

Sample Evaluation Report for LSVT LOUD®

I. Identifying Information

NAME: Jane Doe
EVALUATION DATE: Day/Month/Year
DATE OF BIRTH: Day/Month/Year
DIAGNOSIS: Parkinson disease (or other diagnosis)
EXAMINER: Susie Smith, MS, CCC-SLP
PHYSICIAN: Dr. Mary Black (PCP)
REFERRAL SOURCE: Dr. Joe Jones (Neurologist)
BILLING CODES: 92524

II. History

Ms. Jane Doe, a 66-year-old female, was seen for a voice and speech evaluation on Day/Month/Year. She is received with her son. Ms. Doe reported that she was diagnosed two years ago with idiopathic Parkinson disease. She described her initial symptoms to include tremor in the right leg and a hoarse voice, with onset of symptoms as of seven years ago.

Ms. Doe lives alone; however, her son, who she is reportedly close with, lives in a residence in the same apartment building, a positive prognostic variable for treatment success. Ms. Doe is employed as a life insurance salesperson and estimates that she uses her voice about four hours a day at work and 1 hour a day on the phone or otherwise engaging her family/son/community. She uses her voice for weekly marketing webinars and social engagements and has noted an increase in rough quality with prolonged voice use. She also requires use of voice for communication with family and medical professionals. She reported a lower vocal pitch, changes in her singing voice, an increase in rough vocal quality that has become progressively worse over the past six months and running out of breath when presenting at meetings and during webinars. She also complained of vocal fatigue, a slower speech rate, tremor (without medication) and lingual fasciculations.

A laryngeal examination with videostroboscopy revealed moderate bowing of the vocal folds and use of an anterior to posterior supraglottic hyper-functioning pattern during vocalization. No mass lesion, Laryngopharyngeal Reflux (LPR), or paralysis/paresis were observed. (See scanned in report from ENT Dr. XXX or separate report from SLP).

OR Ms. Doe has not recently seen an otolaryngologist; she was referred to Dr. Smith for videostroboscopic testing prior to initiation of treatment.

Medical history is significant for Parkinson's disease diagnosed in 2010; mild Chronic Obstructive Pulmonary Disease (COPD) diagnosed in 2009; hypercholesterolemia; history of three occurrences of pneumonia; s/p rotator cuff surgery in 2009 and transforaminal lumbar disc surgery in 2010. Ms. Doe reported she falls every few months; physical therapy (LSVT BIG) was recommended but has not yet been scheduled.

Medication list was reconciled and reportedly includes: Spironolactone 20mg, Lipitor 20mg, Lexapro 20mg, Pramipexole 3mg, and Lasix 20mg. Ms. Doe and her son were unable to report other medications at the time of the assessment. A complete list was requested.

III. Evaluation Results

Hearing: Results of a hearing screening revealed Ms. Doe’s hearing to be within normal limits bilaterally.

Acoustic Measures: Sound pressure level (SPL, acoustic correlate of vocal loudness) measured with a sound level meter at 50 cm from the patient’s mouth during three voice and speech tasks revealed the following average vocal SPL numbers:

Example data Chart 1:

	Average Loudness	Loudness Range	Average Maximum Phonation Time (MPT)	Range
Sustained Vowels	65 dB	60-68 dB	7.3s	5.1-10.2s
Reading	58 dB	52-62 dB	N/A	N/A
Conversation	55 dB	52-60 dB	N/A	N/A

**Use of normative values will vary depending upon equipment and distance from sound level meter.*

These results represented reading and conversation vocal SPL levels that may significantly reduce Ms. Doe’s audibility, speech intelligibility and communicative effectiveness.

Example data Chart 2:

TASK	Average dB SPL	Range dB SPL	Average Duration in seconds	Range Duration in seconds	Average frequency in Hz
Vowel Duration Exercise	68.7	60.8-76.9	19.1	8-27	
Pitch Range High Exercise	72.9				480 (with strain)
Pitch Range Low Exercise	72.5				170 (with glottal fry)
Text Reading Exercise	67.1	64-72			
Monitored Conversation Exercise	66.4	65-73			

Perceptual Measures: The clinician engaged in conversation with the patient from distances of 1.5 feet in a quiet environment. Ms. Doe's functional speech intelligibility was judged to be reduced from 100% to 75% in known contexts. During conversation, speech intelligibility was further reduced when any background noise was present, when there was greater distance between the patient and the listener, or when the context of the conversational topic was unknown.

The patient reported that she is "not loud enough" in conversation 70% of the time and experiences a hoarse voice 90% of the time. She stated that people frequently ask her to repeat and at times, when using the phone, people "hang-up" on her. She also noted "being ignored" at her Coffee Clutch social group, and thus she speaks a reported 50% less and sometimes even "misses the group because I get frustrated that no one listens to me".

Oral Motor Examination: An oral motor speech exam revealed the structures and functions of Ms. Doe's speech mechanism to be within normal limits.

Stimulability Testing: Stimulability testing was completed to determine Ms. Doe's stimulability for the Lee Silverman Voice Treatment program (LSVT LOUD). With stimulation to "increase loudness" Ms. Doe increased her vocal loudness during sustained vowel phonation to 75 dB and during reading of single words to 70 dB.

IV. Impressions

Ms. Doe presented with a moderate to severe voice disorder. Voice deficits included reduced loudness, monotone pitch, and a hoarse voice quality, which contributed to an overall decrease in speech intelligibility. During conversation, speech intelligibility is reduced 80-85% of the time. Her moderate to severe voice disorder limits Ms. Doe's ability to perform work responsibilities and is causing her to start withdrawing from her community causing feelings of isolation and decreased QOL.

She is an excellent candidate for therapy given her motivation to improve communication, response to stimulability testing, her desire to communicate at work and in her community and her strong support system including her son who is also her neighbor and sees her frequently. Potential barriers to therapy include the sensory mismatch between her self-perception of appropriate loudness when she is in fact inaudible. This perceptual mismatch is characteristic of patients with PD and will be addressed throughout her treatment course to target carryover of treatment gains into her everyday communication.

V. Recommendations

It is recommended that Ms. Doe receive the LSVT LOUD program that is comprised of 16 intensive sessions (4 days a week for 4 weeks; one-hour individual sessions) of voice treatment. LSVT LOUD is an evidence-based treatment with over 25 years of research support, designed for individuals with Parkinson disease. *

VI. References

* Ramig, L., Countryman, S., Thompson, L., & Horii, Y. (1995). *A comparison of two forms*

of intensive speech treatment for Parkinson disease. *J. Speech and Hearing Research*, *38*, 1232-1251.

Fox, C. M., & Ramig, L. O. (1997). Vocal sound pressure level and self-perception of speech and voice in men and women with idiopathic Parkinson disease. *American Journal of Speech-Language Pathology*, *6*(2), 85-94.

Ramig, L., Sapir, S., Countryman S., Pawlas, A., O'Brien, C., Hoehn, M., & Thompson, L. (2001). Intensive voice treatment (LSVT[®]) for individuals with Parkinson disease: A two-year follow-up. *J. Neurology, Neurosurgery, and Psychiatry*. *71*, 493-498.

Ramig, L., Sapir, S., Fox, C., & Countryman, S. (2001). Changes in vocal intensity following intensive voice treatment (LSVT[®]) in individuals with Parkinson disease: A comparison with untreated patients and normal age-matched controls. *Movement Disorders*, *16*, 79-83.

VII. Treatment Plan

Long Term Goal: The patient will improve coordination between the subsystems of respiration, phonation, and articulation for functional speech production with a variety of communication partners across environmental and situational contexts.

Long Term Goal: Patient will increase loudness in conversational speech allowing her to converse in the community, increase voice use, slow progression of vocal deterioration, and improve her QOL.

Short-term Goals:

1. Patient will increase vocal intensity by 6 dB SPL with minimal to no clinician cueing across daily and hierarchy tasks.
2. Patient will increase vocal loudness to reach a target sound pressure level of XX dB SPL at a XX cm microphone to mouth distance with XX cues from XX dB at time of initial evaluation during sustained phonation, which will help her to increase vocal respiratory support required to be understood without cues while expressing medical and personal needs and wants.
3. Patient will increase maximum phonation time to reach a duration of XX seconds with XX cues from XX seconds at time of initial evaluation during sustained phonation, which will help her to increase vocal respiratory support required to be understood without cues during a 1-minute phone call.
4. Patient will increase phonational frequency range to XX-XX Hertz (Hz) with XX cues from XX-XX Hz with XX cues at time of initial evaluation during pitch range tasks, which will help her to reduce monotone pitch and increase vocal expressivity for functional communication (e.g., raise pitch to indicate she is asking a question; drop pitch to direct an action; change pitch when reading books to grandchildren).
5. Patient will increase vocal loudness to reach a target sound pressure level of XX dB at a XX cm microphone to mouth distance with XX cues from XX dB at time of initial evaluation during reading at word and sentence levels, which

will help her to increase vocal respiratory support to be understood without the need for repetition to convey information while in a car.

6. Patient will increase vocal loudness to reach a target sound pressure level of XX dB at a XX cm microphone to mouth distance with XX cues from XX dB at time of initial evaluation to communicate effectively during simple, structured conversational speech, which will help her to increase vocal respiratory support to increase loudness to be understood without the need for repetition to talk with family and friends during a meal.
7. Patient will reach a target sound pressure level of XX dB at a XX cm microphone to mouth distance with XX cues from XX dB at time of initial evaluation to for longer more complex paragraph level reading to help her increase vocal respiratory support to increase loudness to be understood without the need for repetition to instruct caregivers regarding needs and wants.
8. Patient will reach a target sound pressure level of XX dB at a XX cm microphone to mouth distance to communicate effectively during moderate to complex conversational speech with XX cues to increase loudness which will help patient to increase vocal respiratory support to be understood without the need for repetition to maintain vocal responsibilities at work.
9. Caregiver(s) will demonstrate understanding of using communication strategies to help patient increase loudness and intelligibility 100% of the time given minimal cues over three consecutive sessions.