the Always Cutting Edge (ACE) Head Start and Early Head Start Program uses these techniques to analyze data about enrollment of and services to children with disabilities.

2. Change Your View

Select one of these commonly used techniques to explore how it may be helpful.

- Aggregate
- Disaggregate
- Compare
- Find mean, median, mode, and range

3. Change Your View: Aggregate

The **Technique** section defines *aggregate*. The three data sections each include a chart with relevant data. The **Story** section explains more about what the charts are telling us.

3.1. Change Your View: Aggregate: Technique

Technique

When you aggregate data, you total data from different sources to get the big picture. For example, teachers aggregate child outcomes data to get an overall picture of their classes. A center director looks at aggregated data from all of the classrooms in one center. Numbers from all centers are totaled to provide program-wide data. Aggregated data can inform program-wide changes in policies and procedures.

This big picture view of data is especially useful in sharing information with such audiences as your governing body and Policy Council. Aggregated data is also appropriate for your annual report to the public. In the annual Program Information Report (PIR), you submit aggregated data about your grantee to the Office of Head Start (OHS). OHS then aggregates this data to compile an overall view of the Head Start program in relation to a number of key indicators.

3.2. Change Your View: Aggregate: Total Enrollment

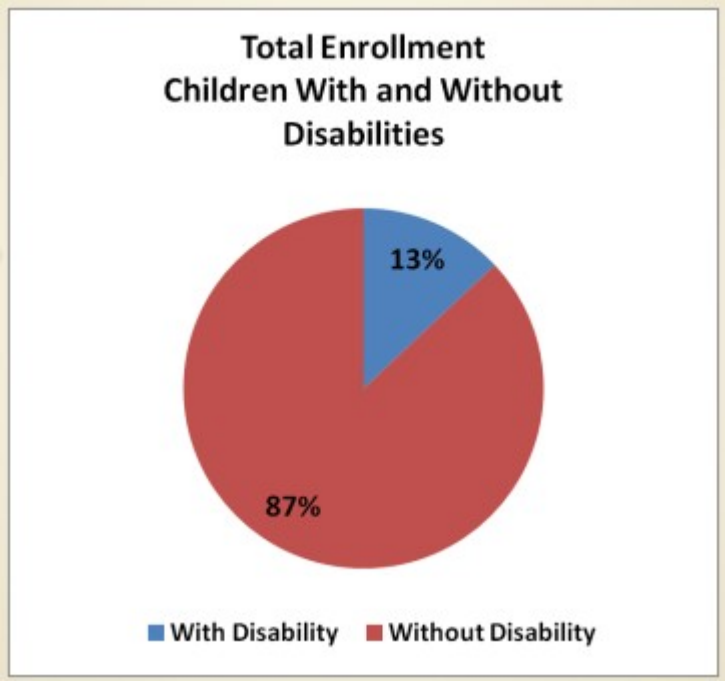


Figure 13. Pie chart showing that 13% of children have disabilities, while 87% do not.

3.3. Change Your View: Aggregate: Head Start and Early Head Start Programs

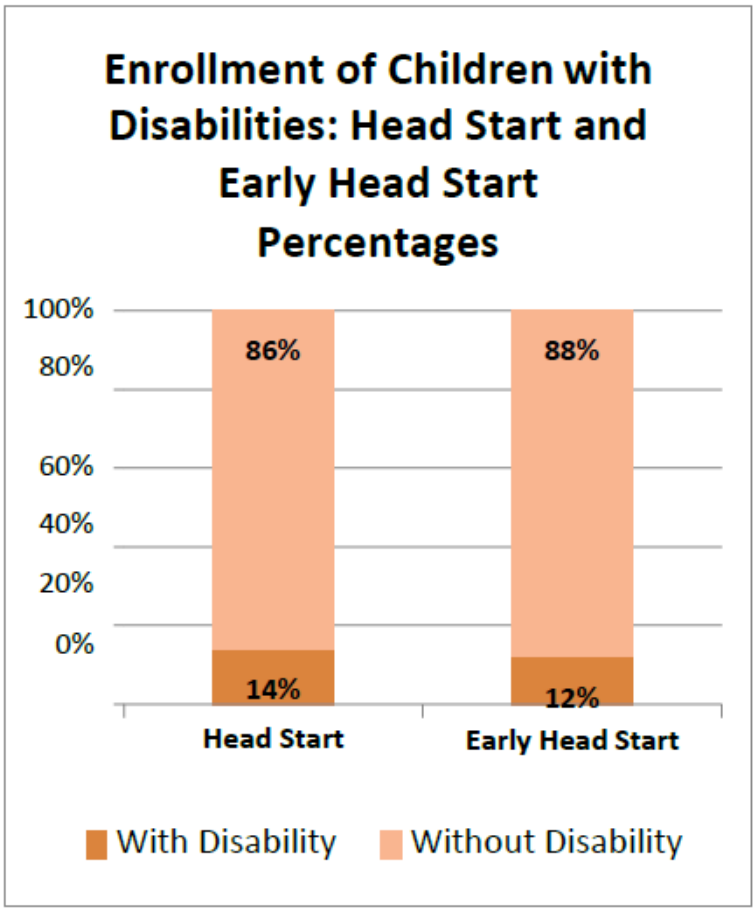


Figure 14. Bar chart showing that 14% of children in Head Start and 12% in Early Head Start have disabilities,

3.4. Change Your View: Aggregate: Vision and Hearing Screenings

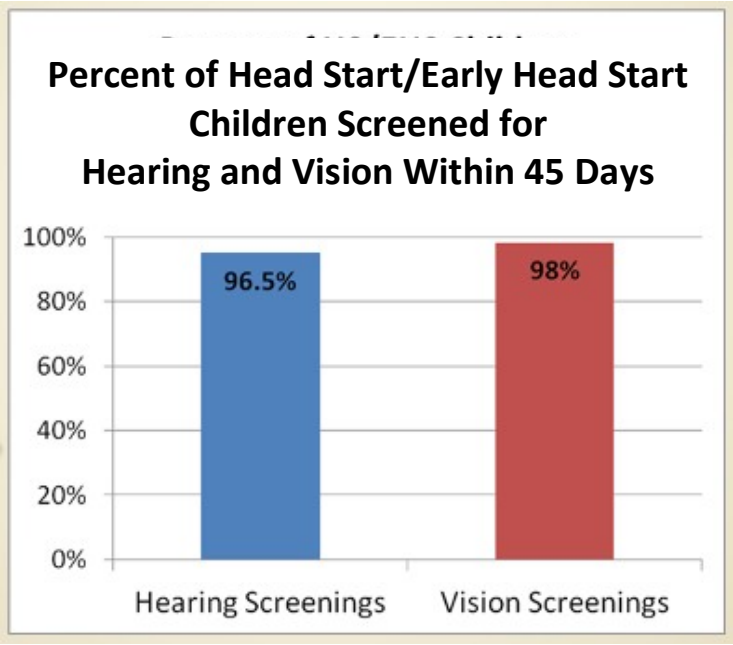


Figure 15. Bar chart showing that 96.5% of children were screened for hearing and 98%were screened for vision within 45 days

3.5. Change Your View: Aggregate: Story

Story

These aggregated data charts help the program know how it is doing in relation to requirements for enrolling children with disabilities and for completing hearing and vision screenings within 45 days of enrollment. The charts show that the ACE Head Start and Early Head Start program is meeting the requirement that not less than 10% of its total funded enrollment are children with disabilities. It is meeting the 45-day requirement for hearing screenings 96.5% of the time and for vision screenings 98% of the time.

4. Change Your View: Disaggregate

The **Technique** section defines *disaggregate*. The three data sections each include a chart with relevant data. The **Story** section explains more about what the charts are telling us.

4.1. Change Your View: Disaggregate: Technique

Technique

Aggregated data gives you the big picture. Disaggregating allows you to take different pieces of data and obtain more and more details. There are many ways to disaggregate data. In this activity, we disaggregated by type of disability and program option. ACE's Early Head Start (EHS) program options include center-based, home-based, and family child care (FCC). We also could have disaggregated the data by the local education agency (LEA) and the appropriate Part C Agency or receiving school. Other

ways to disaggregate include gender and home language.

How do you know which options to choose? First, know your questions. A Migrant and Seasonal Head Start program, for example, may want to disaggregate child outcomes data about the number of returning children versus newly enrolled children. This can also be done by length of time children spend in the program.

When you disaggregate data, you can dig deeper. Disaggregate program-wide data by site, site data by classroom, and classroom data by child. You can disaggregate five-year data by year, yearly data by month, and monthly data by week. Each time, you get a more magnified view of one piece of data.

4.2. Change Your View: Disaggregate: By Disability

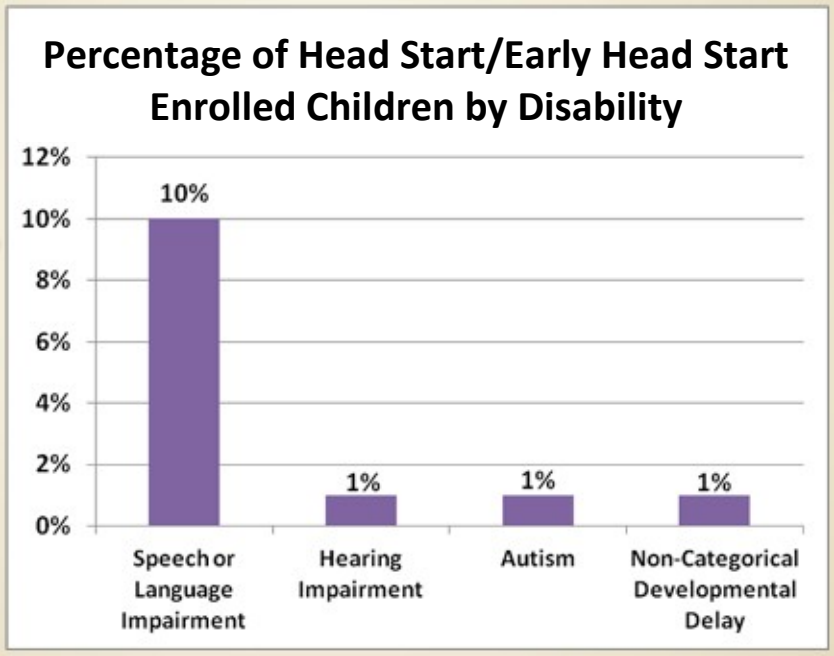


Figure 16. Bar chart showing that 10% of children have a speech or language impairment. For hearing impairment, autism, or non-categorical language delay, an equal number of children, 1%, have that type of delay.

4.3. Change Your View: Disaggregate: By EHS Program Option

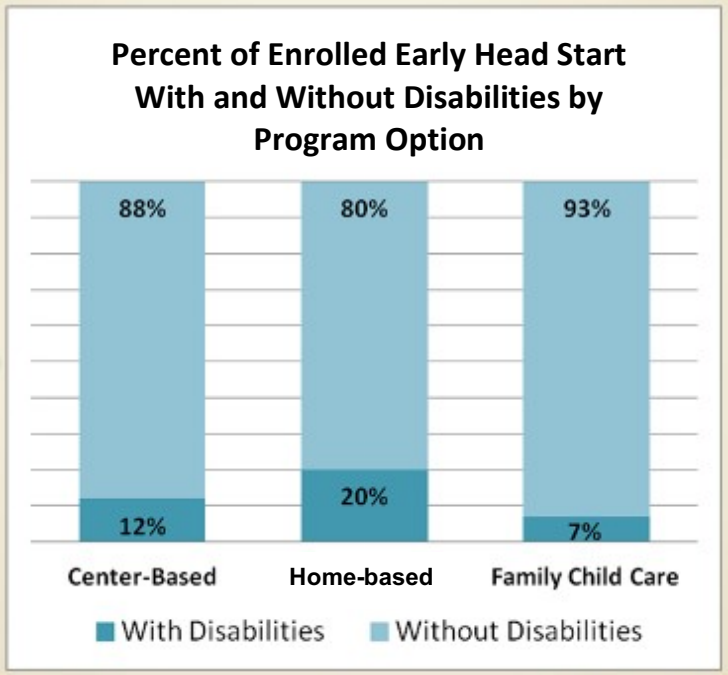
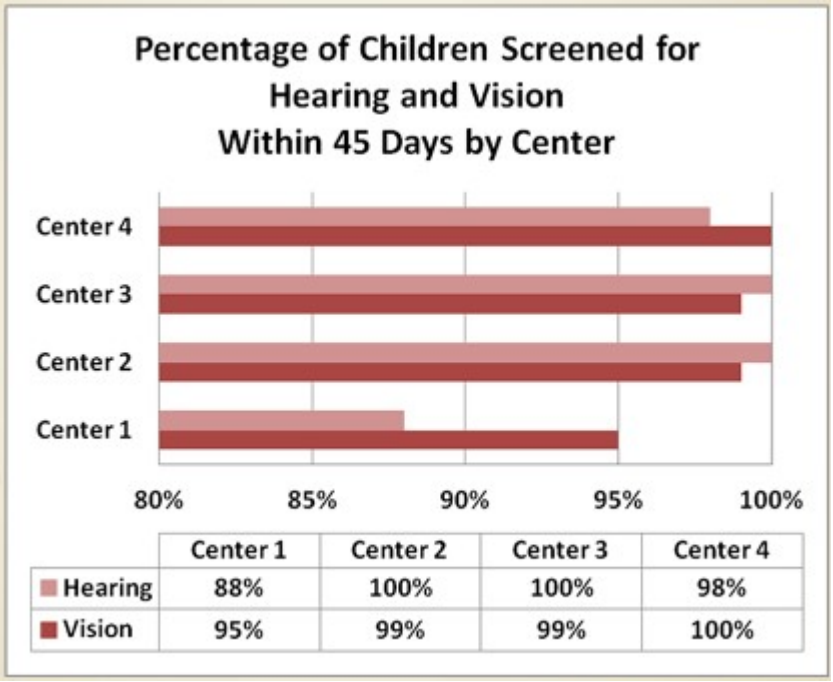


Figure 17. Bar chart showing that home-based programs have the greatest percentage of children with disabilities at 20%. Center-based programs have the next highest at 12%. Family child care has the lowest percentage at 7%. 13% of children have disabilities, while 87% do not.

4.4. Change Your View: Disaggregate: By Center



	Center 1	Center 2	Center 3	Center 4
Hearing	88%	100%	100%	98%
Vision	95%	99%	99%	100%

Figure 17. Bar chart showing that Center 1 has the lowest number of children screened within 45 days for both hearing at 88% and vision at 95%. The other three centers have rates of more than 97%

4.5. Change Your View: Disaggregate: By Classroom

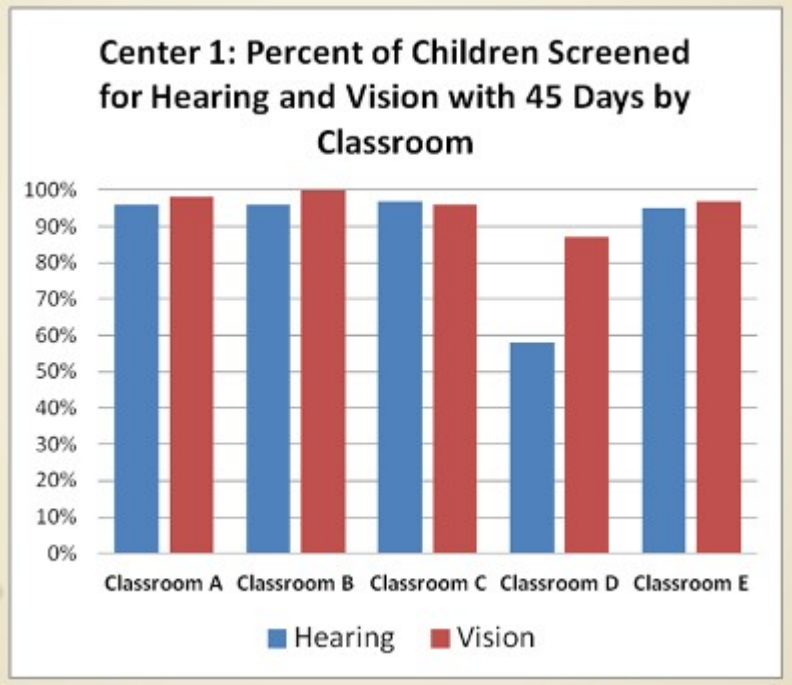


Figure 18. Bar chart showing that classroom D has the lowest number of children screened within 45 days for both hearing (under 60%) and vision (under 90%). The other three classrooms have rates of more than 90%.

4.6. Change Your View: Disaggregate: Story

Story

These charts illustrate some of the different ways data can be broken down. The first two charts in this example are disaggregated at the program level. The next two show how you can disaggregate data to achieve a more detailed view.

Sometimes disaggregated data can surprise you. When you look at the data disaggregated by type of disability, you notice most of the children with disabilities have a diagnosis of speech or language impairments. Very few have diagnoses of hearing impairment, autism, or non-categorical developmental delay. Disaggregated data can help you pinpoint and prioritize your follow-up plans. Here, you might decide to focus on recruiting children with disabilities other than speech or language impairments.

You also might wonder why more children with disabilities aren't enrolled in the FCC option. As a next step, you could further disaggregate the FCC data to see if there are differences among the individual providers. Follow-up could include professional development for FCC providers to increase their skills in working with children with disabilities. You might also revise your recruitment protocol to help parents of children with disabilities understand why FCC might be a good setting for their child.

The chart showing data on hearing and vision screenings by center raised questions about Center 1, so we looked at this center by classroom. As often happens, this view generated additional questions. You will want to find out why Classroom 4 has a lower percent of timely completion of hearing and vision screenings than the other classrooms in Center 1.

5. Change Your View: Compare

The **Technique** section defines the *compare* technique. The three data sections each include a chart with data displayed comparatively. The **Story** section explains more about what the charts are telling us.

5.1. Change Your View: Compare: Technique

Technique

When you compare data, you are looking for differences that pinpoint an opportunity or a problem. You can compare results to a target goal, such as the HSPPS requirements. You can also compare Classroom Assessment Scoring System (CLASS®) results with Head Start thresholds, or child outcomes data to national norms.

Comparing data over time helps identify trends. This can help you make predictions about the future. Using baseline data, you can track progress toward goals over time.

Comparing data from different sources also can provide insights. For example, comparing completion rates of referrals for the various service providers with which your agency works would help you answer the question, "Are referrals and follow-ups completed more frequently with particular community agencies?"

In conducting a community assessment, you frequently compare internal data from various sources with external data. Internal data sources may include family enrollment data or data on parent satisfaction with service providers. External data may be gathered from a number of sources, ranging from U.S. census data to data from local public schools.

5.2. Change Your View: Compare: Previous Years

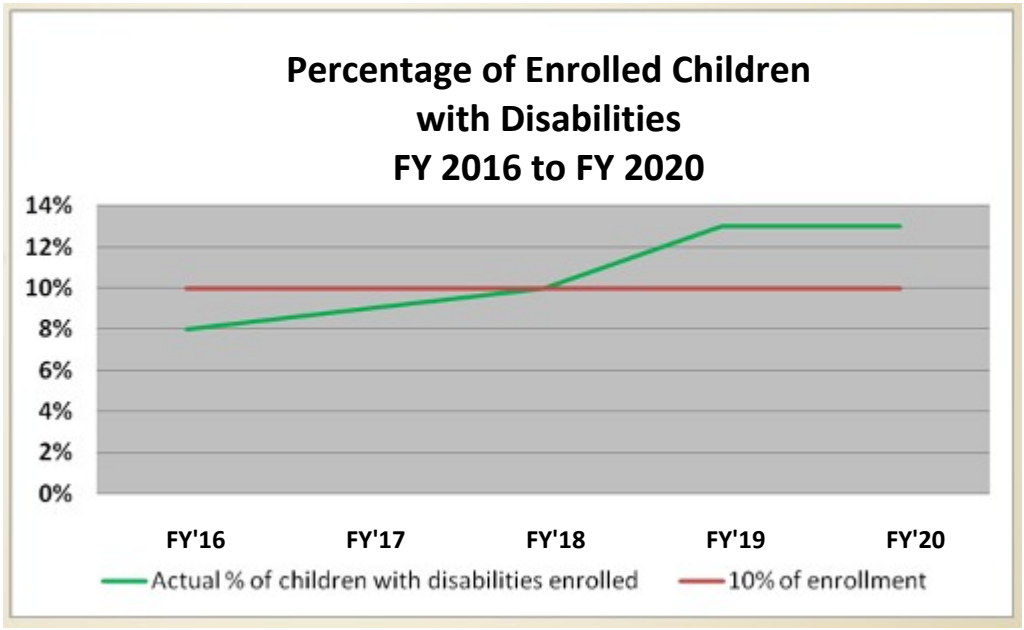


Figure 19. **The HSPPS require that not less than 10% of actual enrollment be children with disabilities. The red line shows the 10% target. It indicates that in 2016 and 2017 the program was not meeting the 10% target; however, the target was met in 2018, 2019, and 2020**

5.3. Change Your View: Compare: Current vs. Waitlist

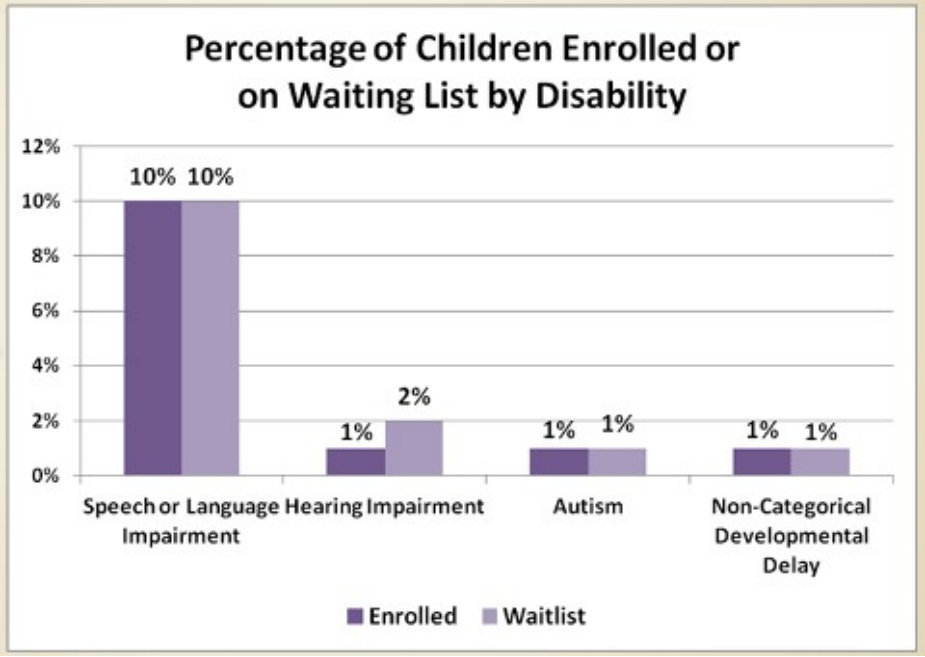


Figure 20. The percentage of children with disabilities, except for hearing impairment, is the same for enrolled versus on the waitlist. For hearing impairment, there are twice as many children (at 2%) on the waitlist as there are enrolled (at 1%).

5.4. Change Your View: Compare: Before and After Enrollment

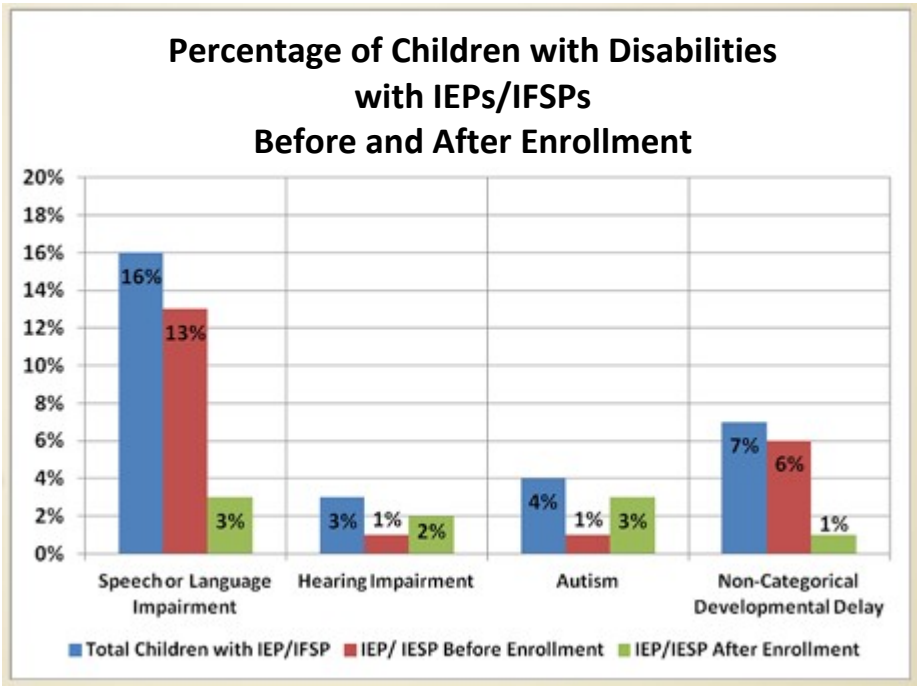


Figure 21. Bar chart showing that some children were diagnosed with disabilities after enrollment: 3% with speech and language, 2% with hearing impairment, 3% with autism, and 1% with a non-categorical delay

5.5. Change Your View: Compare: Diagnosis Before and After Enrollment

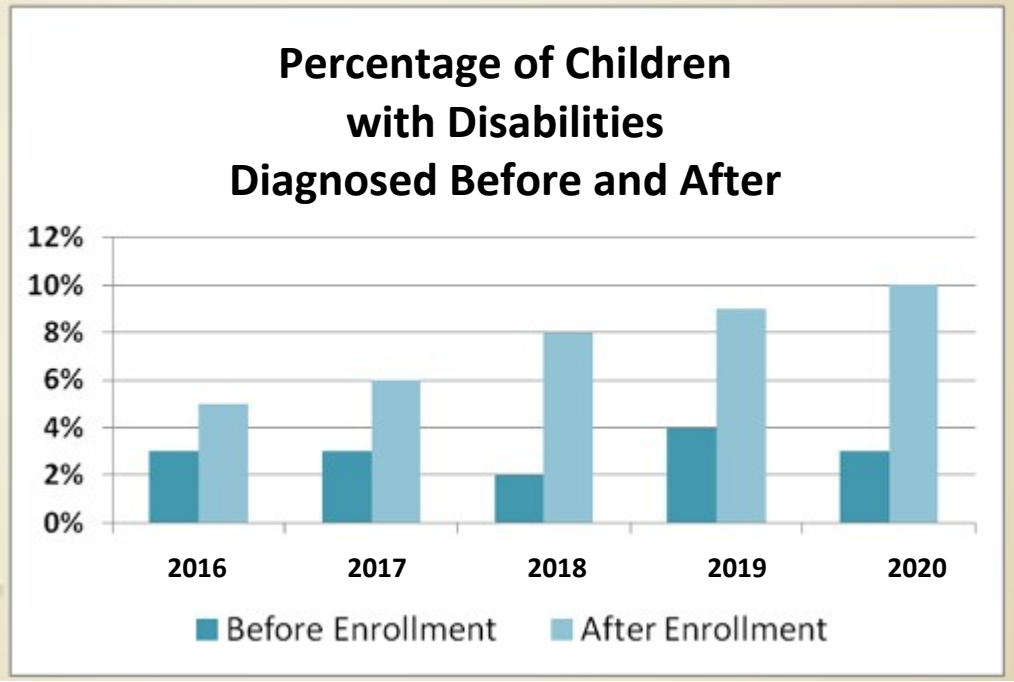


Figure 21. Bar chart showing that the percentage of children who were diagnosed after enrollment has steadily increased between 2016 and 2020, from 5 to 10%. The number of children diagnosed before enrollment has fluctuated between 2 and 4% over this time period.

5.6. Change Your View: Compare: Story

Story

Interestingly, the data on children with disabilities who are currently enrolled and those on the waitlist are similar. This most likely reinforces your previous conclusion about doing some target recruitment of children with disabilities other than speech and language impairment. This is a good opportunity to engage community partners, early intervention, and the local school district to help you identify local children with disabilities who could benefit from Head Start services.

Looking at the percentage of children with Individualized Family Service Plans (IFSPs) and Individualized Education Programs (IEPs) before and after enrollment, especially if reviewed over time, can help a program estimate how many children might be diagnosed with a disability after they enroll in the program. This will enable the program to gauge whether they will meet the 10% requirement after the program year begins rather than at enrollment.

6. Change Your View: Find Mean, Median, Mode, and Range

The **Technique** section defines *mean*, *median*, *mode*, and *range*. The three data sections each include a chart with relevant data. The **Story** section explains more about what the charts are telling us.

6.1. Change Your View: Find Mean, Median, Mode, and Range: Technique

Calculating the mean, median, mode, and range for a series of numbers can aid you in your data analysis:

- Mean is the average of a group of numbers
- Median is the middle value of numbers when they are ordered from smallest to largest
- Mode is the most frequent value
- Range is the difference between the lowest and highest values

The mean is not always a good representation of the center of the data. An outlier (e.g., a very high or very low value) can distort the average. For instance, the average income for a community would be skewed if there were even just a few millionaires. Median gives you a number that is more representative of the middle. Your income is likely to be closer to the median income in your community than to the average income if your neighbors are millionaires.

For a refresher on how to calculate mean, median, and mode, use the tools provided in the Extend Your Learning Section for this activity.

6.1. Change Your View: Find Mean, Median, Mode, and Range: Mean

Elapsed time between identification of suspected disability and completion of IEP	
Child	Length of time in days
AB	80
CD	120
EF	60
GH	120
IJ	30
KL	70
MN	102
OP	158
QR	45
ST	85
UV	120
Total	**990**
	Mean: $990 \div 11 = 90$

Figure 22. Table showing that mean is the average of a group of numbers. To calculate the mean, divide the total by the number of data points. IN this case, 990 divided by 11 equals 90.

6.1. Change Your View: Find Mean, Median, Mode, and Range: Median

The median is the middle point in the data. Put a series of numbers in order from lowest to highest and determine the middle value. This is the median. In this example, there are 11 items, so the sixth item is

the middle or median. If you have an even number of items, the median is calculated by adding the two middle items and dividing by two.

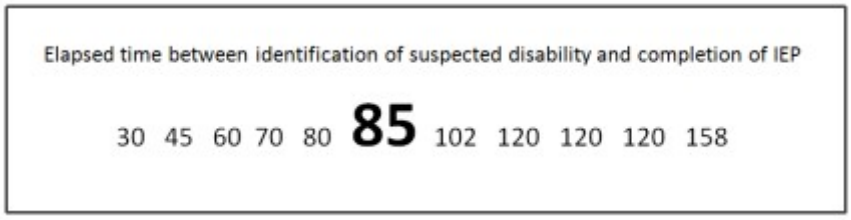


Figure 23. Illustration showing the median in a group of numbers

It's easy to find the median by counting off from both sides of the data points. However, there is a formula that can be used as well. This is especially useful if you have a lot of data points. Calculate by adding up the number of data points, plus one, divided by two. In this case, there are 11 data points: 11 plus one equals 12; 12 divided by two equals six; and so the sixth number is the median.

6.1. Change Your View: Find Mean, Median, Mode, and Range: Mode

Elapsed time between identification of suspected disability and completion of IEP	
Child	Length of time in days
TI	**30**
QR	45
EF	60
AB	70
CD	80
GH	85
ST	102
UV	**120**
KL	**120**
MN	**120**
OP	158

Figure 24. Table showing that the mode is the number repeated the most frequently. In this case, the number 120 appears three times, so it is the mode

6.1. Change Your View: Find Mean, Median, Mode, and Range: Range

The data in this table has been arranged from lowest to highest rather than being displayed in alphabetical order. To determine the range, subtract the lowest number from the highest number. In this case, subtract 30 from 158 to show a range of 128 days.

Elapsed time between identification of suspected disability and completion of IEP	
Child	Length of time in days
TI	**30**
QR	45
EF	60
AB	70
CD	80
GH	85
ST	102
UV	120
KL	120
MN	120
OP	**158**
Range	**158-30=128**

Figure 25. Table showing the range by arranging data points from lowest to highest

The numbers 30 and 158, the two extremes, are also important to note. The shortest length of time might cause you to ask how your program was able to complete the IEP so quickly in this case and whether there are lessons learned that you can apply in other situations. You would also want to learn why one IEP took 158 days to accomplish and consider whether there were things that could have been done to move the process along more quickly.

6.1. Change Your View: Find Mean, Median, Mode, and Range: Story

Story

These tables represent the amount of time that elapsed between indication of a need for a multidisciplinary evaluation and the completion of the IEP. The data is taken from one center. The mean of 90 days is slightly higher than the median of 85 days. The mode shows the most frequent timeline is 120 days. In this example, the range is 128 days, or the difference between a low of 30 and a high of 158 days.

There are many factors that can impact the amount of time between identification of a suspected disability and a signed IEP. Parents must provide written consent before the evaluation can proceed. Evaluation is made by a multidisciplinary team and includes various procedures administered by trained and licensed specialists. Once a need for special education and related services is determined by the team, the IEP must be completed within 30 days.

To dig deeper, the program might look at what enabled several IEPs to be signed in timeframes shorter than the mean and median (e.g., 30, 45, 60, and 70 days). The scores above the median and mean are significantly higher, with the mode being 120 days. Understanding the reasons for this is important for program improvement. Working on lowering the instances over the mean and median would result in children getting services more quickly.

One interesting way to further analyze the data would be to look at the timelines for each step of the process to see if there is a particular part of the process that is most difficult to accomplish. Most evaluations are conducted by the LEA or appropriate Part C agency. In many cases, there are multiple LEAs in a grantee's service area. Therefore, another way to dig deeper into the data is to disaggregate it by LEA.

In addition, the program would want to zero in on the specific 30-day timeline for completion of the IEP. Again, looking at the mean, median, mode, and range for this particular part of the process would help the program see how well it is meeting the required timelines.

7. Change Your View

Scenario

Each year, your program conducts an internal assessment of education program quality. Trained, reliable observers use the CLASS® observation tool for this purpose.

Read each question. Decide which data analysis techniques are the most valuable and appropriate to use. You may select more than one option.

Question 1: The Head Start director is preparing a report on this year's CLASS® results. She will present the report to the governing body and the Policy Council. It will also be included in the program's annual report to the public. Which techniques should she use?

Select all that apply.

- Aggregate
- Disaggregate
- Compare
- Find mean, median, mode, or range

Feedback

If you selected **aggregate**, **compare**, and **find mean, median, mode, or range**:

Correct. Aggregated data that provides high-level information about the entire program is the most appropriate for these audiences. You can use the comparison technique with this aggregated data to show trends over time and to compare with Head Start thresholds.

You might also include information showing average scores: mean, median, and mode and the range of scores for the program.

If you did not select **aggregate**, **compare**, and **find mean, median, mode, or range**:

Compare your responses with ours. In most cases, disaggregated data doesn't provide the high-level, big picture look that is appropriate for governing bodies, Policy Councils, and the annual report to the public.

Aggregated data that provides high-level information about the entire program is the most appropriate for these audiences. You can use the comparison technique with this aggregated data to show trends over time and to compare with Head Start thresholds.

You might also include information showing average scores: mean, median, and mode and the range of scores for the program.

8. Change Your View

Read each question. Decide on which data analysis techniques are the most valuable and appropriate to use. You may select more than one option.

Question 2: Your self-assessment team wants to review CLASS® data as part of its discussion on school readiness. Which techniques are most valuable and appropriate for the team to use?

Select all that apply.

- Aggregate
- Disaggregate
- Compare
- Find mean, median, mode, or range

Feedback

If you selected **aggregate** and **compare**:

Correct. Aggregated data will enable the self-assessment team to look at and discuss valuable program-wide data about CLASS® results. The team would also be interested in several other ways to compare CLASS® data. This might include comparisons with Head Start thresholds, other instruments such as the Early Childhood Environment Rating Scale (ECERS-R), or CLASS® results from a federal monitoring review. Look at your CLASS® results in relation to your aggregated PIR data on staff qualifications and staff turnover. Comparing CLASS® data with child outcomes data could also provide an interesting perspective.

If you did not select **aggregate** and **compare**:

Compare your responses with ours. Programs generally focus on disaggregated data during ongoing monitoring rather than during their annual self-assessment. Aggregate and compare would be more useful techniques to use during self- assessment. Aggregated data would provide a program-wide view that could be analyzed for trends over time, compared with Head Start thresholds, correlated with results from other instruments, and looked at in relation to child outcomes.

9. Conclusion

When you aggregate and analyze data, you are like a photographer taking pictures with different lenses. When you aggregate, you use a wide-angle or panorama lens for a sweeping view of the landscape. When you disaggregate, you use your zoom lens to get close-up pictures. Your completed photo album should include various views that together tell the whole story. Your data will show changes over time, just as the photos in your family album show your children growing up. Photos of milestones, such as high school or college graduation pictures, are like comparing data to targets or thresholds.

Consider these key points when analyzing data.

- **Know all of your data sources.** This will help you use internal and external data to make comparisons and predictions.

- **Know your questions.** These will help you decide how to disaggregate your data.
- **Know your targets.** Comparisons to a target help you measure compliance and progress toward goals.

Extend Your Learning

Data in Head Start and Early Head Start:

- Data Analysis Terms and Concepts [PDF, 462KB]
  - Explore a comprehensive glossary of commonly used terms for data and evaluation.
- Annotated Bibliography [PDF, 335KB]
  - Find links to useful resources on using data.
- Understanding Mean, Median, and Mode
  - The TV411: Tune in to Learning website provides a quick and easy way to review the differences between mean, median, and mode, and to practice calculating each one.

Activity 4: Draw Conclusions

This activity consists of three scenarios in which management team members review a hypothesis, identify and present related data, engage in discussion, and draw conclusions.

Activity 4: Draw Conclusions

1. Draw Conclusions

Aggregating and analyzing enables you to study the data and look for patterns, trends, and outliers. Now that you've studied the data, it's time to draw conclusions and apply what you've learned. When drawing conclusions, you'll be explaining what data represents and why, and deciding what actions to take based on your conclusions.

For example, analyzing data may lead to a determination that child outcomes at a specific center are 10% lower this year than last. You wonder why and generate possible explanations. Drawing a conclusion might mean recognizing that outcomes are lower because the center experienced a high rate of teacher turnover, with new teachers replacing more experienced and better-trained staff.

Conclusions lead you to solutions, such as revising your new teacher orientation and establishing a mentoring program for new teachers. The more completely you analyze and understand the data, the better your conclusions and solutions are likely to be.

2. Test Your Hypothesis

Aggregating and analyzing data give you a picture of the "what." The next step, drawing conclusions, involves figuring out the "why." In this step, you will first infer from the data why something might be happening, i.e., form a hypothesis based on the given data. Finally, continue to look at additional data to see if it helps you confirm or refute your hypothesis.

In this activity, you will learn how to:

- Identify data that confirm or refute a hypothesis
- Formulate questions that help you get at what's missing
- Identify additional data that need to be gathered to answer your new questions
- Draw conclusions about what the problems might be

3. Test Your Hypothesis

Select a scenario to begin.

- Teacher Turnover
- Referrals
- Injury Prevention

4. Test Your Hypothesis: Teacher Turnover

Scenario

Teacher turnover rates have been holding steady for several years, but three months ago they took a sudden jump.
The director has called a meeting to discuss whether or not the cause can be identified and addressed. She has invited the education, human resources (HR), and fiscal managers to attend. She asked each person to bring any related data they have about the sudden jump.

In this activity, you will assist these staff members decide if the data they brought help to confirm the hypothesis, refute it, or neither confirm nor refute it.

4. 1. Test Your Hypothesis: Teacher Turnover

Read the director's hypothesis. Select each staff person in turn, review their data, and indicate your response.

Director: *"I have a hypothesis. I think we're not paying them enough!"*

4.1.1. Test Your Hypothesis: Teacher Turnover: Education Manager

Education Manager

I looked at teacher turnover in the early childhood field. Several studies from the National Association for the Education of Young Children (NAEYC), Child Care Aware of America, and the National Center for the Early Childhood Workforce show national teacher turnover is between 25 and 40%. Based on this, our program is not any worse off than the field as a whole.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**" or "**Refutes the hypothesis**:"

This information neither helps confirm nor refute your hypothesis that low teacher salaries are the reason for the recent spike in teacher turnover in your program.

If you selected "**Neither supports nor refutes**:"

That's right. This data may be interesting, but it isn't relevant. It may be comforting to know that your program is in line with national averages for teacher turnover, but so what? This doesn't help your program understand why it has experienced this sudden spike in teacher turnover. If you don't understand it, you can't fix it.

4.1.2. Test Your Hypothesis: Teacher Turnover: Human Resources Manager

Human Resources Manager

What about that new company that opened nearby? I've heard they are hiring. I talked to the HR director at the company and she sent me their salary scale. Take a look. You'll see that their wages are much better than our teacher salaries.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**:"

Bingo! This information supports the hypothesis that your low salaries are related to the turnover since it shows that salaries are higher at the company. It also helps explain why this spike is occurring now.

If you selected "**Neither supports nor refutes**" or "**Refutes the hypothesis**:"

This information supports and is relevant to the hypothesis. Teachers can earn higher wages at the new company, and the timing of the company's opening helps explain why the spike in turnover is occurring now.

4.1.3. Test Your Hypothesis: Teacher Turnover: Fiscal Manager

Fiscal Manager

I brought our most recent wage comparability study. As you can see, it shows that state pre-K programs pay higher starting salaries and have higher median salaries than the Head Start program.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**:"

You're right. It is true that salaries in the Head Start program are lower than the salaries in comparable early childhood programs in the community. Low salaries are a possible cause of the spike in turnover but continue to look further.

The wage comparability study was completed a while back. In this case, the possible explanation of lower salaries may not be the most probable explanation. The wage comparability study doesn't address the question of "Why now?"

If you selected "**Neither supports nor refutes**" or "**Refutes the hypothesis**:"

Actually, the wage comparability study doesn't refute the hypothesis that low salaries are the reason that teachers have been leaving. It is possible that the difference in salaries is part of the reason for staff turnover. Maybe you're suspicious because the wage comparability study was completed a while ago. So it probably doesn't help explain the sudden spike in turnovers.

4.1.4. Test Your Hypothesis: Teacher Turnover: Seek Alternative Explanations

Often, when your team looks at data to understand an event or condition, it uncovers more than one possible explanation. At this point, you may have more questions or still be searching for more data to help explain what's going on.

Seek Alternative Explanations

Now help the director ask the group some additional probing questions. The goal is to identify any other possible explanations for the spike in turnover. Think about the answers. Select "Next" when you're ready to indicate what you've learned about the problem.

What questions do you want to ask?

- **What have we heard in performance reviews?**
  Education manager: "Teachers have been complaining about low salaries. They've also been

resistant to our push for them to go back to school to enhance their degrees, especially since we're not paying for their coursework or giving them time off during the day to attend classes."

- **Is there anything in our CLASS® data that might tie into teacher turnover?**
  Education manager: "Actually, there is. Our turnover has been higher for teachers with lower CLASS® results. Interestingly, this has been especially true for those with low scores related to emotional climate."
- **Has anybody disaggregated the data by center to look for trends?**
  Fiscal manager: "We did look at the data from several perspectives, which included looking at the data by site and by rural versus urban locations. What we found confirms our thinking that the new company might be the impetus for the increased rate of turnovers. The two sites closest to the factory definitely had the largest turnover rates."

4.1.5. Test Your Hypothesis: Teacher Turnover: Take Action

You have identified a number of possible explanations for the spike in staff turnover, including the fact that the program pays lower salaries than other early childhood programs in the community and the recently opened company pays higher salaries than either. Performance reviews and data on staff qualifications also indicate that teachers may be leaving because they don't want to go back to school to enhance their degrees.
The explanation that is most pertinent to explaining the timing of the spike in teacher turnover is the recent company opening. Let's explore possible actions the program could take in light of this explanation.

Take Action

Based on the additional information, what actions should the team take?

Select all that apply.

1. Look at the budget to see if there are ways to raise teachers' salaries without diminishing quality in other areas.
2. No action. You can't do anything about a new company opening and offering higher wages.
3. Look at other ways to increase teachers' job satisfaction.
4. Look for outside funding for the college classes teachers need to enhance their degrees.

Feedback

If you selected **1**, **3**, and **4**:

Correct. Revising the budget and looking for outside funding for college classes are good ideas. Looking at ways to increase teachers' job satisfaction in nonmonetary ways is another good idea.

Revising the budget may be difficult. It may already be stretched to the max, and obtaining outside funding takes time. However, research on job satisfaction shows there are factors other than money that impact people's job satisfaction. These include a positive challenge, variety, a sense of purpose, support from program administrators, and a favorable work environment. These factors may be the

easiest short-term solution. Think as a team about how to use some of these nonmonetary ways to increase job satisfaction to retain teaching staff.

If you did not select **1**, **3**, and **4**:

Compare your responses with ours. Looking for ways to increase teachers' salaries without decreasing quality in other areas and looking for outside funding for college classes are both good ideas. In the short-term, however, it may be more effective to see if there are nonmonetary ways to increase teachers' job satisfaction. Of course, doing nothing is not a good option.

Conclusion

To examine your initial hypothesis, you got input from three new perspectives. However, sometimes one piece of data can change the way you understand an issue. In this case, while there were several possible reasons, there was only one that explained the timing of the increase in staff turnover.

5. Test Your Hypothesis: Referrals

Scenario

You've just made an interesting discovery by comparing data about the follow-up and completion of health referrals with similar data about family services referrals. Your PIR data show an upward trend over time in the number of parents who were satisfied with their health referrals (e.g., Women, Infants and Children (WIC), state health department, medical assistance coverage, etc.). It also highlighted a downward trend over time in the number of parents reporting satisfaction with the timeliness of family service referrals (e.g., food, clothing, substance abuse, domestic violence, housing, etc.).

You meet with your health services, family services, and fiscal managers to see if you can figure out what's going on here.

5. 1. Test Your Hypothesis: Referrals

Read the hypothesis. Select each person in turn, review their data, and indicate your response.

> *I have a hypothesis. I think family services staff need more training on working with community partners.*

5.1.1. Test Your Hypothesis: Referrals: Health Services Manager

Health Services Manager

I reviewed our training and technical assistance (T/TA) records for health services staff over the past three years. We conducted a training series focused on working with community partners. Out of the eight training sessions, one health services assistant missed two sessions. All of our other current health services staff attended 100% of the quarterly training.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**" or "**Refutes the hypothesis**:"

This neither supports nor refutes the hypothesis. You know how much training was provided to health services staff, but your hypothesis is about training for family services staff. Looking at data for family services staff in comparison to data for health services staff would be more helpful in moving you along.

If you selected "**Neither supports nor refutes**:"

That's right. You know how much training was provided to health services staff, but your hypothesis is about training for family services staff. Looking at data for family services staff in comparison to data for health services staff would be more helpful in moving you along.

5.1.2. Test Your Hypothesis: Referrals: Fiscal Manager

Fiscal Manager

I've been looking at our budget over the past three years, and I see that we've made budget cuts in family services each of these years.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypotheses**" or "**Refutes the hypothesis**:"

While this information alone does not support or refute your hypothesis about staff training, your fiscal manager might be on to something here. You probably want to dig deeper into this in your follow-up questions.

If you selected "**Neither supports nor refutes**:"

While this information alone does not support or refute your hypothesis about staff training, your fiscal manager might be on to something here. You probably want to dig deeper into this in your follow-up questions.

5.1.3. Test Your Hypothesis: Referrals: Family Services Manager

Family Services Manager

I reviewed the sign-in sheets for the quarterly training series on working with community partners that we've conducted over the past two years. The training series was attended by both health services and family services staff. All of our current family services staff attended all of the sessions.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Refutes the hypothesis**:"

You're right. If both health and family services staff have received the same training, the data do not support your hypothesis.

If you selected "**Neither supports nor refutes**" or "**Supports the hypothesis**:"

Actually, the data show that you provided a quarterly series of trainings attended by both health and family services staff, and that all of the current family services staff attended 100% of the training. There is a big hole in your hypothesis.

5.1.4. Test Your Hypothesis: Referrals: Seek Alternate Explanations

You've refuted the initial hypothesis, that differences in training explained the differences in success with referrals. You have one new possible explanation: the difference is due to budget cuts. Let's explore the impacts of the budget cuts and whether there are other possible explanations.

Seek Alternative Explanations

Help the director ask the group some additional, probing questions. The goal is to identify any other probable explanations for the discrepancy between health referrals and family services referrals. Read the answers. Select "Next" when you're ready to consider what actions to take based on what you have learned.

What questions do you want to ask?

- **What was the impact of budget cuts on the caseloads of family service workers?**
  Family services manager: "Good question. I don't mean to get defensive here, but the budget cuts over the past three years have had a disastrous impact on our caseloads. We've gone from a 1:30 caseload ratio to 1:60. It's no wonder we're not being successful."
- **Are there other differences between how we carry out family and health services that could explain the difference?**
  Health services manager: "I think one of the reasons we have such a high completion rate on our health referrals is because we have a very strong Health Services Advisory Committee (HSAC). Our HSAC members make sure every doctor, dentist, mental health practitioner, and nutritionist in our community is aware of and responsive to the Head Start program."
- **Is there a connection between increased caseloads for family service staff and the decrease in successful family services referrals?**
  Fiscal manager: "There's a direct link between the two. Over the past three years, referrals have decreased as caseloads have increased."

Test Your Hypothesis: Referrals: Take Action

You've identified two new explanations for the difference in the success rates of referrals between health services and family services. Funding cuts have doubled family service workers' caseloads, and the data indicate these increased caseloads correlate with decreases in referrals. As well, a strong HSAC may have contributed to success in health referrals. Let's look at possible actions the program could take.

Take Action

Based on the additional information, what actions should the team take?

Select all that apply.

1. As an interim step, invite representatives from family services agencies to join the HSAC. As a longer-term solution, consider developing a Family Services Advisory Committee.

2. Take a really good look at your budget. See if there are ways to revise the budget so you can reduce family service workers' caseloads.

3. Update your resource directory and make sure every family gets a copy. Be sure that it is translated into all of the languages spoken by families in your program.

Feedback

If you selected **1** and **2**:

Correct. You selected the two strongest ideas: revising the budget to reduce caseloads and strengthening community partnerships around family services. Updating and translating your resource directory are always good ideas. However, revising the directory is less likely to have a significant impact than the other two action steps.

If you did not select **1** and **2**:

Compare your responses with ours. The two best ideas here are revising the budget to reduce caseloads and strengthening community partnerships around family services by adding representation from family services agencies to your HSAC. Updating your resource directory most likely wouldn't be as helpful as the two other ideas.

Conclusion

We often form hypotheses based on a gut feeling. But it's important to examine data to see if they support your hypothesis. During this process, you may discover new data. You'll want to examine the additional data to confirm or refute your hypothesis. You may find yourself with information that leads you in a new direction.

6. Test Your Hypothesis: Injury Prevention

Scenario

Your year-round Head Start and Early Head Start program is preparing for the summer. In reviewing your incident data for the past three years, you've noticed that playground injuries have increased every year during the summer. You'd like to be proactive so this pattern doesn't continue. You've invited your education, health services, and facilities managers to a meeting to talk about the problem.

6. 1. Test Your Hypothesis: Injury Prevention

Read the hypothesis. Select each person in turn, review their data, and indicate your response.

> *I have a hypothesis. I think injuries have increased because our year-round teaching staff are on vacation during the summer and we have a lot of substitutes on the playground.*

6.1.1. Test Your Hypothesis: Injury Prevention: Facilities Manager

Facilities Manager

We've taken some budget cuts related to facilities maintenance over the past three years.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**" or "**Refutes the hypothesis**:"

Although this information may well be important, it actually neither supports nor refutes your hypothesis.

If you selected "**Neither supports nor refutes**:"

That's right. This information doesn't support or refute the hypothesis about staff absenteeism due to vacations as related to playground injuries. Don't dismiss it just yet; it may still be important.

6.1.2. Test Your Hypothesis: Injury Prevention: Education Manager

Education Manager

I reviewed our staffing patterns for the past three summers. The data show that every summer about 30% of the staff are out during any given week. We have substitutes on the playground in great numbers during the summer months.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**:"

That's right. A third of your experienced teachers are gone and are being replaced by substitutes who may not have had much training in active supervision techniques.

If you selected "**Neither supports nor refutes**" or "**Refutes the hypothesis**:"

Look again. There are likely to be a lot of inexperienced teachers supervising children on the playground. They may not have received much training in active supervision techniques.

6.1.3. Test Your Hypothesis: Injury Prevention: Health Services Manager

Health Services Manager

I looked at our policies and procedures for playground supervision and I think they're really strong. We really emphasize active supervision.

How would you categorize this new information?

- Supports the hypothesis
- Refutes the hypothesis
- Neither supports nor refutes

Feedback

If you selected "**Supports the hypothesis**" or "**Refutes the hypothesis**:"

Actually, this neither confirms nor refutes the hypothesis. It's great that you have policies and procedures for active supervision, but the issue here is whether staff who are supervising the playground have been trained in and are following these procedures.

If you selected "**Neither supports nor refutes**:"

You're right. This neither supports nor refutes the hypothesis. It's great that you have policies and procedures for active supervision, but the issue here is whether staff who are supervising the playground have been trained in and are following these procedures.

6.1.4. Test Your Hypothesis: Injury Prevention: Seek Alternate Explanations

You need a little more information here. The data support your initial hypothesis that the increase in playground injuries during the summer correlates with absences of year-round staff. However, the data

on funding cuts in facilities maintenance may lead in another important direction. Let's explore further.

Seek Alternative Explanations

Help the director ask the group some additional, probing questions. The goal is to identify any other probable explanations for the increase in injuries during the summer months. Look at the answers. Select "Next" when you're ready to indicate what you've learned about the problem.

What questions do you want to ask?

- **What kind of orientation and training do we provide for substitutes, especially in terms of playground supervision?**
  Education manager: "Good question. Most of our summer substitutes are college students who return from year to year. We try to find students who are enrolled in early childhood education programs, and we rely on their coursework to prepare them."

- **Have we looked at where on the playground injuries have taken place?**
  Health services manager: "We did a hazard map and learned that there are several places on the playground where injuries occur most frequently. No surprises here. Children fall off the climber, sometimes get hit when they walk in front of the swings, and run into each other on the bike path."

- **How have budget cuts in facilities impacted playground maintenance?**
  Facilities manager: "We've reduced our timelines for replacing ground cover on the playground from twice a month to once a month. But more importantly, you may remember that we had planned to redesign our playground. We wanted to move the swings and get a lower but more interesting climbing structure. We never were able to find the funds to do either."

6.1.5. Test Your Hypothesis: Injury Prevention: Take Action

You started with a hypothesis about the impact of staff absences on playground injuries that seemed to be supported by the data. Additional data and follow-up questions also suggest a second possible explanation. Let's look at what actions the program might take.

Take Action

Based on the additional information, what actions should the team take?

Select all that apply.

1. Revise your procedures for orienting and training summer staff. Make sure all substitutes are trained in active supervision. Increase education managers' and coordinators' outdoor observation time to make sure all summer teaching staff are implementing the training. They also will ensure staff are stationed where your hazard map shows incidents occur most frequently.

2. Look for ways to make that playground redesign become a reality. For instance, have you looked for outside funding sources? Are there parents who have skills to help put together new playground equipment?

3. Acknowledge that you can't ensure active supervision on the playground while so many staff are on vacation, and require any classroom that has a substitute to stay indoors all day.

Feedback

If you selected **1** and **2**:

We agree. Revising how you orient, train, and supervise new staff and substitutes on playground supervision could go a long way toward decreasing injuries on the playground. Working on creative ways to make your dreams of a redesigned playground become a reality is also a good idea, albeit perhaps a long-term one. Of course, there's no way you want children to stay indoors all day. Keeping children indoors might decrease injuries on the playground, but it may increase indoor injuries. And just think about the impact on your child outcomes related to physical health and development!

If you did not select **1** and **2**:

Compare your responses with ours. Revising how you orient, train, and supervise new staff and substitutes and thinking about creative ways to make your dreams of a redesigned playground become a reality are both strong ideas. As you know, keeping children indoors all day is not a very good idea. While it might decrease injuries outdoors, think about the impact on your child outcomes related to physical health and development.

Scenario Conclusion

Your conclusions may lead to ideas for both short- and long-term actions. In this scenario, you decided to take immediate action to reduce playground incidents by working on playground supervision. You also decided to develop a long-term plan to redesign your playground.

Conclusion

Data tell you what is happening but not why. Figuring out the "why" can be an interesting process. First, you'll need to form a hypothesis. A team meeting provides an excellent opportunity to present a variety of points of view and additional data that may help to confirm or refute your hypothesis.

Posing probing questions about the data can help clarify why something might be happening. Once you know why something is happening, you can devise solutions. Don't forget: you'll want to collect additional data to see if your solutions are working!

Extend Your Learning

- Data in Head Start and Early Head Start:
    - Data Analysis Terms and Concepts [PDF, 462KB]
      Explore a comprehensive glossary of commonly used terms for data and evaluation.
    - Annotated Bibliography [PDF, 335KB]
      Find links to useful resources on using data.
    - Active Supervision
      Explore six strategies for putting active supervision in place and find out what it looks like in action. This tip sheet also includes a self-reflection tool with questions to help assess your active supervision practices and a list of useful resources.

Activity 5: Take Action

This activity shares a methodology for considering and prioritizing actions based on data.

Activity 5: Take Action

1. Take Action

Sometimes your data analysis will lead you to a clear-cut decision and a plan of action. Other times, your choices will be less obvious, such as when the data point to multiple explanations.

When you are uncertain, you'll want to analyze the possibilities using the same clear, logical approach you used to complete your data analysis. You can use a four-quadrant grid to test out potential decisions. Organizing the possibilities in this way helps you work through "what if" situations and determine the pros and cons of each particular action.

In this activity, you will practice using a four-quadrant model to identify the best course of action.

2. What Is a Four-Quadrant Grid?

A four-quadrant grid is a prioritization tool that helps you make thoughtful decisions using the criteria that are most important to you.

This tool is particularly useful when you have limited resources to address an issue and you want to focus on areas that provide the greatest payoff. It can help you move from a large number of options to a more focused plan of action.

When creating a grid, choose two broad criteria that are most relevant to your decision, such as sustainability and cost. Then, evaluate potential options against how they align with the criteria.

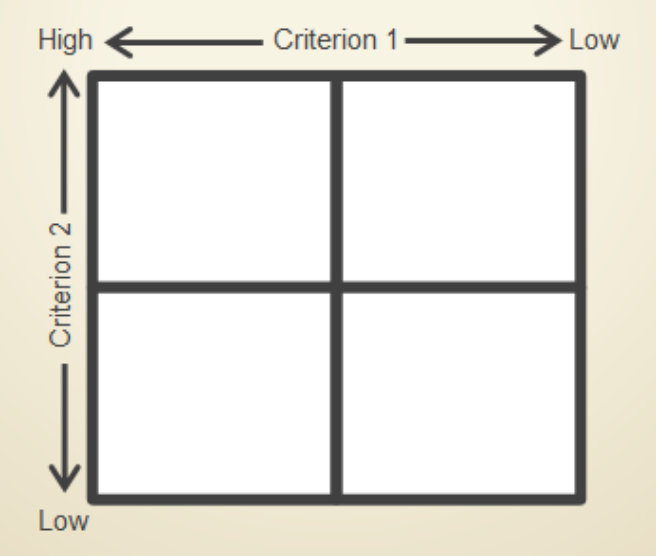


Figure 26. Illustration of a Four-Point Grid

3. Making and Using a Grid

In this activity, you will see the step-by-step process for building a four-quadrant grid for decision-making.

Here's your scenario: ACE Head Start and Early Head Start Program's most recent community assessment showed:

- The percentage of Spanish-speaking families has increased steadily over the last three years
- Spanish-speaking families currently make up 6% of the population in your service area
- Only 3% of current enrollment are children are from Spanish-speaking families and 1% of children on the waiting list are from Spanish-speaking families

These data have led you to set a program goal of increasing recruitment of dual language learners

(DLLs). Select each step in the process to build a sample grid.

1. Create a grid with four quadrants.

Figure 27. Illustration of a Four-Point Grid

2. Choose two criteria relevant to your decision and assign one to each axis.

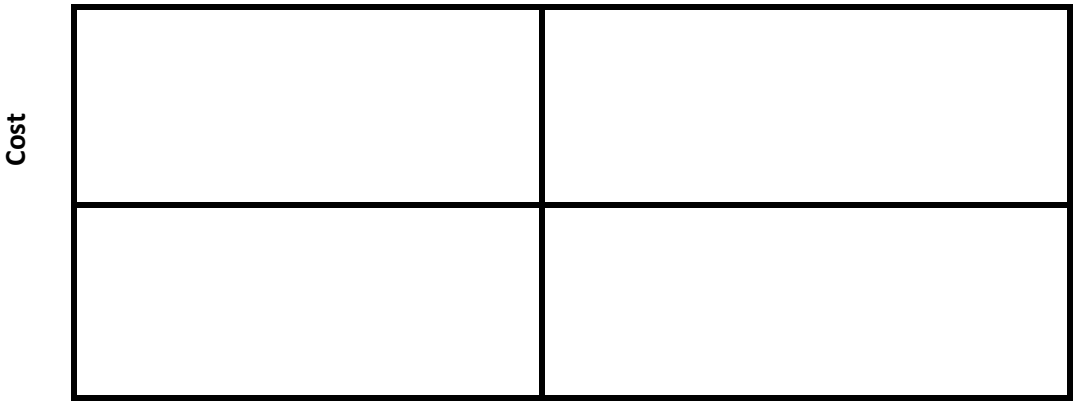


Figure 28. Illustration of a Four-Point Grid

3. Add arrows to indicate high or low to each axis.

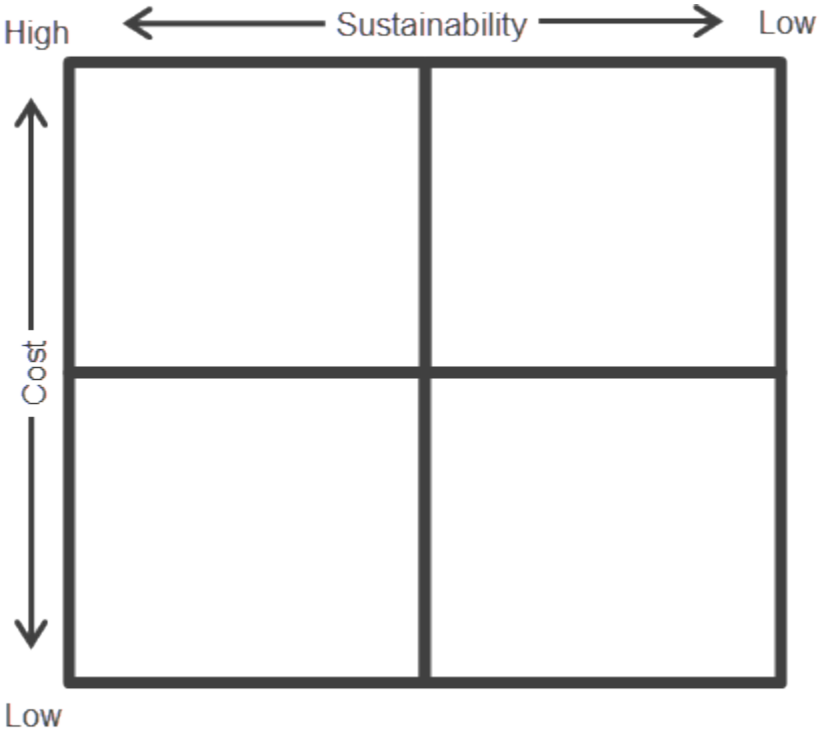


Figure 29. Illustration of a Four-Point Grid

4. Label each quadrant.

High Sustainability High Cost	Low Sustainability High Cost
High Sustainability Low Cost	Low Sustainability Low Cost

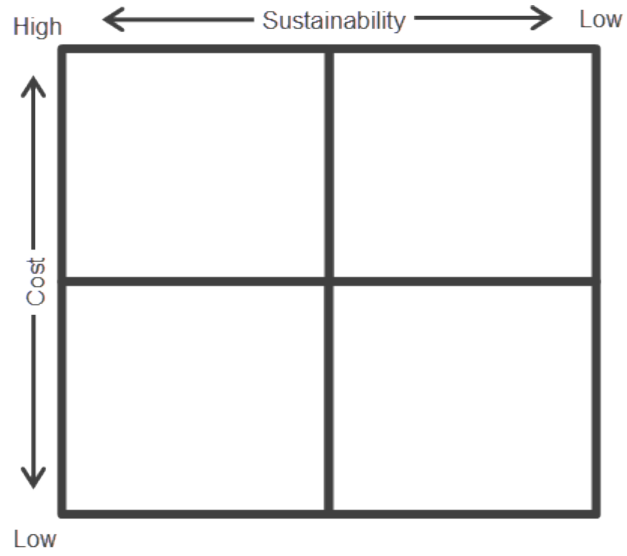
5. Place competing activities, choices, or causes in the appropriate quadrant.

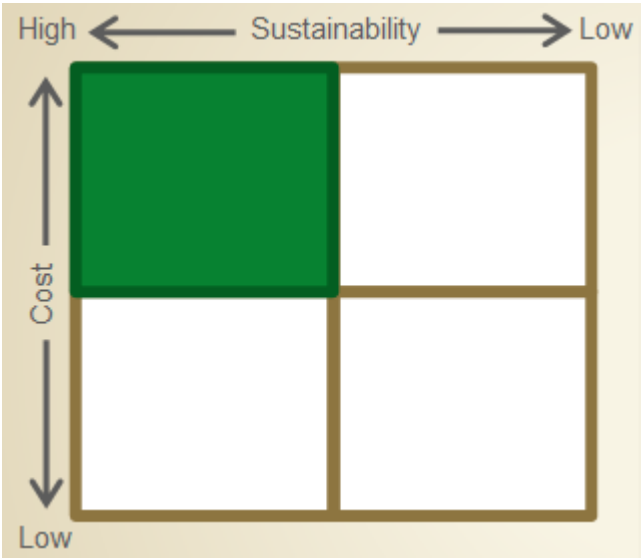
	High ← Sustainability → Low	
	High Sustainability/High Cost Hire additional Spanish-speaking outreach workers.	**Low Sustainability/High Cost** Hold a gala fundraising event for the community's Hispanic leaders at a local hotel.
High ← Cost → Low	**High Sustainability/Low Cost** Complete the Dual Language Learners Program Assessment (DLLPA) and set a program goal of developing a Planned Language Approach. Continue to build partnerships and develop memoranda of understanding (MOUs) with community agencies that work in the Hispanic community. Develop a recruitment script written in Spanish.	**Low Sustainability/Low Cost** Develop a Spanish-language version of your program recruitment flyer and post it in local supermarkets. Distribute the flyers to Spanish-speaking families already enrolled; encourage them to talk to their relatives, friends, and neighbors about the Head Start program. Hold a potluck recruitment fair at local churches attended by Spanish-speaking families in the community.

Figure 30. Illustration of a completed Four-Point Grid

6. Place Competing Activities, Choices, or Causes in the Appropriate Quadrant

Select each box in the grid to see a description of that category.



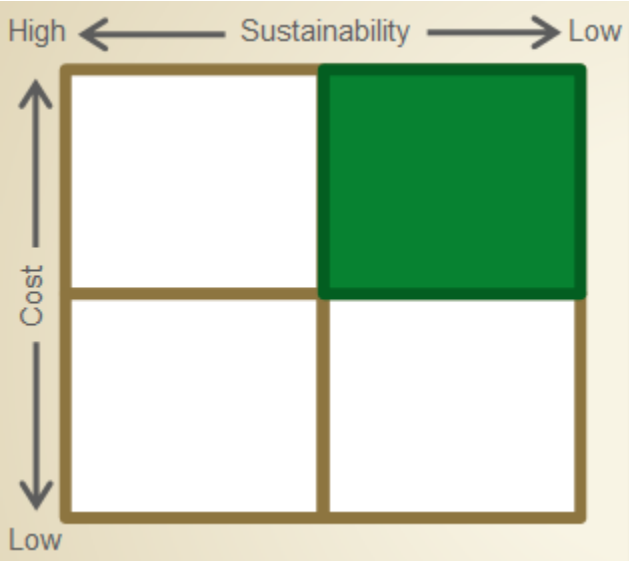


High Sustainability/High Cost

The high cost of these options may make them impossible to implement, especially in the short term. However, because they are sustainable, it's a good idea to at least consider them, possibly as part of a strategic, long-term plan. Weigh these options against your other priorities and your budget.

Sample activity:

- Hire additional Spanish-speaking outreach workers.

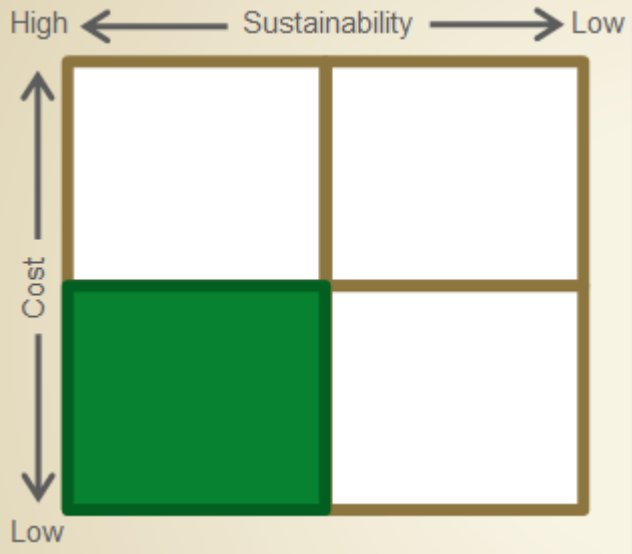


Low Sustainability/High Cost

These actions are generally not worth considering. They cost a great deal and aren't sustainable.

Sample activity:

- Hold a gala fundraising event for the community's Hispanic leaders at a local hotel.



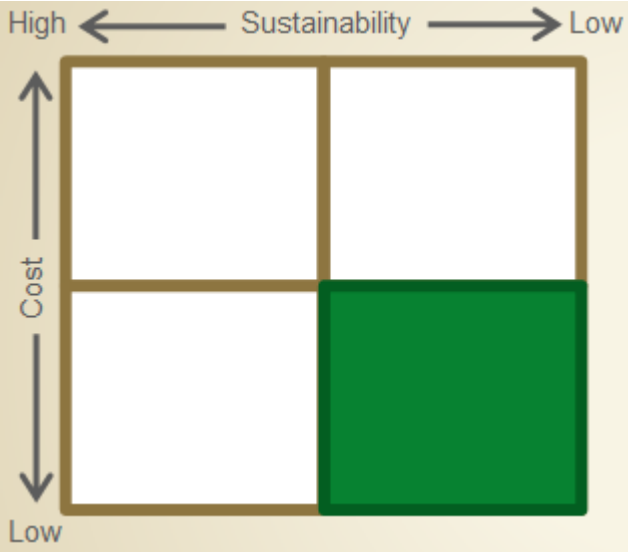
High Sustainability/Low Cost

The actions in this quadrant may become your top priorities. While they are not expensive to implement, they can accomplish a great deal and have long-term impact.

Sample activities:

- Continue to build partnerships and develop MOUs with community agencies that work in the Hispanic community.

- Develop a recruitment script written in Spanish.



Low Sustainability/Low Cost

The actions in this quadrant may be worth doing. While you might not be able to keep the actions going over the long term, they don't require much in the way of resources.

Sample activity:

- Hold a potluck recruitment fair at local churches attended by Spanish-speaking families in the community.

7. Think of the Possibilities: Prioritizing Problems

Which criteria should you use? The answer will vary based on your situation. You may even want to try several combinations and see what effect they elicit.

Use the following scenario to explore several possible combinations of four sample criteria to find a range of solutions to a challenge.

Scenario: Your annual self-assessment revealed that many teachers struggle to implement science activities in the classroom. Your program wants to increase teachers' ability to support children's science learning in order to better promote their kindergarten readiness. This is especially important because your local school district has a strong K–12 emphasis on science, technology, engineering, art, and mathematics (STEAM).

NOTE: Items have been placed in the quadrant where most Head Start programs are likely to place them. However, circumstances in your own area might lead you to think a different quadrant is more appropriate. For instance, costs may vary; something that is high-cost in one area, such as community college tuition, may be low-cost in another. If you already have a strong partnership with your LEA, it may be easier to share training with them.

Below are some criteria, along with their definitions, that are commonly used to prioritize possible actions. There are six possible combinations of criteria to explore. The combinations are explained below.

Criteria:

1. Cost
2. Ease of Implementation
3. Sustainability
4. Effectiveness

Cost

The monetary resources required to carry out an action. This is always a factor to consider in weighing decisions. Remember, though, that a high-cost action may still be worth pursuing if the benefits outweigh the cost.

Ease of Implementation

The degree to which you have the ready resources and ability to carry out an action. This may include time, skills, and available staff.

Sustainability

The ability to continue something over a period of days, months, or years.

Effectiveness

The benefit to the children, families, and staff of your program.

Comparison of Cost with Ease of Implementation

High Cost/High Ease

Purchase pre-packaged science kits and distribute them with books on how to set up a science area in the classroom.

Low Cost/High Ease

Provide opportunities during teacher planning time to view OHS's Teacher Time series related to STEAM.

High Cost/Low Ease

Ask the community college to design a series of courses about preschool science. Arrange for teachers to attend.

Low Cost/Low Ease

Provide opportunities for Head Start teachers to attend public school staff training.

Comparison of Cost with Sustainability

High Cost/High Sustainability

Focus on science in this year's T/TA plan and in teachers' individual professional development plans. Contract with an outside consultant with expertise in STEAM to provide a series of workshops, followed by classroom observations by education coordinators to measure implementation.

Low Cost/High Sustainability

Invite the education manager to obtain training from the T/TA early childhood education specialist to build her capacity regarding STEAM.

High Cost/Low Sustainability

Purchase pre-packaged science kits and distribute them with books on how to set up a science area in the classroom.

Low Cost/Low Sustainability

Provide teachers with an article on implementing science in the classroom.

Comparison of Cost with Effectiveness

High Cost/High Effectiveness

Focus on science in this year's T/TA plan and in teachers' individual professional development plans. Contract with an outside consultant with expertise in STEAM to provide a series of workshops, followed by classroom observations by education coordinators to measure implementation.

Low Cost/High Effectiveness

Identify teachers within the program who are strong in incorporating STEAM into the classroom. Use them as coaches to provide teachers with individualized, practice-based coaching on increasing science activities in the classroom.

High Cost/Low Effectiveness

Purchase pre-packaged science kits and distribute them with books on how to set up a science area in the classroom.

Low Cost/Low Effectiveness

Provide teachers with an article on implementing science in the classroom.

Comparison of Ease of Implementation with Sustainability

High Ease/High Sustainability

Invite the education manager to obtain training from the T/TA early childhood education specialist

to build her capacity regarding STEAM.

Low Ease/High Sustainability

Identify teachers within the program who are strong in incorporating STEAM into the classroom. Use them as coaches to provide teachers with individualized, practice-based coaching on increasing science activities in the classroom.

High Ease/Low Sustainability

Offer a three-hour in-service workshop on science by a local education consultant.

Low Ease/Low Sustainability

Require teachers to conduct a science-focused activity every day.

Comparison of Ease of Implementation with Effectiveness

High Ease/High Effectiveness

Invite the education manager to obtain training from the T/TA early childhood education specialist to build her capacity regarding STEAM.

Low Ease/High Effectiveness

Provide opportunities for Head Start teachers to attend public school staff STEAM training.

High Ease/Low Effectiveness

Provide teachers with an article on implementing science in the classroom.

Low Ease/Low Effectiveness

Require teachers to conduct a science-focused activity every day.

Comparison of Sustainability with Effectiveness

High Effectiveness/High Sustainability

Set a program goal of increasing teachers' ability to support children's science learning.

Low Effectiveness/High Sustainability

Develop standardized science activity plans that all teachers will do every quarter.

High Effectiveness/Low Sustainability

Contract with an outside consultant with expertise in STEAM for one year to provide a series of workshops, followed by classroom observations by education coordinators to measure implementation.

Low Effectiveness/Low Sustainability

Increase teachers' awareness of STEAM by sending them to a national conference to attend sessions presented by experts in the field on implementing STEAM in the classroom.

6. Think of the Possibilities: Prioritizing Problems

Scenario: Family Partnership Agreements

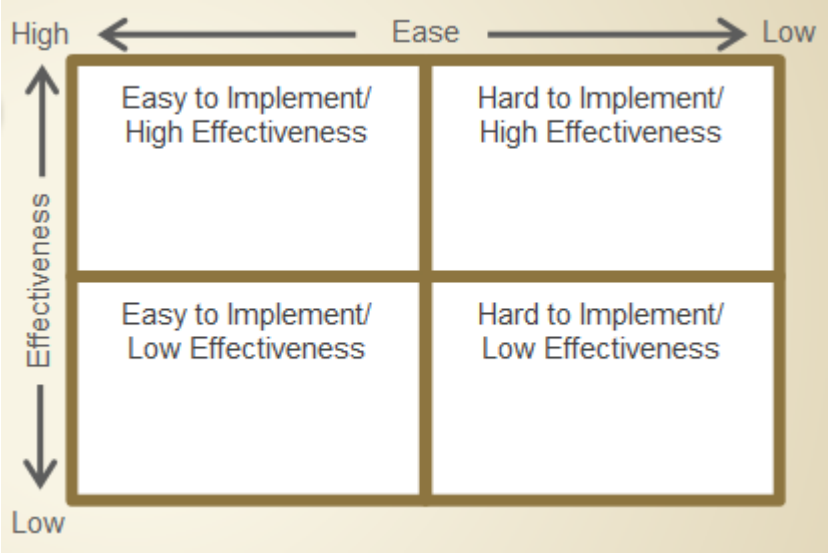
Your ongoing monitoring data show that only 50% of your families have engaged in developing family partnership agreements to date.

In meetings, the local community agencies with which you partner have asked whether their services are represented in families' goals. Services include housing, employment, general education development (GED) completion, and courses in English for non-native speakers.

You're concerned about the low numbers of meaningful family partnership agreements and want to develop a more effective way of engaging families in the process.

6.1. Think of the Possibilities: Prioritizing Problems

Read the potential solution. Then, select the quadrant where you would place the solution.



Potential Solution 1:

Hire additional family service workers so each staff has fewer families with whom to work. Currently, the case load is one teacher to every 50 families, or 1:50.

Feedback

If you selected "**Hard to Implement/High Effectiveness**:"

You've chosen the right quadrant. If family service staff had reduced caseloads, they would be able to spend more time with each family helping to develop meaningful partnership agreements. However, it's

not easy to accomplish. You would have to take a long, hard look at whether you can afford to do this.

If you selected any other quadrant:

We think there is a better answer; please try again.

6.2. Think of the Possibilities: Prioritizing Problems

Read the potential solution. Then, select the quadrant where you would place the solution.

Potential Solution 2:

Make the family partnership agreement form into a checklist that is easily completed by families without assistance from staff.

Feedback

If you selected "**Easy to Implement/Low Effectiveness**:"

You've chosen the right quadrant. This is an easy but not effective solution. Sure you could develop a checklist in a short period of time, but that's not a good way to support family goal-setting.

If you selected any other quadrant:

That is incorrect; please try again.

6.3. Think of the Possibilities: Prioritizing Problems

Read the potential solution. Then, select the quadrant where you would place the solution.

Potential Solution 3:

Make use of technology, such as phone calls, email, social media, or texts, for ongoing communication with families between home visits.

Feedback

If you selected "**Easy to Implement/High Effectiveness**:"

Good choice. Technology can be an effective way to continue communication with families once the groundwork of establishing relationships has been laid. Technology can be used for many things, from making and confirming appointments to providing helpful information. When available and used appropriately, technology can support communication and relationship-building.

If you selected any other quadrant:

That is incorrect; please try again.

6.4. Think of the Possibilities: Prioritizing Problems

Read the potential solution. Then, select the quadrant where you would place the solution.

Potential Solution 4:

Set up a central location where families can drop in and meet with family service workers. Allow enough time so parents aren't rushed.

Feedback

If you selected "**Hard to Implement/Low Effectiveness**:"

That's the right quadrant. Having a central location might be easy for staff, but is not likely to be easy for parents. The lives of most parents are too busy to allow them to add one more thing to their schedules. Besides, having parents drop in would be chaotic. Some parents might end up having to wait a long time, and it sounds like they would meet with whoever happens to be free. Not a great way to build a relationship.

If you selected any other quadrant:

That is incorrect; please try again.

6.5. Think of the Possibilities: Prioritizing Problems

Read the potential solution. Then, select the quadrant where you would place the solution.

Potential Solution 5:

Provide training for family services staff on developing respectful relationships and helping families set meaningful goals.

If you selected "**Easy to Implement/High Effectiveness**:"

Nice! You've chosen the right quadrant. Assuming you have the resources to provide this professional development, it's easy to implement and highly effective but also offers long-term sustainability.

If you selected any other quadrant:

That is incorrect; please try again.

7. What Would You Do?

You've placed each of the options into the quadrant. Now, it's decision time! When you use a four-quadrant grid, you don't automatically pick all of the solutions from a specific box.

In this activity, you will help the team consider what they've learned in the prioritization process and then make their final selections.

Here are some of the options the team is considering. Indicate which ones you think they should pursue.

1. Set up a central location where families can drop in and meet with family service staff. Allow at least an hour for each meeting so parents don't feel rushed.
2. Make your program's family partnership agreement form into a checklist that can easily be completed by families without assistance from staff. Develop a process for collecting the checklist.
3. Hire additional staff so each family service worker has fewer families with whom to work.
4. Make use of technology, such as phone calls, email, social media, or texts, for ongoing communication with families between home visits.
5. Provide training for family services staff on developing respectful relationships and helping families set meaningful goals.

Our Recommendations

1. **Don't Do It:** Set up a central location where families can drop in and meet with family service staff. Allow at least an hour for each meeting so parents don't feel rushed.
2. **Don't Do It:** Make your program's family partnership agreement form into a checklist that can easily be completed by families without assistance from staff. Develop a process for collecting the checklist.
3. **Do It:** Hire additional staff so each family service worker has fewer families with whom to work.
4. **Do It:** Make use of technology, such as phone calls, email, social media, or texts, for ongoing communication with families between home visits.
5. **Do It:** Provide training for family services staff on developing respectful relationships and helping families set meaningful goals.

8. What Would You Do?

The four-quadrant grid can be a helpful tool to evaluate and prioritize potential actions.

Using criteria such as ease of implementation, cost, effectiveness, and sustainability can help you:

- Weigh the pros and cons of potential actions
- Look at potential results for both the long- and short-term
- Balance cost against effectiveness and ease
- Make practical decisions about the best use of your program's resources

9. Conclusion

We looked at developing more effective family partnership agreements through the lenses of ease of implementation and effectiveness. Remember that cost is always a consideration but not necessarily a deal breaker.

Visualize your options on a balance scale. Are effectiveness and sustainability so strong that they outweigh cost? Is there an option you might pursue in the short term because it is so easy to accomplish, even though it might not have long-term impact? There is no "one size fits all" to these kinds of decisions.

Arranging the possibilities in a four-quadrant grid can help your management team focus on the what-ifs of a particular action. At a minimum, it will clarify where you do and do not agree. The tool will help you play out the potential risks in your actions.

Extend Your Learning

- Data in Head Start and Early Head Start:
  - Data Analysis Terms and Concepts [PDF, 462KB]
    Explore a comprehensive glossary of commonly used terms for data and evaluation.
  - Annotated Bibliography [PDF, 335KB]
    Find links to useful resources on using data.
  - Teacher Time Series
    These training videos and materials may be used in a variety of professional development activities.

Activity 6: Share Data

This activity shows how the same data can be effectively shared with different audiences. It also offers some approaches for responding to tough questions.

Activity 6: Share Data

1. Share Data

Everyone knows the expression "Share and share alike." When it comes to sharing your data though, it might be better to think of it as "Share and share not alike."

What you share and how and when you share data depends on your audience. Different audiences need different views of the data. As you write a report or develop a presentation, think about the following questions:

- What is the purpose of your report? Does it need to inform or raise awareness? Will it serve as the basis for a decision?
- What does the audience already know about the topic? Are they novices, experts, generalists, or managers?
- What level of information do they need: big picture or tons of details?

In this activity, you will learn how to present data in ways that are appealing, accessible, accurate, and audience-specific.

2. What's Your Story?

Presentation of Annual Report Data

The Head Start Act requires each agency to publish an annual report to the public. It must include eight specific items, which are spelled out in Sec. 644(a)(2). The Act dictates what kinds of numbers and facts you must include in your annual report. However, it's up to you to make them meaningful and interesting. Your annual report should tell a story.

In this activity, you will create a presentation for your program's Policy Council and governing body about two of the eight required elements of an annual report.

2.1. What's Your Story?

Your annual report must show the total public and private funds received, and the amount received from each source. You have thought of several ways to present this information to the governing body and Policy Council. Review each slide below and then decide which one does the best job of presenting this information.

Slide 1

Funding Source	**Funding Amount**
Head Start	$4,768,249
Early Head Start	$863,760
Child and Adult Care Food Program	$533,753
In-Kind Contributions	$1,309,442
Self-Pay	$487,413
Total	$7,962,617

Figure 31. Table showing funding sources and amounts

Slide 2

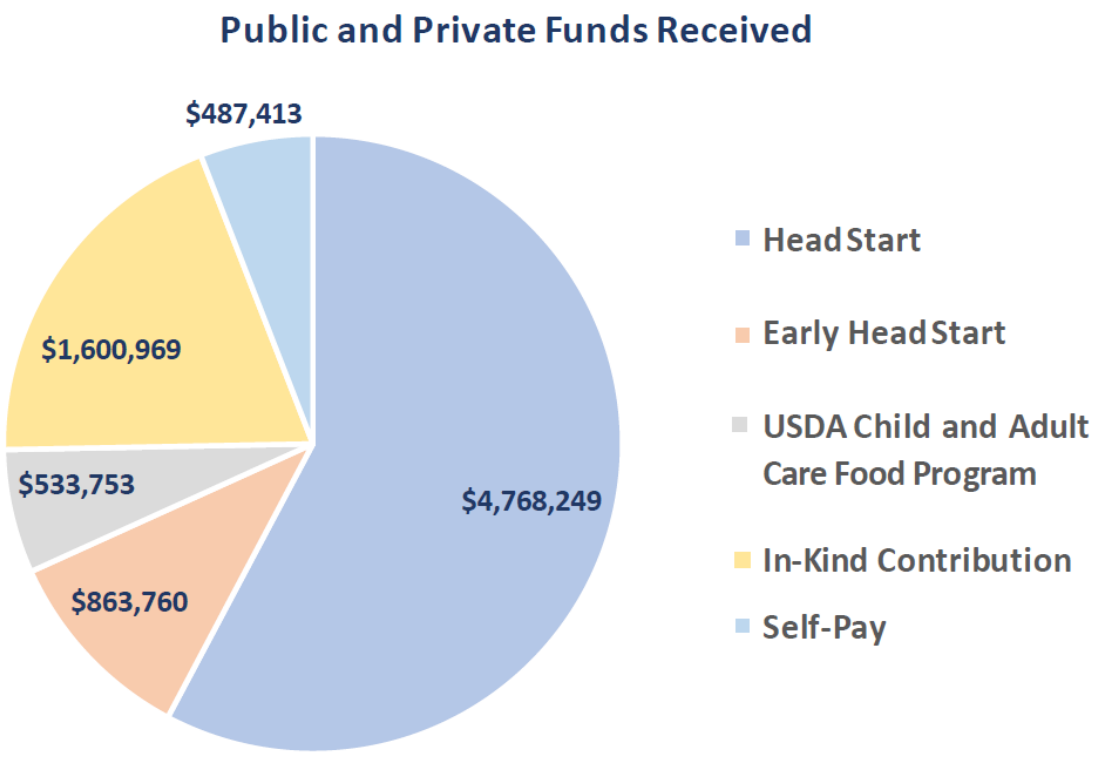


Figure 32. Pie chart showing funding sources and amounts

Slide 3

Our program, ACE Head Start, receives most of its money from OHS. We receive a total of just more than $5,600,000 in direct funding for our Head Start and Early Head Start programs.

All Head Start programs that provide meal service are required to participate in the U.S. Department of Agriculture (USDA) Child and Adult Care Food Program. CACFP funding covers our food costs; food service-related costs, such as food supplies; and a portion of food service staff salaries.

Feedback

If you selected **Slide 1**:

There is a better choice. The table contains a great deal of information and might be useful in the written report, but it is likely to be difficult to read and contain too much detail to be understood in a verbal presentation. The narrative contains too many words to put on a presentation slide. It does contain important information, though. For example, the information about food service costs covered through your CACFP reimbursement is important. You may want to look for a more effective way of presenting the analysis.

If you selected **Slide 2**:

That's a great choice. In a presentation before your governing body and Policy Council, the pie chart is likely to be more easily understood than the other options. Lots of columns and numbers or words on a slide are hard to read and confusing. Of course, in your actual written annual report, you might want to support the pie chart with the table.

If you selected **Slide 3**:

This narrative contains too many words to put on a presentation slide. It does contain important information, though. For example, the information about food service costs covered through your CACFP reimbursement is important. You may want to look for a more effective way of presenting the analysis.

3. What's Your Story?

What will you say when you present this information? Choose a comment from the three options listed to add to the "Notes" section.

Notes:

1. You'll notice that we do have a bit of a problem this year. You may remember there's a requirement that we have a non-federal match of 20%. We only have 18.6%; so it's not a major problem because we're only 1.4% short, but it's still a problem.

2. One of the things we're going to look at this year is our food services costs. Our CACFP funding doesn't cover 100% of our food service program costs. We're considering how to cut costs while meeting CACFP requirements. We also want to continue to serve nutritious meals and snacks.

3. One important thing to note is that our in-kind match is 18.6%, so we don't meet the requirement for 20% non-federal match. We have a waiver from OHS on the match for this budget year. However, addressing this will be a priority for our next budget year. Also, our USDA CACFP funding doesn't cover the entire cost of our food service program.

Feedback

If you selected **Note 1**:

This response contains an alarmingly incorrect statement about the 18.6% non-federal match not being a major problem. While your program has a waiver for this budget year, in the future this could result in a disallowance and the need to return funds to the federal government. Your governing body and Policy Council need to know this is a serious issue and that you need their help to resolve it.

If you selected **Note 2**:

This response doesn't give the whole picture. You discuss the CACFP funding but overlook the vital information about not meeting the matching requirement for non-federal match. Your governing body and Policy Council need to know about this.

If you selected **Note 3**:

Great. You drew attention to the most relevant information, the two challenges that will require action. You did it in a way that was factual and nonjudgmental, which will make it easier for the governing body and Policy Council to explore them further.

4. Answer the Tough Questions

Are you prepared for questions?

You've finished your presentation, but it looks as though members of the group have questions for you. Be prepared to address their comments and concerns.

5. Answer the Tough Questions

How do you intend to meet the non-federal match requirement for a 20% match?

How will you respond?

1. We're very concerned about that. We hope the governing body will help us think about ways to leverage our community contacts to raise more non-federal match. Another difference is that a lot of the Early Head Start program is home-based rather than center-based.

2. We were surprised to see the percentage this year because we've always met the match in the past. Frankly, we haven't had time to think about what we're going to do. I'll have a better answer for you at the next meeting, I promise.

3. I don't see this as a major issue. The requirement is for 20% and we're at 18.6%. Two percentage points is not a big deal. I don't think that we'll have any problem upping it this year.

Feedback

If you selected **Response 1**:

You're right. This is the best answer. It expresses concern and invites the governing body and Policy Council to play a role in resolving the problem.

If you selected **Response 2**:

Not a good answer. It's important to be specific in responding to a request for additional information. If you don't have the data on hand, set a time when you can provide the complete data as a follow up.

If you selected **Response 3**:

Actually, that 18.6% is a major problem, so you've just given incorrect information to your governing body and Policy Council. It is your responsibility to provide accurate information and fully inform the governing body and Policy Council about problems.

6. Answer the Tough Questions

Can you provide the details about food service costs in relation to your CACFP reimbursement?

How will you respond?

1. Our CACFP reimbursement covers the cost of our food and food-related supplies, but the reimbursement doesn't cover our staff salaries. We think we can cut staff so we can make ends meet.

2. That information has been included in each of the monthly reports that I send out to the governing body and Policy Council. I can go back to each of those reports and send that information to you again.

3. I'll send out the detailed food service budget with the meeting minutes. We're doing a thorough analysis of our food service program. We're analyzing the overall cost of our food service contract, whether we're preparing appropriate amounts of food, and whether using single-service disposable items would be more cost effective.

Feedback

If you selected **Response 1**:
Not the best choice. Just saying that you'll cut staff to reduce food costs isn't a sound way to proceed. You need data to support that choice.

If you selected **Response 2**:

There's a better choice. Since governing body and Policy Council members have been reviewing the monthly data, in this case an annual budget that gives the big picture would be more helpful than resending the monthly reports.

If you selected **Response 3**:

Good choice! Sending out the detailed budget in a form that allows members to review it carefully and describing further data analysis are strong responses.

7. Answer the Tough Questions

How do our costs per child for Head Start compare to our costs per child for Early Head Start?

How will you respond?

1. Comparing Head Start and Early Head Start costs per child is like comparing apples and oranges because of the differences in staff-child ratios, group sizes, and staff qualifications.

2. It's not actually useful to make that comparison.

3. Yes. Our cost per Head Start child is $9,014. Our cost per Early Head Start child is $15,700.

Feedback

If you selected **Response 1**:

Good explanation. You helped the audience understand the context for the comparison.
If you selected **Response 2**:
While it's true that it isn't useful to compare cost per child in Head Start and Early Head Start programs, it's best to respond with an explanation of why it isn't useful. This is one time when the numbers themselves don't mean much without some context.

If you selected **Response 3**:

While it's true that it isn't useful to compare cost per child in Head Start and Early Head Start programs, it's best to respond with an explanation of why it isn't useful. This is one time when the numbers themselves don't mean much without some context.

8. What's Your Story?

Your annual report must include the percentage of enrolled children who have received medical and dental exams. Fortunately, your management information system tracks this data and you keep it up to date for your PIR, so the information is easy to access.

8.1. What's Your Story?

You have prepared several slide options for the presentation to your governing body and Policy Council. Select each slide in the slide organizer to see a larger version. When you've selected the slide that does the best job, select "Use This One."

Slide 1

Data on Percentage of Enrolled Children That Received Medical and Dental Exams*

- Medical exams completed: 90% (Head Start); 90% (Early Head Start)
- Dental exams completed: 92% (Head Start); 2% (Early Head Start)

* Statistics include children who were enrolled at any time during the 2018-2019 program year, including children who dropped the program.

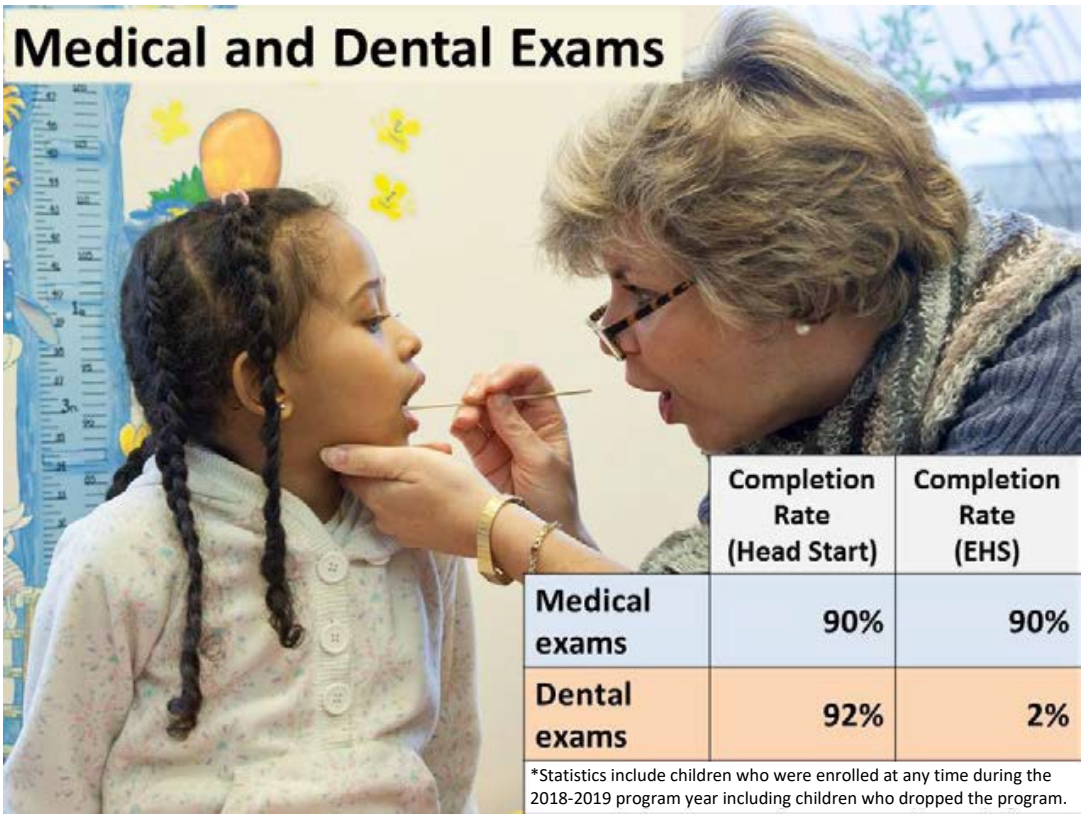
Slide 2

Medical and Dental Exams

- Medical exams completed: 90% (Head Start) 90% (Early Head Start)
- Dental exams completed: 92% (Head Start) 2% (Early Head Start)

*Statistics include children who were enrolled at any time during the 2018-2019 program year including children who dropped the program

Slide 3



Feedback

If you selected **Slide 1**:

Actually, we don't really think that slides 1 or 2 meet the "attractive" criteria. Slide 1 is too wordy and not well organized. Slide 2 tries harder but just isn't quite there.

If you selected **Slide 2**:

This is not the best choice. Because it has a picture, it's better than the text-only slide. Keep looking. We think there's still a better choice.

If you selected **Slide 3**:

Yes. This slide best meets the "attractive" criteria. It uses a table to present the data and a photo to bring the slide to life. In your presentation, of course, you'd use a photo of children in your own program.

9. What's Your Story?

Now add your comments to the "Notes" section. What will you say when you present this information?

Notes:

1. Clearly we haven't made dental exams for children in our Early Head Start program a priority. If we want to see change in this area, somebody, probably the health services manager, needs to make this an area of focus. We need more accountability and action around this requirement.
2. We are all dedicated to seeing that every child in both our Head Start and Early Head Start programs finds a medical and dental home and receives the necessary exams.
3. We are concerned about the low percentage of Early Head Start children who have had a dental exam. The American Academy of Pediatrics, the American Academy of Family Physicians, the American Dental Association, and the American Academy of Pediatric Dentistry all recommend that children have their first dental visit by age 1.

Feedback

If you selected **Note 1**:

We disagree. This response identifies one of the issues the data raise but seems to point fingers and doesn't state the problem in a way that would lead to positive problem solving.

If you selected **Note 2**:

This response says you're dedicated to finding medical and dental homes but doesn't acknowledge that you've been less than successful in some areas.

If you selected **Note 3**:

Good choice. You've explained what is significant in the data that you presented.

10. Answer the Tough Questions

Are you prepared for questions?

You've finished your presentation, but it looks as though members of the group have questions for you. Be prepared to address their comments and concerns.

11. Answer the Tough Questions

How do you know that your information is accurate?
How will you respond?

1. Several management team members reviewed the data from our management information system carefully in advance of this meeting to ensure this information is correct.
2. Our management information system allows us to track dental exams on an ongoing basis. We have a system for data input and review. When our health services specialists receive the completed forms from the primary care provider (e.g., physician or nurse practitioner) or dentist, they put the information into the system immediately. Our health services manager reviews the reports monthly and discusses any discrepancies with the specialist who entered the data. We have reduced our error rate from 15% to 2% in the last two years.
3. We have very smart and caring staff doing the data entry. We know this because they are so embarrassed when we find a mistake.

Feedback
If you selected **Response 1**:

Try again. It's good to let your audience know that staff has checked the data from your management information system for accuracy. Providing more specifics about the kind of data you have been collecting and about the decrease in error rate will increase your audience's confidence in the accuracy.

If you selected **Response 2**:

Yes. You've given a very thorough answer, including providing statistics on how the new procedure you instituted has reduced the error rate.

If you selected **Response 3**:

Not good enough. Smart, caring staff doesn't constitute an adequate, ongoing monitoring system. You might want to describe your system for reviewing the data provided by your smart, caring (and easily embarrassed) staff.

12. Answer the Tough Questions

Why is the percentage of dental exams in our Early Head Start program so low? That looks like a big red flag to me.

How will you respond?

1. It's a problem and we're hoping that more pediatric dentists establish a practice in our community.

2. As the data show, we do not have enough pediatric dentists in our service area. We are working with our HSAC to build relationships with general dentists who treat infants and young children. We also need to help parents understand that oral health is part of children's overall health and dental exams are important.
3. For two years, we've been trying to get more pediatric dentists to provide care in our service area, but this has been difficult because we are located in a rural area.

Feedback

If you selected **Response 1**:

It's good that you aren't defensive about agreeing it is a concern. It would be even better to also provide information about how you are trying to address it.

If you selected **Response 2**:
This is a nice, non-defensive, thoughtful answer. It provides an explanation for why the problem shown in the data is occurring, highlights the significant data, and shows how you are working to resolve the problem.

If you selected **Response 3**:

It's good that you aren't defensive about agreeing that it is a concern. It would be even better to also provide information about how you are trying to address it.

13. Answer the Tough Questions

I'm curious about whether you have data on timeliness of completion for these exams and about whether there are patterns of health or dental issues that emerge from these exams.

How will you respond?

1. Hmm. Good questions. I'm afraid I haven't thought about either of them. Maybe my health services manager has, though. I hold her accountable for knowing the details about things like that. I can't hold all of that information in my head.
2. You may remember that we talked about both of those things last year, and nothing has changed. We're fine on timeliness of completion and no new health issues have emerged.
3. I do. Our management information system lets us look at both timeliness and patterns of issues. I'll send you the details in a follow-up report. The data on health issues has been especially interesting to us, and we've been discussing them with our HSAC.

Feedback

If you selected **Response 1**:

We don't think that either your governing body or Policy Council would be satisfied with these answers. If you can't answer the more detailed question during the meeting, your best recourse is to promise to do some follow-up and send an update to the group.

If you selected **Response 2**:

We don't think that either your governing body or Policy Council would be satisfied with these answers. If you can't answer the more detailed question during the meeting, your best recourse is to promise to do some follow-up and send an update to the group.

If you selected **Response 3**:

Nice answer. Sometimes you don't have the details at your fingertips during a meeting, but you know you can put your hands on the information quickly. Promising a timely follow-up report and showing that you are aware of and have been taking action on health issues are good immediate responses.

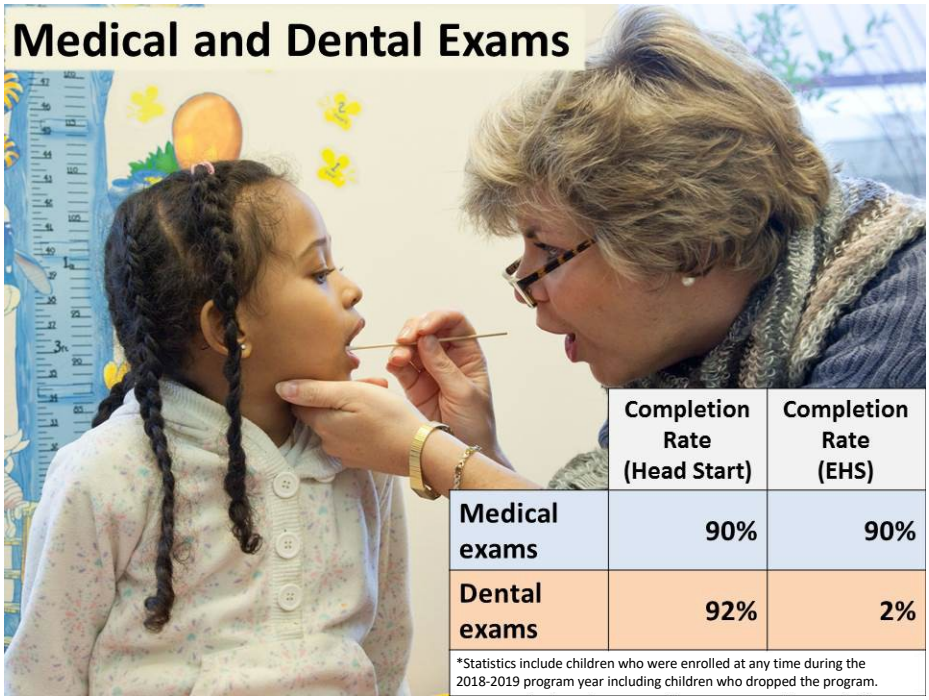
14. What's Your Story?

We've been talking about making presentations audience-specific. In the previous scenario, you provided information from your annual report about medical and dental exams to your governing body and Policy Council. What if you were presenting the same information at a parent meeting? Would you show it the same way? Let's take a look at how you might present the same information to this very different audience.

14.1. What's Your Story?

You have prepared several slide options for a parent meeting presentation. Review each slide, and then decide which one does the best job.

Slide 1



Slide 2

True or False?

I don’t need to take my baby to the dentist as long as he or she has only a few teeth.

☐ True

☐ False

Slide 3

Untreated Dental Decay

This is what can happen when young children have untreated dental decay.

Feedback

If you selected **Slide 1**:

There's a better choice. In this case, the slide with the table and photo that was most appropriate for your presentation to the governing body and Policy Council isn't the best choice here. You might want to include it later, though. Instead, it's a good idea to get parents interested by posing a question that relates to their experience.

If you selected **Slide 2**:

We agree. The slide with the table and photo was most appropriate to your presentation to the governing body and Policy Council. It isn't the best choice for the same topic at a parent meeting.

One effective way to start a presentation is to connect the topic to the audience's experience. Your true/false statement does that well and is a good lead-in to the slide you used with the governing body and Policy Council.

If you selected **Slide 3**:

We prefer the slide that gets parents interested by posing the true/false statement relating to their own beliefs rather than this one which presents such an alarming image.

9. What's Your Story?

Now add your comments to the "Notes" section of this screen. What will you say when you present this information?

Notes:

1. Today we're going to talk about taking children to the dentist. Is it a good idea or a bad idea to take infants to the dentist when they don't even have teeth? Can't their first visit to the dentist wait until they get their permanent teeth? What do you think?

2. Oral healthcare is very important, even for infants and toddlers. A lot of people think children under 3 don't have to go to the dentist. But actually, even if they don't have teeth or only have their baby teeth, it is important to take your children to the dentist. Here's why.

3. Our program has a big problem, and we want your help to fix it. We have to report the percentage of Early Head Start children who have medical and dental exams. Most of you are taking your children to the doctor for physicals, but almost none of you are taking your children to the dentist. We could lose our grant if this doesn't change.

Feedback

If you selected **Note 1**:

At first glance, this looks like a great choice because it asks the parents to talk about the question on the slide. Here's something to think about, though. It puts parents on the spot before they have good information on which to base their answer. It's better to give them the information about why it's important to take children to the dentist. It could be interesting to revisit your first slide at the end of the presentation and see if parents have changed their minds because of the information.

If you selected **Note 2**:

We think this one is best, too. You put a thought-provoking statement on the slide and then start the presentation by using it. End by showing a simplified version of the data that shows EHS parents aren't

taking their children to the dentist and ask for parents' help in changing the percentage of children having dental exams. Saying that you could lose your grant if parents don't take their children to the dentist is inappropriate.

If you selected **Note 3**:

We don't think this is the best choice for this group. Instead, capture parents' interest by asking them to respond to a thought-provoking statement. Then, continue with information to help them understand the answer. Before you finish your presentation, you will want to encourage parents to take their infants and toddlers to the dentist, and you can link this to your data. But saying that you could lose your grant if parents don't take their children to the dentist is inappropriate.

15. Answer the Tough Questions

Are you prepared for questions?

You've finished your presentation, but it looks as though members of the group have questions for you. Be prepared to address their comments and concerns.

16. Answer the Tough Questions

I've been having trouble finding a dentist who will see my 2-year-old. Do you have any information about how many dentists in this area are willing to provide care to children under age 3 and enrolled in Medicaid?

How will you respond?

1. Good questions. This is a serious issue in our community. We're doing a new community needs assessment, and the questions you asked are part of what we're investigating. In addition to surveying local dentists, we're planning to send out a survey to parents. You can help us gather the data by completing the survey. I'll also be glad to share the results with you.

2. No. We don't have any data on how bad the problem is.

3. Our HSAC has told us that no one in the community is tracking this information. We think that's too bad because it would be important information for us to have.

Feedback

If you selected **Response 1**:

The parent asked some excellent, data-related follow-up questions. Your answer showed that you're working on collecting the data. You also addressed how parents can contribute and promised to share the results. This is a very thorough answer. You also may consider asking this thoughtful parent to join the Policy Council.

If you selected **Response 2**:

Rather than just saying you don't have any information, it would be better to let parents know that you will be working with your HSAC to gather this data. Since a parent survey will be part of this data collection effort, enlist their help in getting parents to complete the surveys so you'll have a good response rate.

If you selected **Response 3**:

Rather than just saying no one is collecting the data, it would be better to let parents know that you will be working with your HSAC to gather this data. Since a parent survey will be part of this data collection effort, enlist their help in getting parents to complete the surveys so you'll have a good response rate.

17. Answer the Tough Questions

I want to make sure I understand the chart that you showed us. I think it shows that most parents of children in Head Start take their child to the dentist but only a few parents of Early Head Start children take their child to the dentist.

How will you respond?

1. Exactly. Head Start parents are used to taking their children to the dentist.

2. Would it be easier to understand if I showed it to you in a pie chart?

3. You're right. That's exactly what that table shows. Ninety percent of children in Head Start had a dental exam, but only 32% of children in our EHS program had one. Both dentists and medical providers recommend that children under age 3 see a dentist. We're working with our HSAC to help parents understand that it's important.

Feedback

If you selected **Response 1**:

In looking at the chart, we see that most parents of children in Head Start are taking their child to the dentist. A more complete explanation would refer to the data in the chart about children in EHS programs. We also see that fewer than half of EHS parents are taking their child to the dentist.

If you selected **Response 2**:

Actually, a pie chart most likely wouldn't be a better way to show this information. The table does a good job of laying out the data. An effective way to respond is to validate the parent's understanding of the chart by describing details of what the table says.

If you selected **Response 3**:
Nice answer to this parent's question. You validated her understanding of the chart and provided a more detailed view of what the data say. You also told the group how they could contribute to changing the data.

18. Answer the Tough Questions

Is there really a problem if we don't take our children to the dentist until they turn 3? Can you explain why?

How will you respond?

1. Many children with tooth pain are distracted from learning.
2. Some statistics mirror our own program's data and show why this is an issue for families. Reports from the U.S. Centers for Disease Control and Prevention (CDC) indicate that:
    - Tooth decay (dental caries) affects children in the United States more than any other chronic infectious disease
    - Untreated tooth decay causes pain and infections that may lead to problems with skills such as eating, speaking, playing, and learning
3. Children from low-income families experience more tooth decay and resultant pain and suffering than children from families with higher incomes.[1]

Feedback

If you selected **Response 1**:

Not the best choice. The answer does not connect the data to the audience.

If you selected **Response 2**:

Good choice. This response directly connects the research data to the audience and makes a compelling argument.

If you selected **Response 3**:

Not the best choice. The answer provides some meaningful information but does not answer the question.

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[1] Edelstein, BL. Access to Dental Care for Head Start Enrollees. *Journal of Public Health Dentistry,* 60(3): pp. 221–229. 2000.Make your presentation or report:

19. Conclusion

It's important to tailor presentations to your audience. Present your information in a way that makes it easy for them to understand.

- **Appealing**: Keep it simple, clear, and visually attractive. Tell a story in a compelling way.
- **Accessible**: Use an appropriate reading level and avoid jargon or acronyms that the audience doesn't understand. Use bullets rather than long narratives and use the languages spoken by the audience members.
- **Accurate**: Data must be free of errors. The report must convey what the data actually say, not what you wish the data said. Proofread your documents to catch typos that will leap out at the reader.
- **Audience-specific**: Highlight the issues that the audience cares about. Take into account the level of detail needed by the audience and their prior knowledge of the topic.

Remember, this activity focused on just two of the eight required elements of an annual report. The Head Start Act details the information Head Start and Early Head Start programs must include in their annual report to the public.

Extend Your Learning

- Data in Head Start and Early Head Start:
  - Data Analysis Terms and Concepts [PDF, 462KB]
    Explore a comprehensive glossary of commonly used terms for data and evaluation.
  - Annotated Bibliography [PDF, 335KB]
    Find links to useful resources on using data.
  - Attributes of a Good Data Display [PDF, 230KB]
    This handout includes a data display quality checklist and an example of a good and a poor data display.
- Which Chart or Graph Is Right for You?
  Explore a variety of chart formats and learn when to use each.