Supplementary Material 1

Staircase Diagram of the SPC

| Phonologic development | Phonetic development |
|------------------------|----------------------|
| Speech intelligible with good voice pattern | 7 | Consonants: liquid |
| Some clear sentence with good voice pattern | 6 | Consonants: fricatives |
| Some clear phrase with good voice pattern | 5 | Consonants: affricatives |
| Some clear words with good voice pattern | 4 | Most vowels & some consonants (velar stops) |
| Uses vowels to approximate words | 3 | Most vowels & some consonants (nasal, bilabial/alveolar stops) |
| Uses different voice patterns meaningfully | 2 | Base of suprasegmental pattern & some vowel with voice pattern |
| Vocalization as means of communication | 1 | Vocalized freely and on demand |

The SPC, which includes a modification of Ling's 7 distinct stages, assesses phonetic (articulation) and phonologic (meaningful speech) levels of acquisition at each stage in young children who have undergone cochlear implantation. SPC: speech production scale.