Supplementary material for Nilsson P, et al. Perceptual assessment of dysarthria: Comparison of a general and a detailed assessment protocol, Logopedics Phoniatrics Vocology, 2015; Doi: 10.3109/14015439.2015.1069889.

Appendix 1. Dimensions of the detailed assessment protocol and their definitions, divided into different domains.

Dimension	Definition
Voice and breathing	
Decreased pitch level	Average pitch is lower than what is perceived as normal
Increased pitch level	Average pitch is higher than what is perceived as normal
Pitch fluctuation/Instability	Unexpected and uncontrolled pitch variations, pitch breaks
Voice tremor	The voice has a trembling, vibrating character
Decreased loudness	The voice has insufficient strength, limited audibility
Increased loudness	The voice is excessively strong
Varying loudness	Vocal loudness varies more than what is perceived as normal
Loudness decay	Vocal loudness decreases successively during the course of a phrase
Breathiness	Audible air escape through the larynx during phonation
Harshness	High frequency or low frequency aperiodic noise during phonation
Vocal fry	Low frequency periodic/aperiodic vibration
Strained-strangled	Strained phonation, sounds like the voice is created through great effort
Decreased breath support	Insufficient expiratory pressure and flow, affecting the prerequisites of phrase length, pitch and loudness variation
Audible inspiration	Inspiratory stridor
Resonance	
Hyper nasality	Inadequate nasal resonance in non-nasal speech sounds
Mixed nasality	Both inadequate hyper and hypo nasal resonance can be detected in the person's speech
Articulation	
Imprecise consonants	Consonants are perceived as unclear and indistinct
Distorted vowels	Vowels are perceived as unclear or distorted
Irregular articulatory breakdowns	Articulation is disturbed by irregular involuntary articulatory movements
Increased phoneme length	Speech sounds are prolonged, making them more difficult to identify
Repetitions of sounds, syllables, words	Sounds, syllables and/or words are repeated one or several times
Prosody	
Decreased speech rate	Speech rate slower than what is perceived as normal
Increased speech rate	Speech rate is faster than what is perceived as normal
Varying speech rate/rushes of speech	Speech rate is changing between slow and fast, speech can be produced in short rushes
Inappropriate pauses	Unexpected, not syntactically motivated pauses between words
Short phrases	Phrases are shorter than what is perceived as normal or is syntactically motivated
Monotony	Limited pitch and loudness variations
Excess and equal stress	Syllable durations more equalized than what is perceived as normal
Reduced stress	Stress patterns less varied than what is perceived as normal
Overall	General impression of severity of speech deviation

Appendix 2. Domains of the general assessment protocol and their definitions.

Domain	Definition
Voice and breathing	Does the voice deviate with regard to loudness, pitch or quality and /or does the person have deviant breathing during speech?
Resonance	Is the voice hyper or hypo nasal?
Articulation	Is the articulation imprecise?
Prosody	Does the speech exhibit deviations in rate, pausing, stress or intonation?
Overall	General impression of severity of speech deviation