

# AAC Evaluation for a SGD

Date of Evaluation:

Date of Report:

## Client Information

Name:	Medicaid ID #:
Address:	Medicare ID #:
Phone:	Insurance Policy #:
Place of Residence: Home	Licensed SLP:
Date of Birth:	Medical Diagnosis: Rett Syndrome
Age: 4	Medical Diagnosis Onset:
Gender: Female	Speech Diagnosis: Apraxia (784.69)
Physician Referral:	Speech Diagnosis Onset:

## Background Information

### Introduction

XXXX is a 4 year old girl with a medical diagnosis of Rett Syndrome. XXXX is currently unable to communicate verbally or via effective non-verbal means. She has been participating in an extended evaluation and therapeutic trials of speech generating devices over the past several months.

Summary of XXXX's pertinent medical history, speech language skills, speech intelligibility and current communication system.

XXXX has a medical diagnosis of Rett Syndrome. This is a neurological condition that involves early regression in communication and motor abilities, followed by a period of stability. It is associated with severe motor planning difficulties and apraxia, which impacts both speech production and other motor movements. XXXX began exhibiting early symptoms of language regression between 18-24 months. She no longer has any functional speech for communication, relying on general vocalizations (laughing/crying), facial expressions, and eye gaze. XXXX's fine motor skills have also declined, as she demonstrates limited ability to manipulate objects and use her hands for functional tasks. She continues to ambulate, but does show decreased coordination and balance.

Speech intelligibility in spontaneous communication is judged to be 0% intelligible to the unfamiliar listener.

XXXX's condition is chronic and stable and independent communication is expected to remain stable at the present level. Therefore, it is anticipated that natural speech will not be sufficient to meet daily communication needs for the client's lifespan. The prognosis for speech production to meet XXXX's communication needs is poor.

Given the severity of the communication impairment as described above, XXXX's speech does not meet her daily communication needs.

## Language Skills and Abilities

Speech and language abilities have been determined by:

- formal testing
- informal assessment
- observation
- trial therapy
- report by family

Summary of the diagnostic assessments used, test results.

The Preschool Language Scale-5 was used as a formal measure of receptive and expressive language skills. XXXX has difficulty participating in formal testing procedures and attained a 50 on both the Expressive Communication and Auditory Comprehension subtests.

XXXX's receptive language skills (what is understood) is impaired based on formal testing, clinical observations and parental report. XXXX demonstrated understanding of the following: understands what you want when you extend hands and say, 'come with me' (9-11mo), interrupts activity when you call his or her name (9-11mo), looks at objects or people the caregiver points to and names (12-17mo), understands a specific word or phrase without the use of gestural cues (12-17mo) XXXX did not demonstrate understanding of the following: responds to an inhibitory words (12-17mo), demonstrates functional play (12-17mo), demonstrates relational play (12-17mo), demonstrates self-directed play (18-23 mo.), follows routine, familiar directions with gestural cues (18-23mo), identifies familiar objects from a group of objects without gestural cues (24-29mo)

XXXX's expressive language skills (what is said) is impaired based on formal testing, clinical observations and parental report. XXXX demonstrated use of the following: seeks attention from others (9-11mo), vocalizes two different vowel sounds (6-8mo), combines sounds (9-11mo), takes multiple turns vocalizing (12-17mo), plays simple games with another while using appropriate eye contact (12-17mo), babbles two syllables together (12-17mo), uses a representational (symbolic) gesture (12-17mo), uses at least one word (12-17mo), participates in a play routine with another person for at least 1 minute while using appropriate eye contact (18-23mo), imitates a word (18-23mo), demonstrates joint attention (24-29mo) XXXX did not demonstrate use of the following: uses at least one word (12-17mo), produces syllable strings (2-3 syllables) with inflection similar to adult speech (18-23mo), produces different type of consonant-vowel (C-V) combinations (18-23mo), initiates a turn-taking game or social routine

(18-23mo), uses at least five words (18-23mo), uses gestures and vocalizations to request objects (24-29mo), names objects in photographs (24-29mo), uses words more often than gestures to communicate (30-35mo), uses words for a variety of pragmatic functions (30-35mo), uses different word combinations (30-35mo), names a variety of pictured objects (3-3 1/2y)

Comments: Expressively, XXXX demonstrates use of purposeful eye contact and joint attention to request continuation of an activity, as well as to appear to acknowledge an activity. She has been observed to attempt vowel productions and occasionally a /d/ sound, but appears to have significant difficulty with the oral movements for speech. XXXX is not consistent with her attempts to imitate speech and does not currently use any words spontaneously. During trials with the iPad and communication devices, XXXX required intermittent tactile prompts to use her hand to activate. She shows active interest and attention to activities on the iPad, computers and communication devices however her motor control to activate such technology by hand inhibits her interaction with tablets.

XXXX presents with severe impairment in language functioning and she possesses the following Language skills and abilities:

## **Receptive Language**

XXXX demonstrates the following receptive language skills:

- attends when spoken to
- appears to recognize name
- understands references to items that are out of sight
- understands frequently used words
- understands simple questions

Individuals familiar with XXXX report she understands some of what is said to her.

Additional receptive language information:

XXXX's difficulties with motor planning impact her ability to demonstrate understanding of language. Her understanding of language does appear to be greater than her expressive skills within functional activities.

## **Expressive Language**

XXXX communicates expressively using the following skills:

- facial expression
- eye gaze

When XXXX's receptive and expressive language skills are compared, she appears to understand significantly more than she is able to communicate, indicating the need to focus on expanding her ability to communicate.

Additional expressive language information:

Expressively, XXXX will communicate via eye gaze, broad gestures/reaching and occasionally will attempt to produce a word. Her speech attempts appear effortful and consist mostly of vowels. XXXX will make intentional eye contact on her terms and reach to be held. XXXX demonstrates pacing and hand wringing throughout activities unless positioned in stable seating; she smiles and will maintain attention to motivating interactions. Hand wringing interferes with functional play skills, as well as ability to gesture.

## **Pragmatics**

XXXX demonstrates the following pragmatic language skills:

- Uses language for these purposes
  - greetings
  - feelings
  - requesting
  - protesting

XXXX follows these basic conversation rules:

- takes turns
- uses facial expression
- makes eye contact

Although she uses non-symbolic strategies such as facial expressions for most of the different purposes of communication, XXXX is unable to communicate this information using language.

## **Reading**

Educational status: Pre-school.

XXXX's functional reading skill is: non-reader

Additional reading comprehension information:

XXXX is in preschool and does not possess literacy skills to use written language. This is an area that will be addressed within her academic programming; therefore, she may acquire these skills in the future. Given the client's language and literacy functioning, as well as her potential for growth, an SGD that provides message production using a combination of spelling and picture symbols will be required.

## **Writing**

XXXX is unable to produce written language.

An SGD must use this method of message production to enable XXXX to generate written language:

Not applicable

## **Language Skills and Abilities Summary**

XXXX's linguistic performance with the SGD's presented during the evaluation indicate she has the necessary language skills or the potential to develop the necessary language skills to communicate using an SGD.

## **Cognitive Abilities**

The patient presents with mild impairment in cognitive functioning as it relates to ability to use an appropriate Speech Generating Device. The patient's attention, memory and problem solving skills observed during the evaluation appeared functional to learn to use a Speech Generating Device successfully.

Length of assessment and/or training trials: three months.

## **Cognitive Abilities**

XXXX demonstrates the following cognitive abilities:

- Ability to learn new tasks, including device operation
- Attends to the display
- Attends to tasks
- Remembers locations of symbols
- Recognizes the device can be used to communicate needs and wants
- Locates items on a page

Additional details that support XXXX's cognitive ability to use or learn to use an SGD for functional communication in activities of daily living:

XXXX participated in SGD trials across multiple sessions. She demonstrated the ability to learn core vocabulary items and recall locations of vocabulary across sessions. XXXX demonstrates the necessary cognitive abilities (attention, memory and problem solving skills) to learn to use an SGD to achieve functional communication goals.

## **Physical Abilities**

XXXX was able to successfully access SGDs presented at the evaluation with the following selection technique(s): Direct Selection

Direct Selection Input

- eye gaze

The SGD will be used by XXXX in these positions: sitting, standing. Positioning will affect access of the SGD and XXXX will not require multiple access methods.

Description of XXXX's ability to use the access method(s) above, modifications needed for success and accommodations that may be required over time to deal with changes in physical access.

EYEGAZE: XXXX is able to successfully use eye gaze to directly access a communication device. She is able to activate targets in all quadrants of the screen using her eyes. XXXX does not possess sufficient hand function for direct access using her hands. Her significant motor planning difficulties would also impact her abilities to use switch scanning for access. Additionally, switch scanning access is less efficient and should only be considered when a form of direct access is not possible. XXXX was successful with using eye gaze for direct access.

SWITCH SCANNING: XXXX's success with switches was minimal and her frustration with switch access was tremendous. Her ability to use switch access was less than 50% on a relatively good motor planning day for her. Rett syndrome presents with a most profound disability is Apraxia. Apraxia is the inability to carry out a cognitive intent, i.e. XXXX intends to move a particular way, but her neurological signal does not reliably get to the right muscles to move them consistently. These motor abilities/disabilities are also inconsistent from day to day. When XXXX was positioned in a chair with switches placed at her knees, her feet and even her head, she was unable to master the motor plan for the most simple two switch scanning presented to her. She would randomly and repetitively hit the switches, never mastering the more complex motor plans needed—as well as the timing components needed—to be a successful one or two switch user. XXXX is also currently mobile and able to walk to where her device is positioned on a desk or table (she is unable to independently carry the device). If switches also have to be repositioned throughout her day, this will add more level of motor complexity for access. Switch scanning is absolutely not a viable access mode for her to be a successful communicator.

HEAD POINTING: Head pointing offers the same challenge as accessing switches. She lacks the motor planning and control to coordinate these movements. Her eyes are her strength. Rett Syndrome research supports this on all levels as the mode of communication.

XXXX needs an eye gaze system in place that will allow her direct access to her communication device. Research has shown that Rett Syndrome girls' visual skills do not deteriorate over time. In a study where seven females with Rett Syndrome, aged nine to 21 years, were examined, none had abnormalities of ocular structures, five had abnormalities that could be treated with glasses. Since there was no deficiency in the eye muscles, the authors recommend intervention in order to improve visual tracking. (Koslowe, Bergwerk, Yinon, & Merrick, 2009)

The use of eye gaze for communication strongly supports this type of intervention because XXXX would be continually using and mastering the visual tracking to communicate her own thoughts and feelings to meet her daily needs.

## **Mobility**

XXXX is still ambulatory and uses no assistive devices for mobility.

A wheelchair mounting system will not be required at this time.

XXXX will transport the SGD by carry strap.

The SGD must not exceed 4 lbs. in weight.

The physical size of the SGD must not exceed these dimensions. (11.1"w × 7.1"h × 1.4"d).

A carry case is required to transport the SGD.

Additional mobility information:

XXXX continues to be ambulatory, but has difficulty with navigating unstable surfaces. She does not use an assistive device, but does require a caregiver to be in close proximity to assist/supervise. Her walking skills have declined in the past several months and it is anticipated that she may require a wheelchair in the future. Therefore, a device that can be mounted to a wheelchair mount is necessary. XXXX will be unable to carry her own device; therefore, a caregiver will need to assume this responsibility. She will require a table mount to ensure adequate positioning.

Given the above modifications/considerations, XXXX possesses the physical abilities to effectively use an SGD with the required accessories to communicate.

## **Hearing and Visual Status**

### **Hearing Status**

XXXX has no history of a hearing impairment.

### **Visual Status**

XXXX has no history of a visual impairment.

## **Daily Communication Needs**

The results of a communication needs interview conducted with XXXX, relevant family members and caregivers revealed the following communication needs.

#### Communication Partners:

- immediate family
- extended family
- friends
- healthcare provider
- person who cannot read
- person with hearing impairment
- person with visual impairment
- community member
- school staff

#### Communication Environments

- home
- medical facility
- community
- school

#### Communication Activities, Abilities and Participation

- express physical needs/wants
- express needs/wants in emergencies
- express feelings and frustrations appropriately
- protest using appropriate behavior
- generate novel utterances
- ask questions
- make requests
- initiate interactions
- greet others
- participate in conversation
- tell stories and anecdotes
- access to medical care
- ability to report symptoms
- share information

#### Limitations of the current communication methods

XXXX demonstrates significant motor and speech apraxia associated with Rett Syndrome. She is currently unable to produce any functional speech. She previously had a small vocabulary of spoken words; however, she has lost the ability to produce these. XXXX demonstrates consistent hand-wringing, which impedes her ability to use any functional gestures or signs. This also impacts her ability to use voice output switches or communication boards. Low-tech eye gaze



boards have been introduced and used; however, these do not provide adequate vocabulary for growth. They also do not offer the immediate auditory feedback that a speech generating device does, which allows for XXXX to independently communicate with others.

## **Ability to Meet Communication Needs using non-SGD Treatment Approach**

Speech therapy to improve/increase functional speech is not a viable option to meet XXXX's communication needs because:

- of a degenerative condition for which speech therapy to improve/increase functional speech production is not effective.

The results of the communication needs assessment as documented in this section indicate the majority of XXXX's daily functional communication needs cannot be met with natural speech and/or low-tech communication devices. Therefore, she requires an SGD to achieve and/or maintain functional communication abilities in activities of daily living.

## **Rationale for Device Selection**

### **Input/Output Features**

The input features listed below are required to enable XXXX to successfully use the SGD.

- dynamic display
- eye gaze

Justification of multiple input methods:

XXXX is most successful using Eye Gaze to directly access the SGD.

The output features listed below are required to enable XXXX to successfully use the SGD.

- digitized speech
- synthesized speech

Justification of selected output features:

XXXX requires digitized speech to allow for recording personal messages. Synthesized speech is necessary for the ability to produce unique novel messages.

### **Language Characteristics**

The language characteristics listed below are required to enable XXXX to use the SGD for functional communication

- generate messages using all 3 language representation strategies, spelling, single meaning pictures, multi-meaning pictures
- store/retrieve whole messages for rapid communication of routine items
- provide word-based core vocabulary to support generation of novel utterances
- ability to store/edit/retrieve narrative messages (stories, reports, and speeches) from message files

#### Justification of language characteristics

XXXX needs picture symbols to represent vocabulary, as she does not yet possess literacy skills. She has the potential to develop these abilities; therefore, an SGD that supports this is necessary. XXXX is successful selecting messages on SGDs where messages were represented using these symbol options. She was most successful accessing vocabulary from a simple display which grows over time (HELP ME GROW vocabulary set from PRC) which provides anywhere from 2-28 word/symbol buttons, and will benefit vocabulary development and language growth and it built on motor planning principles. XXXX needs access to a word-based vocabulary that will allow her to generate unique messages. She also needs access to grammar to develop these skills as her language increases.

#### Device Features

The device features listed below are required to enable XXXX to use the SGD for functional communication

- vocabulary organization based on core rows for high frequency vocabulary and an activity row for extended vocabulary to avoid navigation among pages and develop motor planning
- provide word/symbol prediction rate acceleration techniques
- software toolset features: icon tutor, icon prediction, vocabulary builder, contextual scenes
- ability to adjust color and contrasts to accommodate visual or cognitive needs
- ability to adjust the number of items per display to accommodate visual, physical or cognitive needs
- ability to mount device on a wheelchair

#### Justification of device features

XXXX requires a consistent vocabulary system to optimize learning and language growth. The ability to adjust color and contrasts, as well as the number of items per display will also be necessary for learning and growth in the future. XXXX does not currently have a wheelchair; however, given the decline in her walking abilities and the nature of Rett Syndrome, the need is anticipated in the future. She requires a device that is able to be mounted to a wheelchair mount. The use of a table mount is required at this time.

#### Additional Features and Accessories

The additional features and accessories listed below are required to enable XXXX to use the SGD for functional communication

- mount
- eye gaze module

#### Justification of Additional Features and Accessories

XXXX requires eye gaze module to successfully use direct access of the SGD. She also needs a table mount to ensure appropriate positioning.

## SGD Assessment or Trial and CPT Codes

### Recommended Speech Generating Device CPT Code

Based on XXXX's communication needs and considering her visual, hearing, physical, language and cognitive status as well as the specified features in this report, SGDs in this Medicare/CPT code category were considered:

Speech Generating Device	Manufacturer	Accessories
Accent 1400	Prentke Romich	NuEye, Table Mount
Accent 1000	Prentke Romich	NuEye, Table Mount
Tobii I-12+	Tobii	Table Mount

### Procedures Used for Evaluating the SGDs

When assessing XXXX's ability to use the selected SGDs, the following procedures were used:

XXXX participated in therapeutic trials of the above devices across several sessions, as well as through home trial.

### Pictures or Symbols used

- Number per page: 2-28
- Size: Large-Medium-Small
- Type: Minspeak and Photographs
- Number of pages: 28

### Language formulating messages

- single hit for one phrase or message

## **Words**

Using the recommended SGD, XXXX was able to generate these types of messages: single word/symbol

XXXX demonstrated this level of proficiency with message generation: emergent.

## **Outcome of the SGD Evaluation**

The Accent 1400 was selected as the most appropriate SGD for XXXX for the following reasons:

XXXX was eager to participate in trials with the Accent 1400 with NuEye, demonstrating excellent attention and motivation to use the SGD. She attended to the screen and was able to access all 4 quadrants of the screen. Given the Help Me Grow vocabulary application, which progresses to Unity 28 one hit, XXXX independently used the SGD to request continuation of activities through core words, such as MORE, GO, and PLAY. She also learned to use EAT to request a preferred snack. She would also smile appropriately and repeatedly activate social words, such as AWESOME. She appeared to enjoy her communication partner's responsiveness to these words. In a relatively short period of time, XXXX displayed that she has the language potential to communicate and continue learning language, but requires the necessary means for access.

The Accent 1000 and Tobii I-12+ were ruled out for the following reasons

XXXX demonstrated the ability to access both the Accent 1000 and the Tobii I-12; however, she was less eager with use of these devices. It is suspected that the smaller screen on the Accent 1000 was less engaging to her; additionally, this impacted the size of the icons on the page that she was most familiar with (Unity 28). Despite efforts and trial of different vocabulary setups, XXXX would not maintain participation in activities on the Tobii. She did not independently communicate any messages on the Tobii I-12.

The selected device is recommended for purchase.

## **Impact of recommended SGD on Client's Communication**

The Accent 1400 with NuEye provides this patient with the necessary means to communicate with her family members, medical providers, teachers, and peers. As her motor skills and speech skills have declined, she has become dependent upon her caregivers to interpret her wants and needs. This results in significant frustration and crying, as XXXX is unable to effectively relay information. During the SGD trials, it became apparent that XXXX has the cognitive-linguistic ability to communicate via eye gaze. On several opportunities, she transitioned from crying at the start of the session to happy and calm when given the appropriate means to communicate via eye gaze.

# Recommended Speech Generating Device and Accessories

XXXX's ability to achieve functional communication goals requires the acquisition and use of the SGD, mounting/carrying devices and accessories listed below. This SGD represents the clinically most appropriate device for XXXX, as it best meets the requirements for:

## Input/Selection Technique:

- dynamic display
- eye gaze

## Output:

- digitized speech
- synthesized speech

## Language Characteristics:

- generate messages using all 3 language representation strategies, spelling, single meaning pictures, multi-meaning pictures
- store/retrieve whole messages for rapid communication of routine items
- provide word-based core vocabulary to support generation of novel utterances
- ability to store/edit/retrieve narrative messages (stories, reports, and speeches) from message files

## Device Features:

- vocabulary organization based on core rows for high frequency vocabulary and an activity row for extended vocabulary to avoid navigation among pages and develop motor planning
- provide word/symbol prediction rate acceleration techniques
- software toolset features: icon tutor, icon prediction, vocabulary builder, contextual scenes
- ability to adjust color and contrasts to accommodate visual or cognitive needs
- ability to adjust the number of items per display to accommodate visual, physical or cognitive needs
- ability to mount device on a wheelchair

## Additional Features and Accessories:

- mount
- eye gaze module

This SGD best offers the combination of characteristics and features needed by XXXX for functional communication, thus empowering her to participate actively in a variety of situations, including social interaction, self-care and medical needs.

<b>SGD, Mounting System or Accessory</b>	<b>Medicare CPT Code</b>	<b>Vendor Name, Address and Phone</b>
Accent 1400	E2510: Synthesized, multi access, multi message	Prentke Romich Company 1022 Heyl Rd. Wooster, OH 44691 (330)262-1984
NuEye	E2599: Accessories	Prentke Romich Company 1022 Heyl Rd. Wooster, OH 44691 (330)262-1984
Table Mount	E2512: Mount	Prentke Romich Company 1022 Heyl Rd. Wooster, OH 44691 (330)262-1984

## **Functional Communication Goals**

XXXX's short term and long term goals and estimated times for completion following receipt of the recommended SGD are listed below.

<b>Functional Communication Goal</b>	<b>Estimated Completion Time</b>	<b>Short Term</b>	<b>Long Term</b>
call for help from a family member/support person	> 3 months	Yes	No
make requests and provide information to familiar listeners	> 3 months	No	Yes
make requests and provide information to unfamiliar listeners.	> 3 months	Yes	No
communicate physical needs and emotional status to family member/support person on a daily basis	> 3 months	Yes	No
engage in social communication exchanges with extended family members, friends, classmates, colleagues in various environments.	> 3 months	No	Yes

## **Support, Treatment Plan and Signature**

## **Client/Family Support of the Speech Generating Device**

XXXX's Parent was present and/or are supportive of the necessity of the SGD for meeting her communication needs.

## **Physician Involvement Statement**

This report was forwarded to the treating physician, XXXXXXXXX at the Children's Hospital, on XX/XX/XXXX. The physician was asked to write a prescription for the recommended equipment.

## **Treatment Plan**

Upon receipt of the equipment, it is recommended XXXX receive 24 treatment sessions to address the functional communication goals described earlier in this report. XXXX's treatment goals will best be met in an individual setting.

## **SLP Assurance of Financial Independence and Signature**

The Speech-Language Pathologist performing this evaluation is not an employee of and does not have a financial relationship with the supplier of any SGD.

Evaluating SLP Name:

ASHA Certification:

State License Number:

---

Speech Language Pathologist (SLP) Signature

Date