

## **Formative Evaluation**

Formative evaluation will be done about once every 3 sessions in order to gather information about on-going treatment. Collection of data will depend on the nature of the task. For instance, for JN's sight reading task, a list of sight words would be provided and the student clinicians would check off which words were read by sight and which needed prompts and/or were read letter-by-letter. Most data can be gathered online. However, if the treatment activity requires heavy involvement on the part of both student clinicians, a video or audio recording may be taken so that data can be analyzed and recorded at a later date. Alternatively, the consulting student clinicians will record data in the observation room.

Treatment effectiveness will be measured by comparing recorded data and observing an increase in scores. In addition, an increase in JN's confidence and comfort with the tasks will be noted and recorded as part of treatment effectiveness. In addition, the families perception of JN progress will be taken into account when evaluating treatment effectiveness. Generalizability will also play a role in measuring treatment effective such that if the skill is generalized we will conclude that treatment was effective and allowed skills to be generalized. However, even though skills may not generalize to other context, treatment will still be considered effective if pre and post measure scores increase.

Goals:

1. JN will correctly use 15/20 irregular past tense verbs in sentences with no cues over 2 structured play activities with the clinicians.

### **Quantitative Measures:**

- a) Number of correct productions will be recorded on a data sheet during the structured play activity.
- b) Number of cues provided will be recorded.
- c) Number of structured play activities that target this goal. This is important as our goal includes that JN must have 15/20 correct verb productions over 2 structured play activities (can be in different sessions)

### **Qualitative Measures:**

- a) When cues are provided, the cue will be recorded as well as its general effectiveness.
  - b) Note any frustration or increased confidence in answering on the part of JN.
2. JN will use 2 intelligibility strategies (eye contact, volume, rate, and clear speech) with no cues throughout a 5 minute unstructured play activity in the waiting room with twin brother and/or mom.

### **Quantitative Measures:**

- a. Count the number of intelligibility strategies JN uses as well as the number of times they are used in a 5 minute conversation

- b. Count number of prompts and cues needed to get JN to produce the strategies.
- c. Rate overall loudness using a sound level meter (volume is one of our intelligibility strategies).

**Qualitative Measures:**

- a) Note which types of cues were most helpful for JN as well as anything he responded particularly well to.
- b) Note JN's attention and interest level during the task. See if there are any times he shuts down or stops paying attention.
- c) To get a sense of generalizability, take note of who JN is interacting with (ex. Mom, clinician, etc.) and if the number of strategies he uses differs between conversation partners.

- 3. JN will successfully read 31 words by sight (not letter-by-letter) with no cues, with 100% accuracy over 3 structured reading tasks.

**Quantitative Measures:**

- a) Count number of words JN correctly reads by sight
- b) Count number of words JN has to sound out/use other strategies to read the word.
- c) Count number of prompts/cues given
- d) Count number of tasks. This is important as our goal includes that JN must read 31 words by over 3 structured reading tasks (can be in different sessions).

**Qualitative Measures:**

- a) Note which words/types of words JN has most difficulty with (does word length affect his performance?)
- b) Note what types of cues seem most helpful for JN.
- c) Note attention and/or frustration level with task.

### **Summative Evaluation**

Summative evaluations will be done at the beginning of treatment (ideally before treatment has started, but possibly a week or two in), once half way through treatment, and once at the end of treatment (post-measure) for both quantitative and qualitative measures. Data will be collected online. As well, these sessions will be audio and/or video recorded in case data is missed during the session. Cues and supports will not be provided during these tasks as they are evaluations to see what JN can do without these supports. In other words, if he has achieved mastery of the target goal then he will be able to do the task without support. Cues will be documented by formative evaluations and therefore, performance with and without cues can be compared. Treatment effectiveness will be measured both by the difference in scores between pre-measures, middle measures, and post measure, as well as checking in with JN's mom or grandma to see how they think he is progressing. In some cases, generalizability will be built into the measure. For instance, in the intelligibility

goal we have JN try to use his strategies in a different setting than the treatment room and with a different communication partner. It is difficult to test generalizability of some skills, so treatment effectiveness will be measured as an increase in overall scores on pre, middle, and post measures. Treatment effectiveness will be measured both by the difference in scores between pre-measures, middle measures, and post measure as well as HN and her families perception of her progress. Generalizability will also play a role in measuring treatment effective such that if the skill is generalized we will conclude that treatment was effective and allowed skills to be generalized. However, even though skills may not generalize to other context, treatment will still be considered effective if pre and post measure scores increase. In general, the treatment plan is to follow the goal hierarchies and progress along the steps as the client reaches the appropriate level of mastery. Therefore, should the client reach a level of the hierarchy above where he started, this would also be documented as progress.

**Goals:**

1. JN will correctly use 15/20 irregular past tense verbs in sentences with no cues over 2 structured play activities with the clinicians.

**Quantitative Measures:**

- a) Pre measure: Number of correct productions on 20 pre-selected irregular past tense verbs during a structured play activity with the clinicians. These verbs will be elicited through structured play using various objects/toys as props. (Please see record form at the end of this section)
- b) Middle measures: Depends on the position in hierarchy. For instance, if JN is at the sentence level in a drill activity, the middle measure will be conducted using sentences in a drill activity (flashcards) using a game as reinforcement.
- c) Post measure: This will be the same as the pre-measure. To measure generalizability we may add an additional set of irregular past tense verbs to see if he has transferred skills to these other verbs.

**Qualitative Measures:**

- a) JN's perceived confidence level during the task will be noted.
  - b) To get a sense of generalization, ask JN's mother or grandmother if they have noticed a transfer of skills at home.
  - c) Ask JN's mother and grandmother if they have noticed progress in this area.
  - d) Ask JN about his perceptions of the task (did he find it difficult? Easy? Middle of the road?)
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2. JN will use 2 intelligibility strategies (eye contact, volume, rate, and clear speech) with no cues throughout a 5 minute unstructured play activity in the waiting room with twin brother and/or mom.

**Quantitative Measures:**

- a) Pre-measure: Count number of pre-determined intelligibility strategies J.N uses during a 5 minute unstructured play activity with the student clinician.
- b) Middle measure: This measure will depend on position in the hierarchy. For instance, it could take the shape of a structured play activity with mom and grandmother in the treatment room unless he is ready to progress beyond that.
- c) Post-measure: Same as pre-measure but with mother/grandmother/brother in the waiting room of Corbett. The change in setting and communication partners will help test generalizability. Progress will be considered an increase in number of spontaneously used strategies from pre to post.

**Qualitative Measures:**

- a) Check in with Mom and grandma as to their perceptions on how JN is doing. For instance, ask if they have noticed an increase in eye contact or volume at home.
  - b) Note JN's willingness to attempt the strategies as well as his ability to self monitor (does he stop himself and increase eye contact/volume/clear speech/decrease rate?)
  - c) Ask JN's mother and grandmother if they have noticed progress in this area.
3. JN will successfully read 31 words by sight (not letter-by-letter) with no cues, with 100% accuracy over 3 structured reading tasks.

**Quantitative Measures:**

- a) Pre-measure: Using the big "write your own adventure" book in the materials room, a story containing all 31 target words will be written. JN will read the story and data about which words he reads on sight will be recorded. Any additional words he struggles with will be recorded. (Please see record form at the end of this section)
- b) Middle measure: This measure will depend on the position in the hierarchy. For instance, JN has progressed to the drill in sentence level then the activity/task will be centered around this, for example sight word will appear in a sentence on a flashcard and a game (that has nothing to do with reading) will be used as reinforcement.
- c) Post measure: This will be the same as the premeasure. To measure generalizability, we will also measure his reading of sight words with a family member as this will show us a transfer of skills to different communication/reading partners. Therapy will be considered effective if his number of sight words increases.

**Qualitative Measures:**

- a) Note JN's interest level and comfort level with reading tasks.
- b) To get a sense of generalizability, ask family members about any changes with reading activities at home.
- c) Ask JN's mother and grandmother if they have noticed progress in this area (both in therapy and out).

## Summative Evaluation Data Forms

Pre/Post-Measure- Irregular Past Tense Verb

Activity: Structured play activity

- Please mark down whether J.N conjugates the verb correctly (to past tense)by circling the past tense verb if correct.. If incorrect please note what he said.

Verb	What he said
Ride→ Rode	
Swim→ Swam	
Drive→ Drove	
Bite→ Bit	
Fight→ Fought	
Give→ Gave	
Hold→ Held	
Leave→ Left	
Meet→ Met	
Run→ Ran	
Sing→ Sang	
Sit→ Sat	
Sleep→ Slept	
Eat→ Ate	
Stand→ Stood	
Drink→ Drank	
Write→ Wrote	
Come→ Came	
Dig→ Dug	
Spin→ Spun	

Pre/Post-Measure: Reading goal-Sight words  
Activity: Read book with 31 targeted sight words.

Girl	he
have	give
house	what
she	with
said	see
mom	there
come	name
here	look
light	them
down	around
make	put
out	help
cat	good
going	of
little	write
eat	

### **Portfolio Assessment**

#### **Rationale/Intents:**

The purpose of this portfolio is both to demonstrate JN's overall growth and progress over time as well as highlight his strengths in the area of speech and language. This portfolio will be most important for JN's mom and grandmother to see in a more concrete way the progress JN has made. As well, it will help his family members to be more aware of JN's speech and language strengths, as well as strengths in other areas. For instance, JN's mom expressed her belief that JN did not have any strengths. A portfolio could highlight JN's ability to learn and progress with support, and as well to reveal his creativity as he has demonstrated by his imaginative dialogues in therapy. In addition to providing support to the family, the portfolio could also potentially be used by JN's teachers as a way to see what level he is at, and the rate at which he typically learns.

We believe a portfolio assessment is important as it integrates both the client and the family in the assessment and progress monitoring process. The audio and visual recordings will mean more to JN's family members than scores alone. They provide concrete examples of differences that scores alone cannot convey. Without a portfolio like this, most assessments and progresses are restricted to the clinician's assessments and therefore, are usually based on standardized tests.

Using tools other than tests that the clinicians has administered allows JN and his family to be highly involved in the assessment portion of therapy which will likely lead them to see progress even though it may be slow and/or limited. Allowing JN and his family to realize and see the progress will benefit them such that it may increase JN's motivation to continue with speech therapy and to practice the skills he has learned and may also increase his confidence in her communication skills.

**Contents:**

1. Audio and video recordings of JN's use of the Four Keys to Clear Communication (Intelligibility strategies). These recordings may include his demonstration of someone breaking the rules in a puppet show, to show that he has knowledge of what those keys look like in action and what it looks like when someone is breaking them. The student clinicians will watch/listen to the recording together with the family and JN and highlight and point out positive demonstrations of JN's skills and strengths in the video.
2. List of irregular past tense verbs produced correctly at beginning of therapy and at end, written in parent-friendly language. This list will also be explained to the parent. The list of words will also be provided with pictures, as JN will have learned many of the words with pictures and this may aid his memory. Including this list will provide a concrete visual for JN and his family to see what verbs he knew at the start of therapy and which verbs he knows at the end.
3. Audio and video recordings of JN reading a book with some or all of his target sight words. This will provide a concrete example of how JN's reading fluency has improved. Again, these recordings will be watched with the family and JN and the skill that has shown improvement will be highlighted.
4. Drawings he produces during therapy. We believe it is important to include these items although drawing is not a targeted skill as it is important for JN to be able to see certain skills that he is good at. For instance, if he draws a picture related to a reading, then this should be included in the portfolio as he excels at drawing and it would provide a great example of an activity he is successful at.
5. List of sight words that JN consistently produces correctly both before and after therapy, written in parent friendly language. These would again be explained to the parent and progress would be pointed out. We think it is important to include a list of words JN could read by sight at the beginning and at the end as this will provide JN's family and himself with a very visual and concrete demonstration of his progress with this skill. In addition, a list provides very salient and uncomplicated information making it easier for JN to understand the purpose of this item and also easier for his family to look back after therapy and remember what it means.

6. A book, created by JN and the student clinicians that includes some or all of his sight words. This would be an ongoing project where JN writes his own story and draws pictures to go with the pages. He will be supported by the clinicians in writing and creating the story, but he should be the one writing and drawing. In the end he will have a finished product that is something he made and can be proud of. This will utilize JN's imagination, be a concrete example of something he has accomplished, and will also be something he can successfully read on his own.

### **Standards/Judgments:**

The portfolio should, first and foremost, highlight JN's strengths in all areas of speech language, and communication. The audio and video recordings will be items which JN's family members can refer back to see how he has changed, not only during therapy, but beyond. Recordings that clearly demonstrate improved skills will be included in the portfolio. Other items will be a judgment call for inclusion, and JN will be asked for his approval. For example, the clinician will say "We would like to keep this to show your mom how you've improved. Does that sound good?"

Another aspect that we will consider when choosing items will be their saliency, especially for video and audio recordings. Recordings will only be put into the portfolio if they clearly demonstrate the skill being targeted. For example, a recording that showed a clear, good example of JN's knowledge of eye contact would be included in the portfolio. This saliency of the targeted skill is important because when/if JN or his family decide to take a look in his portfolio after therapy is done it is important for them to be able to identify the skill being targeted in each item in order to see and understand the progress she has made. We would also provide a written description that describes the skill, his strengths and progress with that skill with each item in the portfolio to make sure they can identify the skill being targeted if they look at his portfolio after therapy is complete.

Another important standard is that JN must agree with the items that go into the portfolio. In the same respect, we think it is important for JN's mother to agree with what we put into the portfolio. It is important that JN and his family agree which items go into the portfolio because if they don't believe it is his/JN's best work then they will not see the progress that has been made. That is, if JN or his mother doesn't want the item to go into the portfolio because they don't believe it shows his best work or because they don't think it shows progress then we won't put the item in his portfolio. The purpose of this portfolio is to allow JN and his family to be able to see progress, therefore JN and his family must agree that the items being put into the portfolio show progress and show his strengths. As such, quality will not necessarily be a standard or used to judge the items that go into the portfolio. However, the items that we believe are good quality, will be brought to JN and his family's attention and we will ask them if they want to include those items in the portfolio. Their perspective on the quality of the material will be more important so if they don't want that item in the portfolio we will not include it and also if they request an item to be put into the portfolio we



will include it even though we may not think it is the best of quality. Again ,we believe including items that demonstrate progress in the eyes of the client is important as this will allow the client to see and acknowledge the progress that has been made.