**Meredith's temporary protocol for the DEMSS**

Adapted from Strand, McCauley, Weigand, Stoeckel & Baas., (2013). A motor speech assessment for children with severe speech disorders: Reliability and validity evidence, *JSLHR,* Vol 56., 505-520

*"The DEMMS is designed specifically to examine the speech movements of younger children and/or children who are more severely impaired, even those who may not yet produce many sounds, syllables, or words. Therefore, instead of sampling all American English speech sounds, the DEMSS focuses on earlier developing consonant sounds paired with a variety of vowels in several earlier developing syllable shapes." (Strand, et al., 2013, p. 506)*

**Isolated Vowels: (if unable to get in direct imitation, proceed to attempting in simultaneous and then simultaneous with tactile cues if necessary.**

(Optional-not part of DEMSS) **direct imitation simultaneous simultaneous with TC**

\_\_\_\_\_/i/\_\_\_\_\_\_\_\_ **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

\_\_\_\_\_/I/\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ **\_\_\_\_\_\_\_\_\_\_\_\_**

\_\_\_\_\_/eI/ **\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** ɛ **/\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** æ **/\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_**/ɑ/**\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** ʊ **/\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** u **/ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** ʌ **/\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_/** aI **/\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_**/ɑ ʊ **/\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_**/ ɔI**/\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**

*TC=tactile cues such as assistance with jaw movement or lip retraction and protrusion*

|  |
| --- |
| Strand, et al., 2013, p. 508, Table 2  **Overall articulatory accuracy**: 5-point multidimensional scoring  0 = correct on first attempt  1 = consistent developmental substitution error (e.g., /t/ for /k/; /w/ for /r/) without slowness or distortion of movement gestures  2 = correct after first cued attempt  3= correct after two or three additional cued attempts  4 = not correct after all cued attempts  X= No attempt/refusal |
| **Vowel accuracy:** 3-point multidimensional scoring  0 = correct  1 = mild distortion 2 = frank distortion |
| **Prosodic accuracy**: Binary scoring 0 = correct 1 = incorrect |
| **Consistency:** Binary scoring  0 = consistent across all trials  1 = inconsistent across any 2 or more trials |

*Stimulus items written here can be changed to suit the child's sound repertoire.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Utterance Type** | **Overall articulatory accuracy**  **0 =** Immediate correct repetition.  **1 =** Immediate; accurate rate and movement but consistent error.  2= correct after first cued attempt  **3 =** Needs cuing (multiple cues)  **4 =** No correct response.  **X=**Refusal/inattention/no | | | | | | **Vowel accuracy**  **0 =** Immediate correct repetition of the vowel  **1 =** Mild distortion  **2 =** Frank distortion *On first attempt* | | | **Prosodic accuracy**  **0 =** Correct  **1 =** Incorrect  *On first attempt* | | **Consistency**  **0 =** Consistent  **1 =** Inconsistent  *On any 2 or more trials* | |
| **CV** | | | | | | | | | | | | | |
| **1. me** | 0 1 2 3 4 X | | | | | | **0 1 2** | | |  | | **0 1** | |
| **2. hi** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **3. boy** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **4. do** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **5. no** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **6. may** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **7. pie** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | **0 1** | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  | |  |  |
| **VC syllables** | | | | | | | | | | | | | |
| **1. eat** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **2. on** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **3. in** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **4. up** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **5. off** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **6. eight** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **7. I’m** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  | |  |  |
| **Re-duplicated syllables** | | | | | | | | | | | | | |
| **1. mama** | 0 1 2 3 4 X | | | | | |  | | | **0 1** | |  | |
| **2. booboo** | 0 1 2 3 4 X | | | | | |  | | | **0 1** | |  | |
| **3. bye bye** | 0 1 2 3 4 X | | | | | |  | | | **0 1** | |  | |
| **4. papa** | 0 1 2 3 4 X | | | | | |  | | | **0 1** | |  | |
| **Subtotal of each #** |  |  |  |  |  |  |  | | |  |  |  | |
| **CVC1** | | | | | | | | | | | | | |
| **1. mom** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **2. peep** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **3. pop** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **4. dad** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **5. bob** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **6. toot** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  | |  |  |
| **CVC2** | | | | | | | | | | | | | |
| **1. mad** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **2. bed** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **3. hop** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **4. bite** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **5. kite** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **6. mine** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **7. make** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | 0 1 | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  | |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Utterance Type** | **Overall articulatory accuracy** | | | | | | **Vowel accuracy** | | | **Prosodic accuracy** | | **Consistency** | |
| **Bisyllabic 1** | | | | | | | | | | | | | |
| **1. baby** | 0 1 2 3 4 X | | | | | | **0 1 2** | | | 0 1 | |  | |
| **2. puppy** | 0 1 2 3 4 X | | | | | | **0 1 2** | | | 0 1 | |
| **3. daddy** | 0 1 2 3 4 X | | | | | | **0 1 2** | | | 0 1 | |
| **4. mommy** | 0 1 2 3 4 X | | | | | | **0 1 2** | | | 0 1 | |
| **5. tootie** | 0 1 2 3 4 X | | | | | | **0 1 2** | | | 0 1 | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  |  |
| **Bisyllabic 2** | | | | | | | | | | | | | |
| **1. bunny** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **2. happy** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **3. money** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **4. pouty** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **5. mighty** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **6. yucky** | 0 1 2 3 4 X | | | | | |  | | | 0 1 | |  | |
| **Subtotal of each #** |  |  |  |  |  |  |  | | |  |  |  | |
| **Multisyllabic (banana, kangaroo, tomato)** | | | | | | | | | | | | | |
| **1. banana** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **2. kangaroo** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **3. computer** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **4. tomato** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **5. alligator** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **6. kindergarten** | 0 1 2 3 4 X | | | | | | 0 1 2 | | | 0 1 | | 0 1 | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Utterances of increasing length** | | | | | | | | | | **word level broke down at/comments** | | | |
| **1. I, I want, I want more I want more please** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **2. my, my turn, my turn now** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **3. I, I do, I do it** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **4. me, me too, me too please** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **5. I, I go, I go now** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **6. what, what is, what is it** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **7. my, my mom, my mommy** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **8. home, go home, I go home** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **9. give, give it, give it to me** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **10. put, put down, put it down** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **11. I, I like, I like you** | 0 1 2 3 4 X | | | | | | 0 1 2 | | |  | | | |
| **Subtotal of each #** |  |  |  |  |  |  |  |  |  |  | | | |
| **Total # of each score** |  |  |  |  |  |  |  |  |  |  | | | |

Levels of cuing

**Level of cuing needed for correct production or greatly improved production.**

1. direct imitation only
2. direct imitation with miming
3. simultaneous
4. simultaneous with tactile cue

**NC = Never correct**

**Potential target phrases for treatment. Level of cuing needed for best production**

**1. 1 2 3 4 NC**

**2. 1 2 3 4 NC**

**3. 1 2 3 4 NC**

**4. 1 2 3 4 NC**

**5. 1 2 3 4 NC**

**6. 1 2 3 4 NC**

**7. 1 2 3 4 NC**

**8. 1 2 3 4 NC**

|  |
| --- |
| **Potential target phrases for treatment. Direct Imitation** |
| **Transcription of phrases 2 reps each PCC PVC PPC** |
|  |
|  |
|  |
| **2.** |
|  |
|  |
| **3.** |
|  |
|  |
| **4.** |
|  |
|  |
| **5.** |
|  |
|  |
| **6.** |
|  |
|  |