

Data Collection

by Capella Partnered with CARD



WHAT'S COVERED

This lesson will review the content from Unit 5: Data Collection by defining and discussing the following:

1. Behavior Reduction
2. Skill Acquisition Data
3. Graphing

1. Behavior Reduction

Collecting accurate data is a foundational part of any top-quality behavior intervention program for patients with autism spectrum disorder (ASD). Data are crucial for a variety of reasons:

1. Data enable a treatment program to be accountable for its effectiveness. ABA must be effective, and it must be continuously modified and adjusted to maintain maximum effectiveness.
2. Treatment decisions must be made virtually every day, and those decisions must be informed by data.
3. Accurate data collection helps maintain consistency across a patient's program.
4. Data collection is often required to secure and maintain funding.

What does this mean for you? The data you collect are very important! Without your data, your BCBA will have nothing on which to base their decisions. Also, accurate data collection is key; if your data are not accurate, the BCBA won't truly know what is happening with behavior.

Video Transcription

So now that we're here looking at measurement procedures, I just want to take a moment to remind you why data collection is really so important. And the main thing that I want you to take home from this is that if we don't take data, then we don't really know what's going on in the program with the client that we're working with. So it's really important to be able to see the changes that are taking place in the treatment program. So data really shows us if the child is getting better or if the client is not getting better and helps us make decisions about how to continue the program.

Data collection is an essential piece to any ABA treatment session. Instructors will be asked to take data on targeted behaviors and skills on a daily basis. There are two primary guidelines for data collection that will help instructors collect data that will most accurately represent the true nature of the behavior.

First, data should be recorded immediately after the occurrence of the behavior to facilitate validity and accuracy. We want instructors to take data immediately in order to prevent errors that may occur if data is taken after a long delay.

Next, data should contain all relevant information regarding the observation and the occurrence of the behavior in order to provide a complete account of the behavior, so that the information that we have collected is objective and clear and gives us a true representation of what behaviors actually occurred.

This chart outlines the different types of data collection:

Type of Data Collection	Definition
Frequency	The number of times the behavior is observed
Rate	The number of times a behavior occurs in a specified amount of time
Duration	The total amount of time the behavior lasts from start to finish
Response Latency	Measure of the elapsed time between the onset of a stimulus and the initiation of a response
Inter-Response Time (IRT)	The amount of time that elapses between two consecutive instances of a response class
Percent of Occurrence	The number of times a particular behavior occurs out of all possible opportunities for the behavior to occur
Interval Recording	Recording whether or not a behavior occurred within some interval of time: a. Whole Interval Recording: the interval is recorded as a “Yes, the behavior occurred” interval if the behavior occurs throughout the entire interval b. Partial Interval Recording: the interval is recorded as a “Yes, the behavior occurred” interval if it occurred at any point during the interval c. Momentary Time Sampling: at the end of a set interval, a “Yes, the behavior occurred” is recorded if the behavior is occurring at the moment the interval ends
Permanent Product Recording	The physical or tangible outcomes of a behavior

Each company has a specific type and style of data collection. Some use paper data sheets, while others have complex computer, iPad, or other technology-based systems for data collection. Refer to your company’s policy and your BCBA.

Many electronic data collection systems also include additional information beyond the data collection, such as the BIP, graphs, notes, etc. Your company and BCBA will train you on all of these specific components as needed for your role and patients.

2. Skill Acquisition Data

Skill acquisition data are important to demonstrate how the patient is progressing in building their repertoire of skills.

Skill acquisition data allow a BCBA to

- Identify skill deficits
- Monitor progress
- Determine mastery
- Ensure maintenance and generalization

Skill acquisition data allow a behavior technician to know what step of discrimination to move on to next, communicate effective and ineffective strategies to the BCBA, and determine mastery and when to introduce a new skill.

One type of data collection is trial by trial data collection, which is used when recording a patient's response to a discriminative stimulus (SD) on a trial by trial basis.

Types of responses can include

- Correct
- Incorrect
- No Response
- Prompt, such as IR prompt (incorrect response) or CR prompt (correct response)

Another type of data collection is percent correct, a calculation that helps us to determine the proportion of correct responses out of the total responses made.

Video Transcription

Here we go. What is it? Say hot dog.

Hot dog.

Oh my goodness, that was so good. What is it? Say hot dog.

Hot dog.

Good job, my friend. Good job, my friend. What is it? Say

Hot dog.

Good job, Mister. Give me five. Yeah, give me five. Awesome. What is it?

Hot dog.

Wow. You got it. That's right.

You're such a goose.

I want to do it again.

Do it again?

Do it again?

You're so smart, Mister.

Do again.

OK, we'll do it again in a sec. Sit up. Go ahead and sit up. Big in your chair.

Got to chew.

OK, finish chewing. You ready? OK, here we go. What is it? Oh, try again.

Hot dog.

Yeah, let's do it better, OK? What is it?

Hot dog.

Yay. Ready? Say do it again.

Do again.

Do--

Do again.

Crap Go faster.

Go faster? You're silly. OK, sit up in your chair. Ready? Try again. What's this?

[INAUDIBLE]

Nope, try again. What's this?

Hot dog.

There you go, Mister. What's this?

Hot dog.

Hot dog. Good job. Give me five. OK, one more. What's this? Oh, try again. What's this?

Hot dog.

Hot dog. You are so smart.



HINT

As previously discussed, there are many different types and styles of data collection forms. This can vary with the company or school, BCBA, patient, environment, etc. Your BCBA will let you know how to collect the data and what type of data to collect.

3. Graphing

Graphs are visual representations that display a comparison of one or more sets of data over a period of time.

A line graph uses lines to connect data points and shows changes in data over time:

- A skill repertoire building data analysis graph
- A behavior management data analysis graph

The six components of a line graph are outlined in the following table.

Line Graph Component	Description
X-axis and Y-axis	X-axis is the horizontal line across the bottom of the graph and represents the passage of time. Y-axis is the vertical line on the left side of the graph and represents the value of the summary measure for the graphed items or targets.
Axis labels	A brief description of each axis, written adjacent to the axis it represents.
Legend	Lists the graphed targets and identifies the symbol that corresponds to each of them.
Data points	Plotted on the graph to indicate the appropriate numerical value, according to the axis labels and legend.
Condition labels	A brief description of the teaching procedure or intervention written along the top of the graph, above the data that were collected during that condition.
Condition change line	A thin, vertical line drawn on the graph at the corresponding point in time when the condition changed.

Here are four guidelines for ensuring accurate and complete graphs:

1. Data points should be clearly drawn on the graph.
2. Connect data points with a line to delineate any trends in the data.
3. Indicate any large breaks in time when data on the target behavior were not collected, such as when a patient is sick for several days or is on vacation for two weeks.

4. Clearly identify any data points that represent a value that exceeds the highest value on the y-axis scale.



BIG IDEA

Skill repertoire building and behavior management line graphs include three basic sections:

- Identifying information
- Description of the graph
- Graphed data



SUMMARY

In this lesson, you reviewed what you have learned so far about data collection. As you may recall, collecting accurate data is fundamental to any top-quality behavior intervention program for patients with autism spectrum disorder (ASD). Without accurate data, the BCBA will not be able to accurately track **behavior reduction**. After reviewing the different types of data collection, you covered **skill acquisition data**, which are important for demonstrating how the patient is progressing in building their repertoire of skills. Lastly, you reviewed **graphing**, which uses visual representations (graphs) to display a comparison of one or more sets of data over a period of time.