

# COMMUNICATION SKILLS ASSESSMENT

Directions for administration  
and scoring

Edition 2.2

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# INTRODUCTION

The Communication Skills Assessment (CSA) grew out of a need to have a reliable tool to assess the communication skills of our clients who have significant communication disabilities and to document specific communication needs and abilities in order to best match individuals with accessible and appropriate treatment. The available tools, while able to assess specific communication areas, were not able to compare communications strengths and weaknesses across the communication spectrum.

A communication assessment can be beneficial to establish baselines for language usage, monitor changes in language use, provide consistent understanding of an individual's best expressive and receptive language(s), document needs related to accommodations and assist in differentiating language dysfluencies from medical or psychological conditions. When and how this information is gathered and shared can have significant impact on a person's life.

This communication assessment is designed to assess an individual's relative strengths and weaknesses across a continuum of communication modalities. It is designed to identify individual strengths and weaknesses in addition to assisting in identifying an individual's most effective communication strategies. The test is structured so to permit those with severe language deficits to demonstrate skills, thus the definition of competence does not necessarily reflect a high degree of fluency

or skill. It does not allow for meaningful comparisons between individuals, nor does it compare one individual to a group norm. Attempts to interpret scores in these ways represent invalid applications of this instrument.

Like any assessment tool, this is a product of numerous efforts and encounters over the last twenty years. The authors would like to thank the many clients who were willing to help in the testing of this instrument. We would also like to especially thank Beryl Bruffey, MSW; A. Barry Critchfield, PhD; Steve Hamerdinger, MA; Carol Morgan, MA; Amanda Somdal, MA and Deby Torbett, MA, for their invaluable assistance in reviewing the administration manual and process.

**Materials required (paper version):**

- CSA administration manual
- CSA scoring sheet
- CSA writing samples
- CSA stimulus materials

**Materials required (electronic version):**

- CSA administration manual
- CSA spreadsheet
- CSA stimulus materials

**User provided:**

- Blank paper
- Pencils with erasers
- 3 – 4 minute cartoon video clip

**Assessor qualifications**

This is a test of the client's communication skills across the entire continuum of communication methods. Administration by assessors who possesses less than native-level skills in the areas tested will not only represent an unethical use of this test and do a great injustice to the client, but will also simply result in an invalid assessment.

**In order to responsibly administer this instrument, the assessor (or assessor teams) must:**

- A. Be able to hear and understand speech at the level of a quiet conversation or be able to access this information through alternative strategies.
- B. Speak clearly and fluently, without strong accent or speech impairment or be able to utilize alternative effective strategies.
- C. Fingerspell fluidly and proficiently, at a rate of about four letters per second or slightly slower than ordinary conversation. Receptive fingerspelling skills must be excellent.
- D. Possess demonstrated fluency in American Sign Language by attaining a Superior Plus on the Sign Language Proficiency Interview, a Certification from the National Registry of



Interpreters for the Deaf, certification from the National Association of the Deaf at Level 4 or higher, Level 4.5 or higher on the Educational Interpreter Proficiency Assessment or equivalent. This represents a receptive and expressive proficiency level similar to native signers, as well as an understanding of the linguistic structures used in ASL.

- E. Be familiar with and have proficiency in manually coded English systems.
- F. Have proficiency in visual-gestural communication.
- G. Familiarity with the assistive communication device or aid used by the client, if applicable.
- H. A minimum of eight (8) hours of training in the assessment to include:
  - a. Overview of instrument
  - b. Overview of types and patterns of dysfluency
  - c. Samples of collected information and written assessments
- I. Review by a qualified assessor of five (5) assessments that include the following:
  - a. A videotaped sample of the assessment.
  - b. The raw data collected.
  - c. The final report.
  - d. Reviewed assessments should include at least one of the following:
    - i. A significantly dysfluent language sample.
    - ii. A person who utilizes atypical language patterns.
    - iii. A hard of hearing or late deafened individual.

- J. Ongoing training, on an annual basis, consisting of at least 8 hours which may include additional training in assessment tools or in language use and dysfluency.

### Assessment teams

Assessments should be done by at least two individuals working collaboratively whenever possible. The team should include at least one native signer who is Deaf, particularly when a consumer's language is considered to be significantly dysfluent. The team should establish policies and procedures for how the assessments will be utilized. Ideally, one member of the team should be designated as the Communication Assessment Coordinator. This person is responsible for;

- A. Maintaining a database of assessments to share among team members or to release to agencies as defined by confidentiality laws governing the information.
- B. Establishing and maintaining training for the team.
- C. Reviewing and monitoring assessments for readability and viability.
- D. Providing mentoring and supervision for team members.

The burden of effective administration of this test lies with the assessor(s), who must conduct the administration in the preferred language or sign system of the client, except when specifically required to do otherwise by the instructions of specific subtests. The assessor(s) should match the client's communication style when providing instructions. Determination of the client's preferred mode of

communication is made through the assessor's observation during the interview and information-gathering portion and is refined as the assessor(s) observes the client's responses to the specific subtests.

The client should NOT be directly asked for his/her communication preference. The determination should be made by the assessor(s) based on the client's preferred communication style through observation. The assessor may use notations in the comment section to provide useful information about the client's needs or perspectives on his/her hearing loss. While various communication modalities remain a hotly controversial topic, the assessor's opinions on modality choices are irrelevant except as unspoken assumptions that may implicitly influence the client's responses and the assessor's scoring. Assessors must be extremely and unusually skilled communicators, mindful of their personal biases, to administer this instrument fairly and ensure optimal performance by the client.

### **Timing of assessments**

Programs which serve a large proportion of individuals with dysfluency should provide a communication assessment before or shortly after engaging in services. The following timelines are recommended:

- A. Prior to any legal determination such as competency or insanity.
- B. A preliminary assessment should be submitted within seven days of engagement or by the third contact.
- C. A complete assessment should be submitted

within thirty days of engagement or by the fifth contact.

- D. As language is not static, assessments should be routinely evaluated.
  - a. When there are significant changes in language use, a new evaluation should be conducted, providing comparison between baseline and subsequent evaluations.
  - b. Assessors should add to the assessment as more understanding is gained regarding the consumer's use of language.
  - c. Assessments should be reviewed annually to determine if a subsequent evaluation is needed.

### **Room setup**

Lighting should be facilitative of communication for the client, regardless of the assessor's preferences. For example, clients with some types of vision problems will prefer a brightly lit room; clients with other types of vision problems will prefer much lower levels of light. Some types of vision problems are most assisted by soft light; others by strong, bright light. A direct light on the assessor may be helpful for some clients, and this must be arranged to light the assessor without impairing the vision of the assessor. Clear sightlines between the assessor and the client must be established and maintained throughout the assessment. The room should be quiet with no loud or disturbing sounds (over 60 dB). Assessors are responsible for ensuring that the testing environment optimizes opportunity for effective communication.

## **General administration information**

Given the significant heterogeneity of the communication skills and experience of the population, collection of background information is invaluable in understanding how an individual communicates. When possible, seek to obtain education, vocational rehabilitation and medical information. Document the receipt of such information on Page 1 of the test booklet or electronic form. As circumstances permit, observe the individual being assessed in communication settings with peers, family members and staff. Document such observations in the appropriate section. Then begin the formal Communications Skills Assessment by interviewing the client. An informal approach will often be more helpful than a structured approach. The Identifying Information and Family Communications Background sections may be used to familiarize the assessor with the client's general communication skills and communication preferences - information which will be necessary in order to administer the Assessment in the client's preferred communication method or language. By beginning a relaxed conversation with the client and showing interest, most of the requested information can easily be obtained. It is wise to review the information already gathered with the client before beginning the formal assessment process, allowing for correction, feedback, and gathering of overlooked but necessary details to be sure the Identifying Information and Family Communications Background sections are completed correctly.

Collecting reliable personal and historical information from some clients will not always be possible. The assessor will have to rely on collateral information sources, such as institutional records, information from caseworkers or family members, or even very limited information from a referral source. If reliable or complete information cannot be obtained, note this on the protocol for consideration when interpreting the results.

# COMMUNICATIONS SKILLS ASSESSMENT ADMINISTRATION INSTRUCTIONS

## Identifying information

### **Name and birthdate**

Client's name and birthdate should be entered in the indicated spaces. If the client also has a unit number or other type of numerical case identifier, this should be entered in the space provided.

### **Type of Hearing Loss**

A brief, but specific, summary statement should be made here. Of particular interest are the distinctions between the loss being conductive or sensorineural and being stable or progressive. If the loss is only in one ear or significantly different between ears, this should be noted.

### **Age at Onset**

Indicate the client's age when the hearing loss is believed to have started and also when it was first diagnosed. For many clients, these will be different dates.

### **Hearing Loss (audiometric)**

A brief summary statement describing the client's severity of hearing loss in audiometric terms should be given here. Of particular interest are unusual

differences in thresholds (for example, a steeply sloping audiogram), marked differences between thresholds and discrimination, and other types of hearing loss which would markedly affect speech comprehension.

## **Etiology**

Give the cause of the client's hearing loss, if it is known. Note some patterns of language dysfluency which may exist in conjunction with specific etiologies.

## **Vision Loss**

Indicate if the client has a vision loss, and if so, what type of vision loss (i.e. Nearsighted/farsighted, stable/progressive, Usher's syndrome, Retinitis Pigmentosa, etc). Indicate what issues this might have for communication.

## **Motor Impairment**

Indicate if the client has a motor impairment, and if so, what type (i.e. Cerebral Palsy, Spina Bifida, stable/progressive, etc). It is obviously very important to indicate any motor problems which interfere with the client's use of his/her hands in the production of signs or fingerspelling.

## **Medical or Psychiatric Information**

Indicate if the client has any medical condition, medication use, secondary disability or psychiatric disabilities that may impact language.



## **Rater**

Give the names of the assessor(s) who administered the CSA to this client.

## **Family Communication Background**

For each family member listed (and applicable), indicate their age (or approximate age), hearing status (Hearing, Hard of Hearing, Deaf), and method and quality of communication with the client (ASL - American Sign Language; Pidgin Signed English; MCE - Manually Coded English systems such as SEE, LOVE, cued speech, etc; oral; writes notes; home signs; gestures; or other). Some family members may be fluent in the use of more than one system and may use more than one system with the client. All applicable modes of communication used by each family member with the client should be indicated. This information should be obtained for each member of the client's household now and during childhood. Consider cultural differences in use of qualitative terms.

## **Social Communication Background**

Describe the client's involvement in their preferred language and cultural community.

Indicate strategies that the client utilizes to communicate with others (family, friends, strangers, etc.) when the other person does not share the same language.

## **Educational Communication Background**

Indicate the type of school(s) which the client attended and the language history related to their educational experience. Describe what accommodations were used during their education.

## **Client's Use of Assistive Services, Technology and Equipment**

For each question, indicate the correct yes or no response. Some questions ask: *“Does the client have or use...”* If the client has but does not use, or uses but does not personally own, a particular device or service, the correct response is Yes. For example, if the client uses a videophone when one is available but does not own one for personal use, the correct answer is yes. Indicate in the comments section if the client would like assistance or information about a particular communication option.

Determination of the client's use of assistive services and equipment is best done through directly interviewing the client. Collateral sources may unknowingly provide incorrect information. Suggested interview questions follow, but may need to be altered somewhat to allow for translation into ASL or effective understanding by the client.

In the comments section, consider the qualitative use of equipment such as the comfort in using and understanding technology and effectiveness of use. Include in what situations would the assistive technology be a benefit for communication.

*Has client used an interpreter before?.....*

***Have you ever used an interpreter before?***

*Does client know the role of an interpreter? .....*

***How have you used an interpreter?***

***What did the interpreter do for you?***

*Does client know the role of a CDI/DI (deaf) interpreter? .....*

***Have you used a deaf interpreter (CDI/DI) before?***

***What did the CDI/DI do for you?***

***How is a CDI/DI different from a hearing interpreter?***

*Is client comfortable using an interpreter?.....*

***Are you comfortable using an interpreter?***

***Are you comfortable using a CDI/DI?***

*Have you ever worked with a communication specialist?.....*

***What did the communication specialist do for you?***

***How is a communication specialist different from a CDI/DI?***

*Does client have or use a videophone (VP)?.....*

***Do you have a VP?***

***Ever used a VP?***

*Does client have or use a hearing aid or cochlear implant? .....*

***Do you have a hearing aid/cochlear implant?***

***Ever used one?***

***How does it help you?***

*Does client use a closed captioning device? .....*

***Do you use closed captioning?***

***Do you know how to turn on the closed captioning on a TV?***

*Does client have or use a signaling device?.....*

***Do you have flashers for your lights so you know when the doorbell rings, or phone rings?***

***How does your alarm clock wake you?***

*Does client have or use a telephone amplifier or captioned telephone? .....*

***Do you have an amplified phone/CapTel?***

***Ever used one?***

*Does client have or use hearing dog? .....*

***Do you have a hearing dog?***

***Ever used one?***

*Does client use text-based social media (i.e. Facebook, Twitter)? .....*

***Do you use Internet for communication with friends or family, like FaceBook, e-mail, Twitter?***

*Does client use video-based social media (i.e. Instagram, Glide)? .....*

***Do you use Internet video for communication with friends or family, like Instagram or Glide?***

*Does client have a smartphone? .....*

***Do you have a cell phone like iPhone or Samsung that can send pictures and text?***

*Does client use text messaging? .....*

***Do you use your phone to send text messages?***

*Does client have or use an assistive communication device? .....*

***Do you use a machine to help you communicate?***

***Do you have other aids (like books or pictures) to help you communicate?***

## **Specific Communications Skills**

For the administration of the Assessment, the assessor(s) will be shifting between communication methods. These transitions between methods (as between speech recognition and speech, or writing and fingerspelling) should be explained to the client. If the client has questions or concerns, these can be discussed during the transitions. Signing clients may express a lack of enthusiasm for the speech-oriented components of the assessment; and oral deaf clients may express reluctance to shift from the speech-oriented subtest to the subtest assessing signing skills. The purpose of the assessment may need to be explained several times, and repeated efforts made to encourage the client to continue with focused effort on all components of the Assessment. If the client's comprehension permits, the assessor may describe the process of the Assessment and inform the client that all areas of communication will be included and specifically mention that speech, speech recognition/lipreading, reading, writing, fingerspelling and signs will each be used. It is expected that individuals will have relative areas of strengths and weaknesses, and some areas of the Assessment will be easier and relatively enjoyable while other areas may present some struggle for the client. Nevertheless, the assessor will make every effort to assist the client as much as possible to complete each component. The sole exception is the assistive communication section which should only be used if the client uses a device or aid. Indicate any notable differences between expressive or receptive communication abilities within specific modalities.

## Lipreading/Speech Recognition A

The terms Lipreading and Speech Recognition are used interchangeably as different individuals use various combinations of residual hearing, speechreading and contextual cues to comprehend spoken language. When beginning this subtest, tell the client (using their preferred communication method) ***“I’m going to talk to you in a normal voice. Tell me the words you understand.”*** Read the first word (*toy*) to the client. Be sure you have a clear sightline to the client, make eye contact as you read the word, and are separated by a conversational distance that facilitates optimal communication for the individual client. Clients with various diagnoses may benefit from differing distances between themselves and the assessor. For example, clients with Usher’s Syndrome may find it necessary to be separated by several yards for optimal visual acuity. Speak clearly and in a normal volume. Clearly enunciate each item, but do not over-enunciate. Normal, clear speech is best. Allow the client an opportunity to tell you what the word is before voicing it again. Clients may respond with speech, signs, fingerspelling, writing, gestures - however the client prefers. It is necessary that the assessor determine if that the client has or has not correctly lipread the word, so the assessor may ask for further description or elaboration if needed to clarify the client’s response. Read each word two times, regardless if the client’s response to the first time was correct or not. This will prevent the client from inferring that their response was correct or not.

## Lipreading/Speech Recognition B

When beginning this subtest, tell the client (using their preferred communication method) ***“I’m going to talk to you in a normal voice. Answer the question or sentence as you understand it.”*** Read the first sentence to the client. Be sure you have a clear sightline to the client, make eye contact as you read the sentence, and are separated by a normal conversational distance. Speak clearly and in a normal tone. Clearly enunciate each item, but do not over-enunciate. Normal, clear speech is best. Allow the client an opportunity to tell you what their response is to the sentence before reading it again. Clients may respond with speech, signs, fingerspelling, writing, gestures - however the client prefers. It is necessary that the assessor determine if the client has or has not correctly lipread the sentence, so the assessor may ask for further description or elaboration if needed to clarify the client’s response. Read each sentence two times, regardless if the client’s response to the first time was correct or not. This will prevent the client from inferring that their response was correct or not.

Following the administration of the Lipreading/Speech Recognition B component, the assessor should explain to the client that the next subtest will use different skills. While the assessor is preparing materials for the Speech A subtest, some change in assessment procedures is obvious to the client. The skilled assessor need only elaborate on the obvious change in materials to inform the client of the shift in communication methods.



## Speech A

Using the client's preferred communication method, tell the client "***I want you to use your voice now. Read this and say it with your voice.***" The client is presented with the word (either electronically or on a card). The assessor points to the word and instructs the client to read the word out loud. If the client does not appear to understand the word, the assessor may sign or fingerspell the word. The client's response must be spoken to be scored.

## Speech B

The client is shown a picture (either electronically or on a card) and asked to describe the picture, using speech. The client is allowed to describe the picture in any way, with any amount of elaboration or detail. The client may choose to describe any part of the picture. Scoring is based on the client's clarity of pronunciation in this subtest. The accuracy or completeness of the description is unimportant. If necessary, request the client provide more information if needed to obtain a longer or more complete sample. Assessing clarity of speech production in expressing him/herself is the focus of this subtest.

As you again change materials and prepare for the next subtest, tell the client that the next section will involve reading and writing. You may want to say, again using the client's preferred communication method, "***Now we will be doing some reading and writing activities.***"

## Reading A

The items are presented as pictures or cards to the client, one at a time. The client must read the word and then inform the assessor of the word. Responses can be signed, spoken, or drawn, but cannot be fingerspelled.

## Reading B

This subtest assesses reading comprehension. It is administered as a matching test. If given electronically, the digital image or card with the sentence and four choices are shown and the client is asked which choice matches the sentence. The client is instructed, again in his/her preferred communication method, “***There is only one correct match for each sentence. Look carefully - once you complete a match, you can’t change your mind.***”

If given with paper cards, a card with the test sentence is placed in front of the client, then the cards with each of the four choices are laid out in a row below the test sentence. The client is instructed to read the card with test sentence, and pick the choice that best matches each sentence. The client is instructed, again in her preferred communication method, “***There is only one correct match for each sentence. Look carefully - once you complete a match, you can’t change your mind.***” This is repeated for each of the five test sentences.

The remaining reading score is taken from the Reading & Writing section.

## Writing A

During the administration, of the Writing A, Writing B, and Reading and Writing Combined subtest, the assessor must not fingerspell any word during the administration. These three subtests were designed to be easily administered by skilled signers using oral administration procedures, or any signed language or method. Fingerspelling, even of single words, is not necessary and may lead to invalid results.

Remove the Reading B subtest materials, and place the response sheet for Writing A in front of the client, along with a pencil.

The client is told to write his/her name in the space provided on the Writing A subtest answer sheet. Then the client is told to write the name of each picture shown him/her as a digital image or cards on the answer sheet. Alternatively, the client may be asked “**What is it?**” and told to write the name of the picture.

## Writing B

Place the sheet labeled Writing B in front of the client. The client should be told to “**Make your description as complete and detailed as you can.**” If the client responds with only a single word or phrase, ask the client to provide a lengthier response.

## Reading and Writing Combined

The client is presented with 10 questions, either electronically or on a sheet of paper and is given a pencil. The client is instructed to read each question and write the correct answers on the sheet of paper. The client must read the question, understand it, formulate a response and write the response. If the response is written as a single word, the client should be asked to write his response as a complete sentence.

As you again change materials and prepare for the next subtest, tell the client that the next section will involve fingerspelling. You may want to say, again using the client's preferred communication method, ***“Now we will do two short fingerspelling activities.”***

## Receptive Fingerspelling

Tell the client, ***“I am going to fingerspell a word. Tell me what I fingerspelled. You may write, say or sign the answer.”*** Place a sheet of blank paper and pencil within easy reach of the client.

The assessor fingerspells each word once. The fingerspelling should be done with a steady hand and a natural flow between handshapes. The speed should be a conversational pace, with letters presented at a pace of about four letters per second (this is slightly slower than ordinary conversation). The client is permitted to respond via sign, speech or writing. Fingerspelled responses which are correct are permitted, but incorrect responses should be

followed by the assessor asking the client to write the word. Fingerspell each word two times, regardless if the client's response to the first time was correct or not. This will prevent the client from inferring that their response was correct or not.

### Expressive Fingerspelling

Tell the client, “**Now I will show you a picture. I want you to name the pictured object.**” As the assessor presents each picture, you may also make the formal sign. The assessor should not use lexicalized fingerspelling/loan signs (such as for bus) or fingerspell the word.

In this subtest and in the following subtest (Receptive and expressive fingerspelling combined), responses must be fingerspelled. If the client responds with signs or speech, tell the client “**Fingerspell your answer.**” It is permissible for the client to use loan signs in response to these subtests.

The client is shown a picture, either on a card or electronically, and the assessor may offer the formal sign. The client is instructed to fingerspell the name of the pictured object. If the client provides an alternate answer such as “lady” for the picture of a woman, this response is scored as correct if it is presented with understandable fingerspelling. The last item asks the client to fingerspell their name. The assessor should NOT ask for this by fingerspelling the client's name, but rather by asking for the client's name using a signed language, gesture, speech or using the client's namesign.

## Receptive and Expressive Fingerspelling Combined

The client is told “**Now I will fingerspell a question to you, and I want you to fingerspell your answer.**”

In this subtest, a series of questions is fingerspelled and the client is told to answer each question with fingerspelling. Each question is fingerspelled once. Any possible responses that coherently answer the question should be scored. For example, if the assessor fingerspells “*Where do you live?*” and the client responds by fingerspelling “Mars”, this is scored as correct. If the assessor doubts the client’s comprehension, the assessor should ask “**What do you think I said in my fingerspelling?**” and allow the client to respond in any communication mode. This will allow the assessor to differentiate between a comprehension failure (doesn’t understand the fingerspelled question) and an unusual answer. Answers which are incoherent, such as responding “Green” to the question “*Where do you live?*”, should be scored as incorrect responses because either a substantive receptive or expressive failure has obviously occurred and no follow-up queries by the assessor are needed. It is recommended that the assessor record any unusual responses in the comment section.

## Manual Communication Skills

This section of the Assessment is to be completed using manual communication. The specific type of manual communication used is selected according to the client's preference. The entire sign continuum, including visual-gestural communication, is permitted, and the assessor must select the type of communication preferred by the client. The burden of effective administration of this section lies with the assessor, who must administer these sections in the preferred language or sign system of the client. The assessor should match the client's manual communication style. Determination of the client's preferred mode of manual communication is made through the assessor's observation during administration of previous subtests.

If the client is an oral deaf person who has resisted all manual communications during the administration of the CSA, it is recommended that the assessor use a contact language such as Pidgin Signed English (PSE) to administer the remaining subtests.

The client should NOT be directly asked for his/her communication preference until the completion of the assessment. The determination of the client's preferred manual communication style should be made by the assessor(s) through observation of the interaction during the subtests leading up to this section.

## Receptive Manual Communication Skills

Tell the client, ***“Now we will be using signs for the rest of this assessment. I will sign to you, and your answers should be in sign.”***

Each question should be presented to the client in the client’s preferred language/sign system. The questions are asked once and a correct or possible response is accepted. Coherent responses given in any sign system are acceptable. Responses given in disorganized signs, or departing from the grammatical/structural rules of the client’s preferred language/sign system, are scored if the response can be clearly understood. For example, one word or one sign responses that answer the question are scored as correct.

## Expressive Manual Communication Skills

The client is shown a video segment of a cartoon (without captions or sound or with closed captioning and sound turned off.) then asked to tell the portrayed story. At the client’s request, the client may repeat viewing the video clip up to two more times. The client is rated by the assessor on 10 components of expressive manual communication. For users of signed English systems and pidgin signed English, the latter five elements may be entirely absent and could be scored as zero. Fluent users of American Sign Language will demonstrate use of the grammatical system, as well as the visual-spatial features of the language.



## Assistive Communication Device Use

This section should only be completed if the client, or collateral contact, indicates that the client uses an assistive communication device or aid (such as a communication board, etc.). The client is shown a video segment of a cartoon (without captions or sound, or with closed captioning and sound turned off) then asked to tell the portrayed story. At the client's request, the client may repeat viewing the video clip up to two more times. This can be the same video segment used in the manual communication section. The assessor should determine if the client can use the assistive device or aid independently, semi-independently (requiring prompts from the assessor or other person) or only with direction and assistance. The client is rated by the assessor on six components of their use of the device and the ease with which they are understood.

## Dysfluency

Throughout the interview, the assessor should be looking for examples of the dysfluencies identified in this section. If the client demonstrates the characteristic during the interview, it should be noted in this section. Additional dysfluencies not identified may be added, at the assessor's discretion.

# **COMMUNICATIONS SKILLS ASSESSMENT SCORING INSTRUCTIONS**

Subtests are separately scored according to the procedures summarized below. Then the subtest scores are used to develop scores for the specific communication skills assessed by this instrument. These specific skills are presented as a summary of scores on the last page of the protocol, “Areas of Testing.” Space is also provided for the assessor to describe observations or qualifications of the scores.

Final scores for each Area (Lipreading/Speech Recognition, Speech, Reading, Writing, Receptive Fingerspelling, and so forth) are written in the spaces provided. Scores are then entered in the blocks on the Scoring Grid. For example, a final score of 55 on the Reading subtest would be entered in the block corresponding to the intersection of the Reading column and the 50% row. The grid allows for a visual presentation of relative strengths and weaknesses across the communication continuum represented by the Communication Skills Assessment.

For the electronic scoring spreadsheet, it is not necessary to calculate the scores, it will be done automatically, and the graph prepared.

The CSA assesses an individual’s relative strengths and weaknesses in communications skills. It does not allow for meaningful comparisons between individuals, nor does it compare one individual to a

group norm. Attempts to interpret scores in these ways represent invalid applications of this instrument.

### Lipreading/Speech Recognition A

Each correct response on the first reading receives 2 points. The skill level demonstrated by the client's response is not evaluated. The only evaluation is if the client understood the word. Correct responses after the second reading receive 1 point.

### Lipreading/Speech Recognition B

Each correct response on the first reading receives 8 points. The skill level demonstrated by the client's response is not evaluated. The only evaluation is if the client understood the sentence. Correct responses after the second reading receive 5 points.

### Lipreading/Speech Recognition Score

The final Speech Recognition score is the sum of the two Speech Recognition subtests, Speech Recognition A and Speech Recognition B.

### Speech A

If the word is understandable, that is if the word could be understood by a person with normal hearing and without familiarity with deafness, it is scored 2 points.

### Speech B

Scoring is based on the client's clarity of pronunciation in this subtest. The accuracy or

completeness of the description is unimportant. Using the scoring rubric on the next page, the response is graded from 0 – 4 points on each of four characteristics; quantity, grammar, individual sound production and word production. Each picture thus has a maximum potential score of 16.

## Speech B scoring rubric

| Criterion<br>(Score 0 if<br>element is<br>absent) | 1 point   | 2 points  | 4 points  |
|---|---|---|---|
| Quantity of<br>response                           | Fewer than five<br>words  | Six to ten words  | More than ten<br>words  |
| Grammatical<br>accuracy                           | Response is<br>single words,<br>no phrases or<br>sentences                            | Response is<br>structured in<br>phrases or<br>incomplete<br>sentences                         | Response is in<br>complete<br>sentences.  |
| Clarity of<br>individual<br>sound<br>production   | Consonant and<br>vowel sounds<br>are<br>recognizable<br>less than 25%<br>of the time. | Consonant and<br>vowel sounds<br>are<br>recognizable<br>between 50 and<br>75% of the<br>time. | Consonant and<br>vowel sounds<br>are<br>recognizable<br>more than 75%<br>of the time. |
| Clarity of word<br>production                     | Words spoken<br>are<br>recognizable<br>less than 25%<br>of the time.                  | Words spoken<br>are<br>recognizable<br>between 50 and<br>75% of the<br>time.                  | Words spoken<br>are<br>recognizable<br>more than 75%<br>of the time.                  |
|   |   |   |   |

## **Speech Score**

The final Speech score is the sum of the two Speech subtests; Speech A and Speech B.

### **Reading A**

Responses can be signed, spoken, or drawn, but cannot be fingerspelled. Each correct response receives 2 points.

### **Reading B**

Each correct match is worth 8 points.

### **Writing A**

Including the first item with the client's name, each response is worth 2 points. Incorrect spelling should be disregarded. If the word is recognizable, it should be scored as an acceptable response.

### **Writing B**

Each written description is scored between 0 and 20 points, considering the quantity of the response, spelling accuracy, the grammatical accuracy of the sentences, the grammatical complexity of the sentences and the vocabulary selection. Use the scoring rubric on the next page for more information.

## Writing B Scoring Rubric

| Criterion<br>(Score 0 if<br>element is<br>absent) | 1 point  | 2 points  | 4 points   |
|---|--|---|--|
| Quantity of response                              | One sentence   | Two to three sentences  | Four sentences or more   |
| Vocabulary  | Uses 3 <sup>rd</sup> grade vocabulary or less.       | Uses two syllable words, consistent with 4 <sup>th</sup> and 5 <sup>th</sup> grade. | Uses 6 <sup>th</sup> grade or higher vocabulary, multi-syllabic words. |
| Complexity of grammar                             | Writing is ungrammatical, no sentence structure.     | Sentences use simple structure, such as "noun-verb-object".                         | Sentences are complex, with two or more phrases.                       |
| Accuracy of grammar                               | Less than 25% of the sentences have correct grammar. | 25 to 75% of the sentences have correct grammar.                                    | More than 75% of the sentences have correct grammar.                   |
| Spelling  | Spelling errors impair comprehension of response.    | Spelling errors are present but do not affect comprehension.                        | No spelling errors   |
|   |  |   |  |

## Reading and Writing Combined

In order to be scored as correct, answers must be coherent responses to the question asked, although not necessarily correct responses. For example, if the client gives a date that is not today's date, the response should be scored according to the scoring criteria outlined below.

If the questions are answered in complete sentences, the item is scored 4 points. If the questions are answered in a partial sentence form, the item is scored 2 points. If the question is answered in one word, it is scored with a value of 1 point.

Consideration should be provided in the comments section to quality and comfort of writing, as well as visual or physical considerations (e.g. high contrast is needed between ink and paper, etc.)



## **Reading Score**

After administration and scoring of the Reading A, Reading B, and Reading and Writing Combined subtests, additional scoring is needed to develop the final Reading score. The final Reading score is the sum of the Reading A, Reading B, and Reading and Writing combined subtests. This sum is written in the Reading space in the Score Summary section, “Areas of Testing”.

## **Writing Score**

After administration and scoring of the Writing A, Writing B, and Reading and Writing Combined subtests, additional scoring is needed to develop the final Writing score. The final Writing score is the sum of the final Writing A, Writing B, and Reading and Writing combined subtests. The Writing score is written in the Writing space of the Score Summary section, “Areas of Testing”.

## **Receptive Fingerspelling**

Each word receives a score of 8 points if read correctly on the first presentation. If read correctly after the second presentation, the item is scored as 4 points.

## **Expressive Fingerspelling**

Each word receives a score of 8 points if spelled correctly on the first presentation. If spelled correctly after the second presentation, the item is scored as 4 points.

## Receptive and Expressive Fingerspelling combined

Correct responses are given a score of 10 points each if answered correctly on the first presentation and 7 points if answered correctly after the second presentation.

### **Receptive Fingerspelling Score**

After administration and scoring of the Receptive Fingerspelling and Receptive and Expressive Fingerspelling Combined subtests, additional scoring is needed to develop the final Receptive Fingerspelling score. The final Receptive Fingerspelling score is the sum of the Receptive Fingerspelling and Receptive and Expressive Fingerspelling Combined subtests, multiplied by the percentage in the Reading section and is written in the Receptive Fingerspelling space in the score summary section “Areas of Testing.”

### **Expressive Fingerspelling Score**

After administration and scoring of the Expressive Fingerspelling and Receptive and Expressive Fingerspelling Combined subtests, additional scoring is needed to develop the final Expressive Fingerspelling score. The final Expressive Fingerspelling score is the sum of the final Expressive Fingerspelling and Receptive and Expressive Fingerspelling Combined subtests, multiplied by the percentage in the Writing section and is written in the Expressive Fingerspelling space in the score summary section “Areas of Testing.”

## Receptive Manual Communication Skills

A correct or possible response is scored 5 points. Coherent responses given in any sign system are acceptable. Responses given in disorganized signs, or departing from the grammatical/structural rules of the client's preferred language/sign system, are scored if the response can be clearly understood. For example, one word or one sign responses that answer the question are scored as correct. Correct response after a second presentation are given 3 points.

## **Receptive Sign Language/Manual Communication Skills Score**

The total score from the Receptive Manual Communication Skills subtest is entered in this space.

## Expressive Manual Communication Skills

The client is rated by the assessor on 10 components of expressive manual communication. For users of signed English systems and pidgin signed English (contact language), the latter five elements may be entirely absent and could be scored as zero. Fluent users of American Sign Language will demonstrate use of the grammatical system, as well as the visual-spatial features of the language. The assessor assigns evaluative scores to the client's signing skills in 10 categories. These ratings are expressed on a scale of 1 to 10 depending on the skill demonstrated in each area assessed. The assessor should consider the client's use of signing as compared to a

fluent ASL user. An explanation of scoring criteria follows:

Sign production: assesses clarity of signs, production of signs which demonstrate correct use of each parameter, number and variety of signs and fluidity of movement between signs. An individual who uses the correct handshape but has the wrong orientation, for example, would receive a partial score of 7.

Fluency: demonstrates ability to express self, possesses adequate vocabulary, selects appropriate signs demonstrating common and correct usage and syntax. If an individual is able to express the main points of the story but repeatedly fingerspells words for which there are standard signs, this would receive a partial score of 5.

Expresses complete thought: demonstrates correct ASL grammar, maintains clear flow of expression free of sign fragments and awkwardness, expressions are well-organized and easily followed by the assessor, communications should be clearly coherent. A score of 3 would be given if the assessor were not able to understand the story being told and the sign phrases being used were incomplete.

Provides details: includes details in story, demonstrates inclusion of relevant and meaningful details, provides details via fingerspelling, signs, and classifiers. If the story retelling includes details about the type of characters in the story but is missing some relatively minor details, that would be typical of an 8 in scoring.

Follows main topic: communicates a consistent story, without digressing or otherwise confusing the topic-comment structure. If approximately half the retelling was related to the main story, that would score a 5.

Uses classifiers appropriately: demonstrates use of a variety of classifiers with correct usage and syntax. A typical story would demonstrate 3 or 4 different classifiers used in different situations to score a 10 on this section.

Use of space: demonstrates correct use of classifiers and referents in space, maintains spatial locations and relationships consistently, develops efficient use of space, presents clear, logical movements within previously established spatial parameters, uses movement to appropriately modulate frequency, duration, and intensity. A score of 7 would require the use of indicators of both movement and relative location, even if the indicators were not accurate.

Incorporation of time and numbers: demonstrates understanding of incorporation of time and numbers with correct usage, demonstrates correct use of tense markers, changes tense clearly, fluidly, appropriately and correctly, story structure includes clear and logical flow of time and presentations of sequential information. If the retelling is not told in the correct order and it is not clear that there is more than one character is involved, that would be rated as a 2.

Facial expression varies with grammar and sentence: demonstrates correct use of non-manual markers to modify signed statements. If only one or two

non-manual markers were included in a retelling, this would be scored a three.

Facial expression consistent with topic: maintains fluid, coherent, facial expressions which are congruent with the topic presented. To gain a 10 in this section would require consistent facial expression consistent with the topic (e.g. smiling when telling a funny section).

### **Expressive Sign Language Score**

The sum of the Expressive Manual Communication subtest ratings becomes the Expressive Sign Language (ASL/PSE/SEE) score.

### **Assistive Communication Device Use**

The assessor should determine if the client can use the assistive device or aid independently, semi-independently (requiring prompts from the assessor or other person) or only with constant direction and assistance. If the client can use the device or aid independently, score 28 points on this item. If the client can only effectively use the device or aid with frequent prompts, score 14 points. If the client can only use the device with repeated assistance and direction, score 0.

The client is then rated by the assessor on 6 components of their use of the device and the ease with which they are understood. These ratings are scored on a scale of 1 - 12 depending on the skill demonstrated in each area assessed. The assessor should consider the client's use of the device or aid as

compared to a normal conversation (either in speech or signed language) done without the device or aid. An explanation of scoring criteria follows:

**Fluency:** demonstrates ability to express self, possesses adequate vocabulary, selects appropriate words or pictures demonstrating common and correct usage and syntax. If an individual is able to express the main points of the story but repeatedly has to spell out words for which there are ways to express the word as a whole, this would receive a partial score of 5.

**Expresses complete thought:** maintains clear flow of expression without fragmented or confused sentences, expressions are well-organized and easily followed by the assessor, communications should be clearly coherent. A score of 3 would be given if the assessor were not able to understand the story being told and the communicated phrases were incomplete, lacking subject, object or verb.

**Provides details:** includes details in story, demonstrates inclusion of relevant and meaningful details, provides details via pictures or words. If the story retelling includes details about the type of characters in the story but is missing some relatively minor details, that would be typical of an 8 in scoring.

**Follows main topic:** communicates a consistent story, without digressing or otherwise confusing the structure of the expression. If approximately half the retelling was related to the main story, that would score a 5.

Incorporation of time and numbers: demonstrates understanding of incorporation of time and numbers with correct usage, demonstrates correct use of tense, changes tense clearly, fluidly, appropriately and correctly, story structure includes clear and logical flow of time and presentations of sequential information. If the retelling includes some indication that the story was past tense and that more than one character is involved, that would be rated as a 6.

Uses full range of device or aid: demonstrates an understanding of the use of the device and available features, uses the capacities of the device or aid to deliver the message. An 8 would be appropriate if the client demonstrates an ability to use the features, once reminded by assessor or staff.

Seeks feedback on effectiveness of communication: ensures that the message is being understood by the assessor, seeks explicit or implicit feedback. If the client delivers the message without looking to see if the message is being comprehended, that would be a 2.



## Expressive Manual Communication Scoring Rubric

| Criterion       | 0 points   | 3 point  | 6 points   | 8 points  | 10 points  |
|-----------------|--|--|--|---|--|
| Sign production | <ul style="list-style-type: none"> <li>Does not attempt proper formation.</li> <li>Numerous errors in sign formation</li> <li>Difficult to understand</li> </ul> | <ul style="list-style-type: none"> <li>Some errors, somewhat understandable</li> <li>Attempts to include verb tenses, however in a completely inaccurate/incorrect manner.</li> <li>Errors are not corrected, usually cause confusion</li> </ul> | <ul style="list-style-type: none"> <li>Some errors, but is understandable</li> <li>Errors are usually not corrected</li> <li>Signs may be an approximation</li> <li>Use of inaccurate form of most parameters, or they not produced clearly</li> </ul> | <ul style="list-style-type: none"> <li>Nearly consistent use of correct signs</li> <li>Mostly clear, easily understandable</li> <li>Errors don't impede comprehension</li> <li>Parameters are used accurately 80% of the presentation.</li> </ul> | <ul style="list-style-type: none"> <li>Consistent use of correct signs</li> <li>Clear, easily understood</li> <li>Completely correct or self-corrected to improve comprehensibility</li> </ul> |
| Fluency         | <ul style="list-style-type: none"> <li>Conceptual message emerging.</li> <li>Formation of fingerspelling emerging</li> </ul>                                     | <ul style="list-style-type: none"> <li>Hesitates and self-corrects when signing</li> <li>Signs somewhat conceptually accurate</li> <li>ideas/messages on a limited basis.</li> </ul>   | <ul style="list-style-type: none"> <li>Occasional hesitation, some accuracy</li> <li>May choose speed over accuracy</li> <li>Many pauses</li> <li>Fingerspelling</li> </ul>  | <ul style="list-style-type: none"> <li>Nearly consistent fluency</li> <li>Signs conceptually accurate w/ confidence</li> <li>Ideas mostly organized</li> </ul>  | <ul style="list-style-type: none"> <li>Communicates consistently with fluency and confidence</li> <li>Signs conceptually accurate ideas</li> <li>Organized;</li> </ul>                         |

|                                |  |   |   |   |  |
|--------------------------------|--|---|---|---|--|
|                                |  |   | may be choppy   | <ul style="list-style-type: none"> <li>Near natural pacing and flow</li> </ul>  | natural flow and pacing  |
| Expresses complete thought     | <ul style="list-style-type: none"> <li>Uses signs in isolation</li> </ul>  | <ul style="list-style-type: none"> <li>Uses connected signs but not phrases</li> </ul>  | <ul style="list-style-type: none"> <li>Uses phrases and connected signs but not sentences</li> </ul>  | <ul style="list-style-type: none"> <li>Uses “topic-comment” sentence structure.</li> </ul>  | <ul style="list-style-type: none"> <li>Uses compound sentences, with flow and transition to next sentence</li> </ul> |
| Provides details               | <ul style="list-style-type: none"> <li>Insufficient details to understand story</li> </ul>   | <ul style="list-style-type: none"> <li>Details are provided infrequently and inconsistently</li> </ul>  | <ul style="list-style-type: none"> <li>Adjectives are used to modify nouns (BIRD-BIG)</li> </ul>  | <ul style="list-style-type: none"> <li>Both nouns and verbs are modified to provide specific information</li> </ul>   | <ul style="list-style-type: none"> <li>Story retelling includes all relevant details</li> </ul>                      |
| Follows main topic             | <ul style="list-style-type: none"> <li>Narrative does not relate to provided story</li> </ul>  | <ul style="list-style-type: none"> <li>Narrative includes both provided story and unrelated information</li> </ul>  | <ul style="list-style-type: none"> <li>Retelling stays with provided story but needed elements are missing</li> </ul>   | <ul style="list-style-type: none"> <li>Retelling keeps to provided story but may include all elements</li> </ul>  | <ul style="list-style-type: none"> <li>Retelling describes entire story, in correct order</li> </ul>                 |
| Uses classifiers appropriately | <ul style="list-style-type: none"> <li>Demonstrates emerging use of classifiers to describe basic objects (e.g., DCL:C- ball, or DCL:B- box).</li> </ul> | <ul style="list-style-type: none"> <li>Uses instrument classifiers (e.g., PULL-OUT; ZIP-UP; TURN-ON-TV).</li> <li>Starts to use classifier manner of verb (e.g., “3” car move up and down, person “1” walking by).</li> </ul> | <ul style="list-style-type: none"> <li>Uses descriptive classifiers to describe nouns, including color, size, shape, and quality (e.g., hairstyle, bodytype, size, texture).</li> </ul> | <ul style="list-style-type: none"> <li>Continues to use descriptive classifiers to show intensity for noun size, shape, texture, and quality (e.g., LIGHT, BRIGHT; ROAD, BUMPY).</li> </ul> | <ul style="list-style-type: none"> <li>Uses classifiers with ease without being conscious about it.</li> </ul>       |

|                                   |   |  |   |  |  |
|-----------------------------------|---|--|---|--|--|
| Use of space<br>(absent/referent) | <ul style="list-style-type: none"> <li>• Does not attempt to use space in collaboration with narrative.</li> </ul>                            | <ul style="list-style-type: none"> <li>• Difficulty with setting up points in space to refer to objects and people</li> <li>• Limited use of setting up points in space to refer to objects and people sometimes makes errors</li> <li>• May use one location for more than one thing</li> </ul> | <ul style="list-style-type: none"> <li>• Limited use of setting up points in space to refer to objects and people:</li> <li>• Sometimes makes errors</li> <li>• Occasionally sets up spaces</li> <li>• Sets up locations but not always clear.</li> </ul> | <ul style="list-style-type: none"> <li>• Frequently sets up points in space to refer to objects and people.</li> <li>• Nearly consistent use of setting up points</li> <li>• Location use is mostly clear</li> </ul> | <ul style="list-style-type: none"> <li>• Extensive use of setting up points in space to refer to objects and people</li> <li>• Extensive/consistent use of setting up points in space to refer to places and people</li> </ul> |
| Incorporation of time and numbers | <ul style="list-style-type: none"> <li>• No use of tense or numbers in narrative.</li> </ul>  | <ul style="list-style-type: none"> <li>• Inconsistent or inaccurate use of both tense and numbers</li> </ul>   | <ul style="list-style-type: none"> <li>• Uses numbers to retell story, although makes errors in tense OR</li> <li>• does not use tense</li> </ul>   | <ul style="list-style-type: none"> <li>• Shows number and location through plural/spatial classifiers (e.g., line of people; books in row).</li> </ul>   | <ul style="list-style-type: none"> <li>• Uses numbers and tense to provide all needed details</li> </ul>   |
| ASL Grammar                       | <ul style="list-style-type: none"> <li>• Does not attempt to use appropriate ASL grammar.</li> <li>• Rarely any facial expressions</li> </ul> | <ul style="list-style-type: none"> <li>• Difficulty using non-manual signals.</li> <li>• Difficulty using listing and ordering</li> <li>• Limited use of</li> </ul>  | <ul style="list-style-type: none"> <li>• Some appropriate use of facial expressions</li> <li>• Limited use of non-manual markers</li> </ul>   | <ul style="list-style-type: none"> <li>• Appropriate use of facial expressions when signing</li> <li>• Inconsistent use of non-manual</li> </ul>   | <ul style="list-style-type: none"> <li>• Uses good facial expressions correctly and consistently</li> <li>• Appropriate use of non-manual</li> </ul>   |

|   |  |   |  |   |  |
|---|--|---|--|---|--|
|   | or facial expressions that don't match the signs                         | intensifiers  | <ul style="list-style-type: none"> <li>• Limited use of listing and ordering</li> <li>• Some/inconsistent use of intensifiers</li> </ul> | signals. <ul style="list-style-type: none"> <li>• Inconsistent use of listing and ordering</li> <li>• Grammar use mostly appropriate</li> </ul> | signals <ul style="list-style-type: none"> <li>• Appropriate use of listing and ordering</li> <li>• Uses intensifiers to match information conveyed</li> </ul> |
| Facial expression consistent with topic | <ul style="list-style-type: none"> <li>• No facial expression</li> </ul> | <ul style="list-style-type: none"> <li>• Facial expression does not match narrative or is very limited</li> </ul> | <ul style="list-style-type: none"> <li>• Facial expression is present for some parts of the narrative but inconsistent</li> </ul>        | <ul style="list-style-type: none"> <li>• Facial expression is present and appropriate for much of the retelling</li> </ul>                      | <ul style="list-style-type: none"> <li>• Appropriate facial expression present throughout entire presentation</li> </ul>                                       |

## **Assistive Communication Device Use Score**

The sum of the Assistive Communication Device Use subtest ratings becomes the Assistive Communication Device Use score.

## **Dysfluency Score**

For the specific characteristics identified, score either yes or no. The score is the number of items scored “yes” divided by the total number of available items, expressed as a percentage.

## **Reporting Guidelines**

Narrative portions of the report should:

- Consider cultural differences in use of qualitative terms.
- Include descriptions of situations where specific communication abilities are recommended and where it is not recommended for effective communication and quality service provision. (Examples: treatment, group, one on one, incidental, routine, casual, familiar environments, stressful or technical settings, etc.)

## APPENDIX A: LANGUAGE PATTERNS (DEPRIVATION AND THOUGHT DISORDER)

Examples of the kinds of language errors that are attributed mainly to **language deprivation** although it is reasonable to assume that neurological problems could also contribute.

These common errors were:

1. **Impoverished vocabulary** with many signs used incorrectly. The limited vocabulary is the most obvious form of language dysfluency seen, with some deaf patients communicating only with isolated signs or short sign phrases.
2. **Inability to sequence events in time**. This often includes a lack of signs and grammatical structures to indicate tense. These persons seem unable to tell any story using a beginning, middle and end, much less the story of their own life. They jump back and forwards in time without indicating that they are doing so. This deficiency also makes it difficult for them to see cause and effect or to use conditional phrasing (if this, then that.)
3. **Spatial disorganization**. Inability to use the space around the signer grammatically. For instances, referents are not established and maintained in one part of the spatial field. Sign inflection involving movement through space is absent or inconsistent.
4. **Syntax**. The topic comment structure of much ASL is missing. Subjects are not established

clearly. Nor are they related appropriately to verbs and objects. Classifiers (like an index finger to establish a person) may be used without any referent. Often these patients seem to be listing nouns or sometimes verbs without establishing relationships. They make heavy use of sign repetition as a substitute for grammar.

5. Mixture of gesture and pantomime with sign. Because their vocabulary is so limited, these persons make frequent use of gesture and pantomime. While competent signers may do this on occasion, usually for emphasis or for creative storytelling, they have the necessary language structure if they choose to use it, while these persons have no alternative but to act things out.

Within the difficulty of sorting out thought disorder from language deprivation, there are some clues that point toward **thought disorder**. Some of these are as follows:

1. Inappropriate facial and emotive expression.
2. Language content that is not merely off the point, but actually bizarre.
3. Nonverbal behaviors suggesting hallucinations.
4. Guardedness, suspiciousness and volatility.
5. Language problems that have not been long standing or a point where the communication was better than currently exhibited.
6. Personal appearance and behavior of psychotic persons are often striking and abnormal. Self-care is often poor.

7. The language (related to thought disorder) should improve with medication.

*"Do You Hear Voices? Problems in Assessment of Mental Status in Deaf Persons with Severe Language Deprivation".  
Journal of Deaf Studies and Deaf Education. Neil Glickman*



# APPENDIX B: ETIOLOGICAL CONSIDERATIONS

## Potential etiological causes of language dysfluency.

### Toxoplasmosis

A parasitic disease. During the first few weeks post-exposure, the infection typically causes a mild flu-like illness or no illness. Thereafter, the parasite rarely causes any symptoms in otherwise healthy adults.

However, those with a weakened immune system, such as AIDS patients or pregnant women and the unborn child, may become seriously ill, and it can occasionally be fatal.

The parasite can cause encephalitis (inflammation of the brain) and neurologic diseases, and can affect the heart, liver, inner ears, and eyes.

In addition, it may result in multiple disabilities such as vision loss (eye pain sensitivity to light, tearing of the eyes, blurred vision), brain damage, abnormal enlargement, or smallness of the head, seizures, mental disabilities, confusion, lethargy, memory loss, weakness on one side of the body, speech and language disorders. It has also been reported to cause global delay in language development and vocabulary deficits.

### Congenital Rubella Syndrome (CRS)

Also known commonly as Rubella or German measles. During the 1960's in the United States, an epidemic of Rubella occurred and is sometimes

referred to as the Rubella bulge. It was so pervasive that for a while, it was the number one cause of deafness. Although not all individuals are impacted the same way, individuals deafened as a result of CRS may exhibit a variety of issues that can be progressive throughout their lives.

There are a host of conditions that may be present, manifest later or worsen throughout the remainder of their lives. These include:

Diabetes, thyroid, congenital cardiac problems, intellectual disabilities, autistic like behaviors, dyslexia, developmental delays, cognitive skill problems, visual memory and processing problems, poor balance, dyscoordination, deaf-blindness, kidney problems, change in hearing or visual abilities, decline in IQ from childhood, increased premorbid motor and behavioral abnormalities, early menopause, psychological problems and behavioral problems, specifically impulsivity and attention deficits etc.

In some cases later neurological sequelae can occur and as these individuals age, they may experience functional decomposition, such as early on-set dementia.

Based on language patterns seen in communication assessments, language abnormalities which may present in some individuals, and may or may not indicate a pattern for all individuals deafened by CRS include;

- Brief intermittent periods of language incoherence (similar to, but with a different origin to incoherence as a psycholinguistic error) in either expressive or receptive language.
- Signing produced at a slightly slower than expected for normal rate.
- Difficulty learning new vocabulary words.

- Difficulty finding the right word (sign) to convey their thoughts.
- Some noted difficulty expressing and receiving fingerspelled words.
- Comments that diverge from the message – the signs/comment made sense within the comment itself, but not within the context of the overall message. After the short comment, conversation would return to the original discussion.
- Copying signs of other people as they are communicating (simultaneously) before responding.
- Asymmetrical language in expressive/receptive sign or in written or read English.

### Cytomegalovirus (CMV)

CMV is a common and usually harmless form of herpes that can cause severe disabilities in newborns including Cerebral Palsy, vision loss, small head, motor difficulties, developmental delays, mental retardation, learning delays, autism, ADD, OCD, SLI, and issues with balance.

These individuals typically have a shorter attention span, impulse control issues, and a low tolerance for delayed gratification and may also have some significantly different language processing problems. Approximately 10 to 15% of those impacted by CMV may have hearing loss. Hearing loss may occur or be present even in cases where they pass their newborn hearing screening. The pattern of hearing loss in these children usually involves one ear initially, and will invariably progress to a severe or profound hearing loss. The rate of progression will vary, sometimes it is fast, within a few months, and sometimes it occurs slowly, and takes years. Hearing

loss may progress throughout childhood and adolescence and young adulthood. In 10 to 20% of these cases, hearing loss will also involve the other ear. In addition, these individuals may experience central auditory processing problems, even if their hearing is normal.

### Prematurity

Infants with a hearing loss who are born prematurely often have physical and psychological sequelae (e.g., developmental delay/mental retardation, cerebral palsy, and learning and emotional disabilities). There are more likely to have issues with hyperactivity, distractibility, restlessness, learning disabilities, intellectual disabilities, etc.

### Meningitis

Sometimes individuals are deafened by meningitis as children. There are various forms of meningitis. In known research, bacterial meningitis has resulted in language related issues. Individuals deafened by bacterial meningitis may experience delayed language and expressive and receptive abilities may differ. These individuals often have expressive skills which are superior to their receptive skills.

They may have difficulty understanding the following: Metaphors/idioms and jokes and riddles, discourse (turn taking, etc.), inferential reasoning tasks, sentence assembly, ambiguous sentences, making inferences, figurative language, recreating sentences, short-term memory loss, verbal intelligence, reading difficulties, acquisition of language skills, visio-spatial functions, hyperactivity, distractibility, impulsivity, and ability to solve non-routine problems.

These individuals may have difficulty managing when

considerable emphasis is on learning through language-based instruction. They may also have difficulties using the context of a situation to infer others' intentions and appropriately modify their own behavior. As a result the person may behave inappropriately because they have not perceived, or accurately interpreted, another's meaning.

### Traumatic Brain Injury (TBI)

Deficits that can follow TBI include impaired attention; disrupted insight, judgment, and thought; reduced processing speed; distractibility; and deficits in executive functions such as abstract reasoning, planning, problem-solving, and multitasking. People who have suffered TBI may also have difficulty with understanding or producing language, or with more subtle aspects of communication such as body language.

### Fetal Alcohol Syndrome Disorder (FASD)

This can cause vision difficulties, impulsivity, and low muscle tone or their limbs may be floppy. FASD can cause deficits related to language such as: ability to grasp parts of a concept, but not the whole message, poor short-term memory, inconsistent memory and knowledge base, poor judgment, information-processing disorder, poor ability to perceive patterns, poor cause and effect reasoning, inconsistent ability to link words to actions, poor generalization ability, and expressive or receptive language disorders. They may have poor spatial awareness, resulting in a failure to cross the midline (e.g., reaching for something to the left with one's right hand) and may have less detailed language than peers. Expressive skills may be superior to receptive

skills. The individual can repeat information back and sound as if they understand when they do not. Parents report that children can repeat a rule, tell what might happen if it is broken, and then break it a minute later. When the child is reprimanded, they do not understand why the parent is upset. Individuals who work in the field of deafness and are fluent signers are either trained or intuitively adjust to match the language level of the person signing. When this happens, the signer may be matching the consumer's expressive skills, but not their receptive skills. Great care should be taken to ensure communication is understood, including repetition over time and regularly checking-in with the consumer – avoiding yes/no questions. Assumptions should not be made that the consumer understands the message, even when they can repeat back the information.

## APPENDIX C: MEDICATIONS

There are a host of medications which may have unique impact for individuals who are deaf. Some examples of considerations for medication side effects are listed below.

### Visual changes

Medications which impact the person's vision, can also have detrimental effects on the person's ability to receive language.

### Tremors, shaking, etc.

Medications which impact the person's ability to control their arms or hands, can also have significant effect on the person's ability to express language. This may cause misunderstanding or frustration. Limited range of movement of hands and arms may also be an issue. These limitations can cause the person to be less or non-responsive even though they are fully capable of expressing themselves.

### Tardive Dyskinesia

Which may show repetitive, involuntary, purposeless movements - often of the lips, face, legs, or torso. These movements can have significant effect on the person's ability to express language. This may cause misunderstanding or frustration.

### Lethargy/loss of concentration

Receiving information visually over time can be exhausting. The eye is a muscle that requires use differently than receiving information through auditory means. While lethargy or ability to concentrate can

have an impact on any person, deaf or hearing, the level of energy required to receive information for deaf individuals is greater.

Using sign language is also a physical act that can require a significant degree of movement. As a result, this can have a negative impact on the person's ability to receive or express language.

### Lowered level of cognition/loss of concentration

Receiving language through an interpreter, directly through lipreading, or through a second language, often requires a good bit of concentration and use of closure skills to figure out what is being asked or stated. This is something that hearing individuals rarely have to deal with. Anytime the level of cognition is lowered, it inhibits the ability of the person who is deaf to make sense of language that is conveyed.

### Dizziness

Because individuals who are deaf receive language visually, any side effect such as dizziness that can impact their ability to visually receive information can have significant effect on the person's ability to receive language. Additionally, this can cause the person to be tired or unable to concentrate (see above).

### Moodiness

If a deaf individual comes in and is upset, their ability to deal with communication breakdowns or to attempt to use closure or repair skills or to deal with someone who is not culturally aware is greatly reduced.



# NOTES

