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Codes and Criteria for Fluency Disability

Impairment Code: Y = Yes; N = No; N/A = Not Applicable

Evidence Code: **1** = fluency measurements from speech samples
2 = attitude/self-perception measures **3** = structured observation
4 = teacher report/interview **5** = child report/interview
6 = parent report/ interview.

Note: Numbers 4, 5 and 6 are not sufficient evidence, by themselves, of impairment. They must be supported by objective data.

Adverse Effect on Educational Performance Code:

1 = oral participation **2** = oral reading **3** = curriculum/academic results*
4 = social-emotional adjustment/behavior **5** = reaction of self, peers, teachers, parents.

* including appropriate curriculum standards for effective communication (language arts), CMT/CAPT results

Note: Number 4, reaction of self, peers, teachers, parents is not sufficient evidence, by itself, of an adverse educational impact.

Eligibility: The child exhibits disfluencies during connected speech in at least one of the following areas, with accompanying adverse effect on educational performance.

1. Frequency and/or durational measurements of disfluencies in one or more settings.

   (a) more than 2 percent atypical disfluencies, with or without the presence of struggle behaviors, covert stuttering behaviors, or coping mechanisms; OR
   (b) more than 5 percent typical disfluencies, with or without the presence of struggle behaviors, covert stuttering behaviors, or coping mechanisms, or with the presence of one or more risk factors.

2. Rate of speech at least +/- 1.5 standard deviations from the mean.

3. Speech naturalness outside the normal range of 3.0 for children and 2.12–2.39 for adolescents/adults on a 9-point naturalness rating scale.

The impairments must not be related primarily to limited exposure to communication building experiences, the normal process of acquiring English as a second language, dialect usage, or lack of instruction in reading or mathematics.

School District:

Summary of Evaluation/Reevaluation Findings: Fluency

NOTE: *When completed, this worksheet becomes part of the child's education record.*

Date _____ SLP _____

Child _____ DOB_____

School _____ Grade_____

Teacher _____

Record areas assessed. The assessment should reflect areas of concern described in the referral and those that arise during the evaluation. Areas not assessed should be marked N/A.

Fluency Area	Impairment	Evidence	Adverse Effect on Educational Performance
FREQUENCY			
Type of Disfluencies			
Hesitations			
Interjections			
Revisions			
Unfinished words			
Sound repetitions			
Syllable repetitions			
Word repetitions			
Phrase repetitions			
Prolongations			
Blocks			
Struggle Behaviors			
Visible Tension			
Head			
Neck			
Shoulders			
Eyes			
Lips			
Tongue			
Jaw			
Larynx			
Inhalation			
Other			

School District:

Child _____ Date_____

Fluency Area	Impairment	Evidence	Adverse Effect on Educational Performance
FREQUENCY			
Struggle Behaviors			
Audible Tension			
Uneven stress			
Pitch changes			
Neutralized vowels			
Increased rate			
Inhalation			
Exhalation			
Other			
DURATION OF DISFLUENT EPISODES			
RATE OF SPEECH			
SPEECH NATURALNESS			
COPING MECHANISMS			
Awkward Phrases			
Distorted Grammatical Forms			
Circumlocutions			
Starter Devices			
Postponement Tactics			
Avoidance (to disguise stuttering)			
COVERT STUTTERING BEHAVIORS			
Emotional reaction			
Avoidance (of feared sounds, words, situations or people)			
Expectation of stuttering			
Expectation of fluency			

Fluency Measurement Options

Choose Option 1 Or Option 2

Option 1: Choose one fluency measurement from group A, one from group B and one from group C.

Group A:

1. To analyze *frequency of stuttering*, use the following:

In a variety of settings, using audiotape or videotape, collect appropriate speech samples that include monologue, conversation, oral reading, story retelling and pressure dialogue. Transcribe 200 syllables from each sample (Campbell & Hill, 1992) or, to increase validity for preschool and young school age children, transcribe 300 syllables (Lincoln & Packman, 2003). In the event of very severe stuttering, it may be difficult to collect a 200- or 300-syllable sample, in which case a 10-minute sample should be collected (Campbell & Hill, 1992). Videotape is preferable for analyzing blocks (silent pauses), hesitations, secondary characteristics and struggle behaviors. The 200 or 300 syllables to be analyzed should represent the intended message. To obtain the 200 or 300 syllables, do not include repetitions of sounds, words, syllables or other disfluencies as part of the intended message. Revisions, however, should be counted as part of the intended message.

Example: "I I I am go..go..go..go..ing to…(2 second prolongation) play climb on the on the slide. C C C uh C atch me?"

This 12-syllable example includes a repetition of a word 2 times (I); a repetition of a syllable three times (go); a two-second prolongation (to); a revision (climb); a repetition of a phrase (on the); and a three-component stutter (C C + uh + C) that contains a repetition of a sound two times (C C), an interjection (uh) and a repetition of a sound one time (C). In total, the example contains six instances of stuttering. The repetition of the word and the revision are typical disfluencies; the repetition of the syllable, prolongation and the three-component stutter are considered atypical disfluencies. Although "uh" is an interjection and a typical disfluency, the three-component stutter is atypical because it contains atypical disfluencies (repetitions of sounds). See the Continuum of Disfluent Speech Behavior in the Fluency section of the Supplemental Resources Packet.

In addition, count the number of instances of disfluencies, such as hesitations, interjections, revisions or prolongations and note struggle behaviors, such as audible or visible tension, that accompany the stuttering. Divide the number of instances of stuttering by the number of syllables in the sample and multiply by 100 to obtain the percentage of stuttered syllables. Subtract this number from 100 to obtain the percentage of fluent speech. Using the same formula, calculate the percentages of stuttered syllables for typical and atypical disfluencies (Campbell & Hill, 1992; Lincoln & Packman, 2003).

OR

2. To analyze *duration of stuttering*, the following measurements may be used:

A. Collect a 10- to 15-minute speech sample of the student's conversational speech using videotape or audiotape. Videotape is preferable for analyzing secondary characteristics and struggle behaviors. Use a stopwatch to time five minutes (300 seconds) of the student's talking time. Review the sample and use a stopwatch to obtain the total number of seconds of disfluencies. Divide the total number of seconds of disfluencies by the total number of seconds in the speech sample and multiply by 100 to obtain the percentage of duration of disfluent speech (Bacolini, P., Shames, G., & Powell, L., 1993). If using a video sample, watch the video once again, noting the types of disfluencies and secondary characteristics listed on the Summary of Evaluation Findings: Fluency.

B. Curlee & Perkins (1984) suggest the following method for analyzing duration:

1. Use a stopwatch to time the length of 10 different stuttering moments at random within a speech sample. These moments of stuttering should be representative of the sample. To obtain the average duration of stuttering, divide the sum of the 10 stuttering moments by 10.

2. Choose the three longest stuttering occurrences and time each with a stopwatch. Record the results.

Group B:

1. To analyze *rate of speech*, use the following procedure:

Collect a five-minute speech sample using speaking or oral reading (Peters & Guitar, 1991). You may need 10 minutes of taping to get the five minutes of the student's speaking time. Count the number of syllables (or words) in the intended message. Then, divide the number of syllables (or words) by the total number of minutes of the student's speaking/oral reading time in the sample to obtain a syllable per minute rating, or SPM (or a word per minute rating, WPM). See the Fluency section of the Supplemental Resource Packet for mean rates of speech.

OR

2. To analyze *speech naturalness*, use the following procedure:

Collect a five-minute speech sample. Use a 9-point naturalness scale to determine whether speech has a natural sounding quality. To analyze speech quality, judgments of naturalness may be made by SLPs or naive listeners (lay persons, graduate students). Review the sample (watch/listen) and at 15 second intervals make subjective judgments about the speech to determine whether it sounds highly natural or highly unnatural, despite the percentage of fluency. A total of at least 10 such judgments should be made. To calculate naturalness, add the number assigned at each rating and then divide that number by 10. The mean naturalness rating for adolescents/adults is 2.12 to 2.39

on the 9-point naturalness scale (Martin et al., 1984; Ingham et al., 1985). The mean naturalness rating for children is 3.0 (J. Ingham, 1998). See the Fluency section of the Supplemental Resource Packet.

Group C:

For children, choose one of the following procedures, if appropriate.
For adolescents, you must choose one.

1. **To assess coping mechanisms, Culatta & Goldberg (1995) recommend using the following methods:**

Observations, checklists, rating scales and self-rating protocols. (See the Fluency section of the Supplemental Resource Packet.)
Reports by the student of how he/she manipulates speech in order to cope with stuttering.
Reports by the student of experiences of tension.
Reports by the student of vigilance necessary to achieve and maintain fluent speech.

OR

2. **To assess covert stuttering behaviors, Culatta & Goldberg (1995) recommend using a variety of interview and questionnaire protocols.** (See the Fluency section of the Supplemental Resources Packet.)

OPTION 2:	**Use Fluency Severity Rating Scale Procedures.** (See samples in the Fluency section of the Supplemental Resources Packet.)