

Supplemental Material S5. Commentary on Supplemental Materials S1–S4.

Supplemental Material S1 (P1)

Visit One

- Articulatory features: distortions, distorted substitutions, and distorted additions; false starts/restarts/revisions
- Prosodic features: slow rate; syllable segmentation (or prolonged intersyllable durations)
- Other features: effortful speech; obvious awareness of errors

Visit Two

- Articulatory features: increased prominence and severity of articulatory features described above; some sound (“/t/” in first and third productions of “catapult”) and syllable omissions or merging of syllables (as in “catastrophe”)
- Prosodic features: slower rate and increased intersyllable durations, relative to Visit One
- Other features: intermittently strained voice quality

Visit Three

- Articulatory features: pervasive distorted substitutions that are increasingly off-target
- Prosodic features: slower rate and increased intersyllable durations, relative to Visit Two
- Other features: strained voice quality, suggestive of spastic dysarthria; most words unintelligible; aborted attempts at production; increased effort

Visit Four

- Articulatory features: relatively undifferentiated sounds and reduced articulatory movements
- Prosodic features: speech output too limited to describe
- Other features: spastic dysarthria

Visit Five

- Speech very limited; some off-target attempts to produce single syllable words without phonation

Visit Six

- Mute; unable to volitionally produce sounds or words
- Using alphabet board to spell words

Supplemental Material S5. Commentary on Supplemental Materials S1–S4.

Supplemental Material S2 (P2)

Visit One

- Articulatory features: some distortions and sound prolongations with increasing length/complexity ("catastrophe")
- Prosodic features: mildly slow rate and mild syllable segmentation

Visit Two

- Articulatory features: distortions in less complex words ("catnip" and "catapult")
- Prosodic features: moderately slow rate and increased segmentation

Visit Three

- Articulatory features: increased distortions; some distorted substitutions
- Prosodic features: moderately slow rate and increased segmentation
- Other features: hoarse-breathy voice, suggestive of hypokinetic dysarthria; increased effort; awareness of errors

Visit Four

- Articulatory features: similar to Visit Three
- Prosodic features: markedly slow rate and segmentation
- Other features: hoarse-breathy voice and reduced loudness, suggestive of hypokinetic dysarthria

Visit Five

- Not included secondary to technical difficulties

Visit Six

- Prosodic features: increased segmentation; reduced syllables per breath group
- Other features: reduced loudness; delayed initiation of speech production; reduced facial animation; obvious distress

Supplemental Material S5. Commentary on Supplemental Materials S1–S4.

Supplemental Material S3 (P3)

Visit One

- Articulatory features: mild, subtle distortions
- Prosodic features: mildly slow rate

Visit Two

- Articulatory features: distortions.
- Prosodic features: mild-moderately slow rate; reduced syllables per breath group
- Other features: strained and hoarse/breathy voice quality, suggestive of spastic dysarthria

Visit Three

- Articulatory features: increased distortions; restarts/revisions/repetitions (as in "catastrophe")
- Prosodic features: moderate-markedly slow rate; further reduced syllables per breath group
- Other features: strained and hoarse/breathy voice quality, suggestive of spastic dysarthria

Visit Four

- Articulatory features: similar to Visit Three
- Prosodic features: severely slow rate; further reduced syllables per breath group (~1 syllable/breath)
- Other features: strained and hoarse/breathy voice quality, suggestive of spastic dysarthria

Visit Five

- Inaudible attempts to produce repeated productions of the sound /pʌ/

Visit Six

- Did not produce any verbal output; wrote to communicate

Supplemental Material S5. Commentary on Supplemental Materials S1–S4.

Supplemental Material S4 (P4)

Visit One

- Articulatory features: false starts/restarts/revisions

Visit Two

- Articulatory features: increased false starts/restarts/revisions, including sound repetitions (as in “catastrophe”); distortions (as in first production of “catnip”)
- Prosodic features: mildly slow rate; syllable segmentation

Visit Three

- Articulatory features: sound substitutions; sound omissions (as in “catapult”); sound additions; distorted substitutions (as in “catastrophe”); false starts/restarts/revisions
- Prosodic features: syllable segmentation
- Other features: unsteady voice quality

Visit Four

- Articulatory features: increased sound substitutions, sound omissions (as in “catapult”), sound additions, distorted substitutions (as in “catastrophe”); false starts/restarts/revisions
- Prosodic features: mildly slow rate; syllable segmentation
- Other features: hoarse/breathy voice quality, suggestive of hypokinetic dysarthria

Visit Five

- Off-target attempts to produce single syllable words
- Other features: hoarse/breathy voice quality, suggestive of hypokinetic dysarthria