

Dysarthria Reference & Resource Guide

Comprehensive Clinical Diagnostics, Subsystem Interventions & Caregiver Strategies

SPEECH-LANGUAGE PATHOLOGY CLINICAL TOOLKIT

EVIDENCE-BASED PRACTICE

PART I: CLINICIAN DIAGNOSTIC & ASSESSMENT MATRIX

1. Dysarthria Subtype Assessment & Differential Diagnosis Matrix

Subtype	Lesion Site / Etiology	Perceptual Speech Features	Oral-Motor & Subsystem Markers
Flaccid	Lower Motor Neuron (LMN) <i>ALS, Guillain-Barré, Myasthenia Gravis, CN VII/IX/X/XII damage</i>	Breathiness, severe hypernasality, audible nasal emission, monopitch, short phrases	Muscle weakness, hypotonia, fasciculations, reduced/absent reflexes, rapid fatigue
Spastic	Bilateral Upper Motor Neuron (UMN) <i>Bilateral CVA, TBI, Pseudobulbar Palsy, Cerebral Palsy</i>	Strained-strangled voice quality, low pitch, slow speech rate, equalized stress, hypernasality	Hypertonia, spasticity, hyperactive reflexes (exaggerated gag, Babinski), emotional lability
Ataxic	Cerebellum / Cerebellar Pathways <i>Cerebellar Degeneration, MS, TBI, Friedreich's Ataxia</i>	Irregular articulatory breakdown, "drunken" rhythm, excess & equal stress, dysprosody, vowel distortion	Cerebellar ataxia, dysmetria, irregular Alternating Motion Rates (AMRs), normal resting tone
Hypokinetic	Basal Ganglia (Substantia Nigra) <i>Parkinson's Disease, Progressive Supranuclear Palsy</i>	Reduced volume (hypophonia), monopitch, rapid speech rushes, imprecise consonants, inappropriate silences	Rigidity, resting tremor, hypokinesia, mask-like facies, reduced ROM, short-range AMRs
Hyperkinetic	Basal Ganglia (Extrapyramidal) <i>Huntington's Chorea, Dystonia, Tardive Dyskinesia</i>	Prolonged intervals, variable speech rate, sudden loudness changes, vocal arrests, inappropriate silences	Involuntary movements (chorea, dystonia, myoclonus, tics) disrupting speech respiratory control
Unilateral UMN	Unilateral Upper Motor Neuron <i>Acute Focal CVA (Internal Capsule, Corticobulbar Tract)</i>	Mild-to-moderate imprecise articulation, transient harshness, slow rate, mild prosodic abnormalities	Unilateral lower facial weakness, unilateral hemiparesis, unilateral tongue weakness

Diagnostic Motor Speech Battery Checklist

- **Alternating Motion Rates (AMRs):** Assess rapid repetition of /pa-pa-pa/, /ta-ta-ta/, /ka-ka-ka/ for speed, rhythm regularity, and range of movement.
- **Sequential Motion Rates (SMRs):** Assess rapid repetition of /pa-ta-ka/ to evaluate motor programming and coordination across articulators.
- **Sustained Phonation:** Measure maximum phonation time and stability on sustained /a/ to assess respiratory support and vocal fold valving.
- **Stress Testing:** Conduct continuous reading for 2–4 minutes to check for neurogenic muscle fatigue (e.g., Myasthenia Gravis).

2. Subsystem-Targeted Intervention & SMART Goal Bank

RESPIRATION & PHONATION Target: Breath Support & Vocal Intensity

Evidence-Based Protocols: Expiratory Muscle Strength Training (EMST), Lee Silverman Voice Treatment (LSVT LOUD®), Pitch Limiting Voice Treatment (PLVT), Controlled Breath Grouping.

SMART Goal Template: "Client will utilize diaphragmatic breathing strategies to initiate speech at top of inhalation, maintaining vocal intensity above 65 dB at a 3-foot distance during 80% of structured conversation turns across 3 consecutive sessions."

ARTICULATION & RATE Target: Intelligibility & Precision

Evidence-Based Protocols: Overarticulation (Clear Speech), Rigid Pacing Boards, Alphabet Board Supplementation, Auditory Feedback / Metronomic Pacing.

SMART Goal Template: "Client will independently apply rate reduction strategies (e.g., pacing board or finger tapping) to increase sentence-level speech intelligibility from 60% to 85% in simulated conversational tasks."

RESONANCE Target: Velopharyngeal Competence

Evidence-Based Protocols: CPAP resistance therapy (for mild flaccid weakness), visual nasal feedback (Nasometer), palatal lift prosthetics referral for severe non-progressive flaccid hypernasality.

SMART Goal Template: "Client will demonstrate reduced hypernasality and zero audible nasal emission during oral sentence production using exaggerated oral opening across 4 out of 5 clinical trials."

PART II: CAREGIVER & COMMUNICATION PARTNER GUIDE

1. The "CLEAR" Communication Partner Strategy Guide

C

CREATE THE ENVIRONMENT

- **Eliminate Background Noise:** Mute the television, turn off music, and close doors to noisy adjacent rooms before starting a conversation.
- **Face Each Other Directly:** Stand or sit 3 to 6 feet apart in a well-lit space so facial expressions and mouth movements are fully visible.

L

LISTEN ACTIVELY & GIVE TIME

- **Allow Adequate Processing Time:** Pause 5 to 10 seconds before jumping in. Avoid finishing sentences unless explicitly requested.
- **Observe Non-Verbal Cues:** Pay close attention to gestures, eye movements, and body language alongside spoken words.

E

ESTABLISH THE TOPIC FIRST

- **Set Context Early:** Encourage the speaker to announce the category first (e.g., "Food", "Medication", "Schedule").
- **Verify Context:** Confirm the subject right away: "Are we talking about what happened this morning?"

A

ACKNOWLEDGE KNOWN WORDS

- **Repeat What You Understood:** Do not ask the speaker to repeat the entire sentence. Repeat only the recognized words.
- *Example:* "I heard you say you want to go, but I missed where."

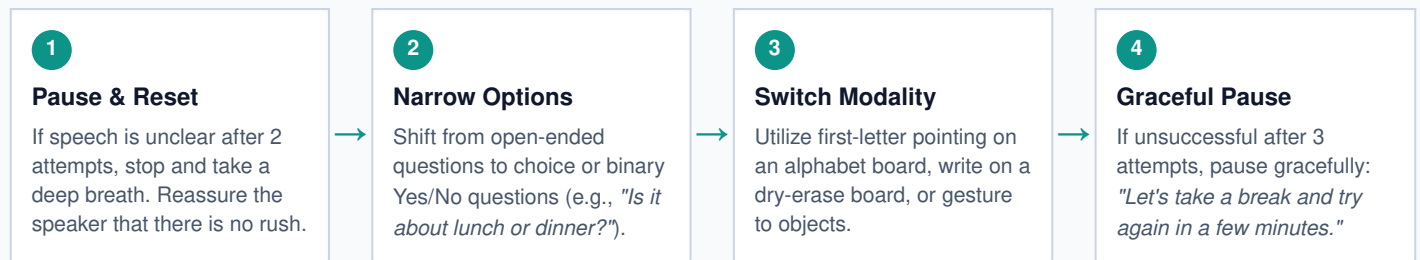
R

REDUCE FATIGUE

- **Capitalize on Peak Energy:** Schedule important discussions during times when the speaker is well-rested (typically mornings).
- **Keep Sessions Brief:** Break complex discussions into short, manageable exchanges to prevent physical exhaustion.

2. Communication Breakdown Repair Procedure & Home Toolkit

Step-by-Step Breakdown Resolution Protocol:



Essential Caregiver Home Toolkit Checklist

- ✓ **Pocket Alphabet Board:** A laminated grid of letters (A–Z) and numbers (0–9) for first-letter pointing.
- ✓ **Dry-Erase Board & Marker:** Lightweight portable board for writing key words or drawing simple diagrams.
- ✓ **Topic & Phrase Cards:** Quick-select cards featuring core daily needs (*Water, Pain, Bathroom, Hot/Cold*).
- ✓ **Personal Voice Amplifier:** Wearable clip-on microphone and speaker for individuals with soft/hypophonic voice.