



Public Webinar Series

Title: **Case Studies in LSVT BIG® and LSVT LOUD®**

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Heather Hodges, MA, CCC-SLP

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Case Studies in LSVT BIG® and LSVT LOUD®



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Instructor Biographies

Heather Cianci, PT, MS, GCS

Ms. Cianci is the founding therapist of the Dan Aaron Parkinson's Rehab Center (a Good Shepherd Penn Partners facility) at Pennsylvania Hospital in Philadelphia, PA. She received her bachelor's in PT from the University of Scranton in Scranton, PA and her master's in gerontology from Saint Joseph's University in Philadelphia. Heather received her GCS in 1999. She is certified in LSVT BIG and is a graduate of the NPF's Allied Team Training for PD. She has written and lectured for both the NPF and PDF. Heather is also a board member for CurePSP, and the coordinator of their Medical Professionals Advisory Committee.

Heather Hodges, MA, CCC-SLP

Ms. Hodges received her master's degree in Speech, Language, and Hearing Sciences from the University of Colorado, and began working on Dr. Lorraine Ramig's research team as a graduate student. She now works at the National Center for Voice and Speech as an ASHA certified speech-language pathologist and research associate. In addition to studying neurogenic voice and speech disorders and being LSVT LOUD certified, Ms. Hodges also works at National Jewish Health in Denver, CO treating a variety of speech, language and swallowing disorders in adult and pediatric populations.

Plan for Webinar

- * Logistics
- * Brief Introduction
- * Review key paradigm shifts
- * Discuss the use of LSVT BIG and LSVT LOUD with people with Parkinson's disease by describing treatment session examples.
- * Address your questions

Disclosures

- All of the LSVT BIG and LSVT LOUD faculty have both financial and non-financial relationships with LSVT Global.
- Non-financial relationships include a preference for the LSVT BIG and LSVT LOUD as a treatment technique.
- Financial Relationships include: Dr. Cynthia Fox receives lecture honorarium and travel reimbursement and has ownership interest in LSVT Global, Inc. Heather Cianci and Heather Hodges both receive consulting fees, lecture honorarium and travel reimbursement from LSVT Global, Inc.

STATEMENT ON DISCLOSURE AND CONFLICT: The co-existence of both the academic research and for-profit business has been handled according to all rules and regulations of the National Institutes of Health and the University of Colorado. The research team is in full compliance with federal Statute (42 C.F.R. Part 50. Subpart F) and the University of Colorado-Boulder Policy on Conflict of Interest and Commitment.

Presented by....

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Objectives

Upon completion of this webinar, participants will be able to:

- Describe real world cases using LSVT BIG and LSVT LOUD.
- Describe 2 challenges encountered and how they were addressed by therapists.

Treatment of one **Speech Target**
Enhances Many Levels
of Speech Production

Improve Efficiency of Treatment
Simplify Treatment

- Progressive Neurological Disease
 - Cognitive Impairment

LOUD as “trigger”

Deep breath, Open mouth
Improved Articulation,
Reduced rate.....

SPREAD of EFFECTS

(Huber et al., 2003; Spielman et al, 2003; El Sharkawi et al, 2002, Sapir et al, 2003; Sapir et al., 2007)

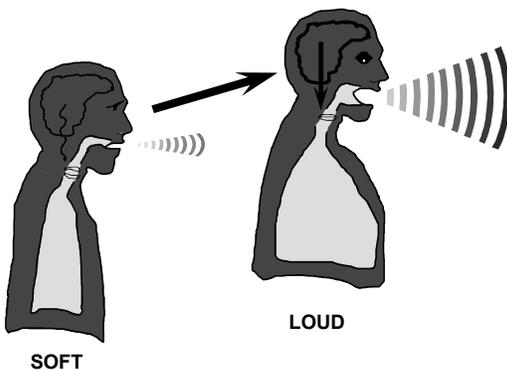
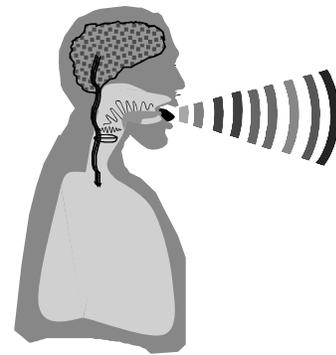
Vocal Loudness

as a

Source: Carrier in signal transmission

Trigger: Enhance effort and
coordination across
motor speech system
“LOUDNESS is a global variable”

(Schulman; Dromey, Ramig & Johnson, 1995; Sapir et al., 2008; Watson & Hughes, 2006)



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General Breakdown of LSVT LOUD Treatment Session

Daily Exercises
30 minutes

Hierarchy Exercises
30 minutes

Long Ahs: 12-15 min.
High/Low Ahs: 10-12 min.
Functional Speech: 5 -10 min.

Structured reading: 20+ min.
Off the cuff: 5-10 minutes
Homework and carryover
assignments: 5 minutes

Calibration: Embedded throughout entire session

Ultimate decision whether
LSVT LOUD
is appropriate is
based upon:

- Speech assessment
- Stimulability testing
- Clinical decision making

LSVT LOUD Case Study

- 75 Year Old Male
- With a yet-to-be-determined neurological condition
 - Memory decline
 - Still living independently
- Presented with a mixed-type dysarthria
 - At times breathy and/or aphonic
 - Other times were strained
 - Decreased speaking pitch; often raspy
 - Had previous voice traditional therapy 1 year prior, but gains were lost

Stimulability testing

Does “loud” have impact
on improving speech and voice

- Maximum duration vowels “ah”
- High/low “ahs”
- Functional phrases (speech)

- Speech intelligibility was approx. 50% at word/phrase level to a novel or semi-familiar listener.
 - His daughter understood 75-80%
- ENT exam revealed no pathology or mobility deficits
- Oral mech exam showed some uncoordinated tongue movement; no weakness or decreased range of motion
- Mild dysphagia on MBSS, addressed in prior therapy

- Try four consecutive initial sessions and evaluate impact
- Monitor progress in treatment

Findings with LSVT LOUD

- Stimulability for increased intensity was promising
 - Could produce a louder voice with cues
 - Louder voice was more intelligible
 - Strain existed still; especially with Ahs
 - At times only needed a cue for loud, other times required a model to replicate loudness

Findings with LSVT LOUD

- In treatment his Ahs remained strained
 - Remedied by using easy onset with short productions, but more reps.
- Highs and Lows were best
 - Decreased range overall, but could avoid fry
- **Emotionally** salient functional phrases were best outcome

LSVT BIG Case Study “Mary”

- 77 year old woman
- Lives with 80 year old husband
- Retired teacher
- Diagnosed with PD 5 years ago
- Started using a cane 1 year ago
- Was very active with volunteering until her balance and voice started to change



- End treatment goal was modified after 2 weeks
 - Phrase and sentence level speech using LOUD voice
 - Variable need for external cueing
 - Use of family as needed
 - At times functional phrases were only success
 - Not predictable, and fluctuated through a day

Deciding on Therapy

- “Mary” was a part of a local PD Support Group and read frequently about PD.
- After having her regular appointment with her neurologist, she asked if “LSVT BIG and LSVT LOUD” therapy would be right for her.
- Her neurologist referred her for physical, occupational, and speech therapy evaluations.

Pleased Patient

- The patient was very relieved and happy with his success
- Could order a coffee
- Ask for help
- Communicate when he was frustrated (family)
- Family with increased confidence in maintaining independent living
 - Emergency situations

PT and OT Evaluations

- PMHx
- Vital signs
- ROM
- Strength
- Cognition
- Transfers
- Bed mobility
- Balance
- ADLs
- IADLs
- Gait...any FOG?
- Care partner situation
- Living situation
- Leisure activities
- History of Falls
- Timed activities
- VIDEOS
- *Stimulability test* – can the person with PD do any of what the PT is showing or asking them to do?

Slide 24

- L4** FOG, Fall history, balance, walking. Even WC propulsion is hypokinetic. Also-emphasize critical need to assess the caregiver situation and options. Also consider things OTs might assess. The importance of understanding the living environment is also crucial.

Laura, 10/2/2014

Reported Functional Issues

1. Walking slower, needing to use a cane
2. Losing her balance more often when walking
3. Occasionally losing her balance when climbing the stairs at her home or getting on to the bus
4. Slower with dressing
5. Asking spouse to be in bathroom when she would get in and out of the shower

Voice Issues

1. Talking less in crowds since she believed no one could hear her
 - Her voice volume was low and would often trail off lower the longer she spoke
2. Felt as though she was rushing to get her words out before she ran out of breath
 - She was speaking quickly and often sounded out of breath
3. Reported feeling "tip of the tongue" moments more frequently.
 - She would often forget words or lose her train of thought

Functional Issues

5. Beginning to not use her dominant hand for ADLs – brushing teeth she switched to electric toothbrush that she did not like
6. Handwriting was getting smaller and harder to read
*Take my hand - she says
writes - small, sometimes she says
require a magnifying glass.*
7. Two falls in the last 6 months – (1) tripping on bottom step & (2) "Caught" foot on carpet when walking

Test Findings

- Gait – slower speed, taking more steps, using a cane, not swinging R arm when not using cane, and scuffing her R foot on the floor
- Stairs - catching her toes on the edge of a step when climbing up
- Turns – taking more steps and showing early signs of FOG
- Balance – not lifting foot high enough when stepping over an object and had difficulty
- Fear of Falling = 6/10

Social & Leisure Issues

- Decreased the amount of time she was volunteering at library archive and pet shelter
- Limited how often she was going to her book club
- Going out to lunch less with friends if she had a longer walk or had to take the bus
- Reported feeling "blue" and concerned with her future and the progression of her PD

Test Findings

- R arm movements were small and slow, she was often not using it – pushing her from her face and gesturing with L arm only
- Micrographia
- Standing to dress her lower body and getting her foot stuck and having balance issues
- Difficulty with tucking in shirts
- Unsteady when stepping over side of tub – foot grazing tub ledge
- Difficulty with using mouse and typing

Goals

- Reduce Fear of Falling
- Get in and out of the shower by herself
- Prevent falls
- Improve gait quality, safety, and speed
- Perform stairs without tripping or LOB
- Spontaneously use R arm more
- Return to brushing her teeth with R hand

LSVT BIG Treatment Session

<p>Maximal Daily Exercises</p> <ol style="list-style-type: none"> 1. Floor to Ceiling – 8 reps 2. Side to Side – 8 each side 3. Forward step – 8 each side 4. Sideways step – 8 each side 5. Backward step – 8 each side 6. Forward Rock and Reach – 10 each side (working up to 20 reps) 7. Sideways Rock and Reach – 10 each side (working up to 20 reps) 	<p>Functional Component Tasks</p> <p>5 EVERYDAY TASKS– 5 reps each</p> <p>Simple, one-step tasks</p> <ul style="list-style-type: none"> • Sit to stand <p>Hierarchy Tasks</p> <p>1-3 multi-step tasks such as getting in and out of the bed</p> <p>Walking BIG</p> <p>Distance/time may vary</p> <p>Carryover Task Assigned</p>
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Goals

- Improve quality of handwriting and ease with computer use
- Improve speed and ease of dressing

Speech:

- reports friends and family no longer ask her to repeat herself
- reports returning to book club and talking throughout her time there
- reports being able to keep her voice volume up when out to dinner with friends

Functional Component Tasks

1. Sit to Stand
2. Stepping up and down
3. Stepping over shoe box
4. Reaching and grabbing items
5. Writing her name



Treatment with PT/OT/SLP

- Completed 2 sessions/week with PT and 2 sessions/week with OT for a total of 4 weeks
- Completed 16 sessions with SLP – 4x/week for 4 weeks
- 1 hour of LSVT LOUD followed by 1 hour of LSVT BIG
- Completed daily homework and carryover task

Hierarchies

1. Getting on and off of the bus



1. Getting in and out of the shower & showering



Slide 31

L7

I'd suggest writing a few actual goals so people not good at goal writing can learn from the experts!

Laura, 10/2/2014

Examples of Carryover Assignments

1. Stand up Big out of car with husband
2. Reach in to closet for coat in a Big way
3. Walk Big with cane outside
4. Greet friend outside with Big walk and Loud hello
5. Lift books from shelf and carry in a Big way

Week 2

- No longer holding on to chair for support with exercises
- Added flicks to seated exercises
- FCM: Added balance pad to sit to stand & writing name
- Working on walking without cane
- Hierarchies: Added in full step-ups and reaching to show bus pass or grab soap

Challenges

1. Could not begin treatment sessions for 2 weeks
2. Worried about the Medicare “Cap”
3. Stepping Backwards and Sideways Rock & Reach initially made her very nervous and often lose her balance

Week 3

- Added flicks to all exercises
- Added balance pad to front and side step exercises
- Consistently walking without cane indoors, ½ of the time outdoors
- FMC: Using balance pad and real objects with all
- Hierarchies: Going through the entire process in clinic

Week 1

- Adapted Stepping Backwards and Sideways Rock & Reach exercises to Mary holding on to a chair
- Needed frequent cues to help Mary remember to keep her R hand fully open, as well as making her steps bigger with step-ups and step-overs
- For Hierarchies: Focused on the big steps, big posture and big grabbing hand rails

Week 4

- All standing exercises done on balance pads
- Walking all of the time except very long distances without cane
- FMC: Performing all with dual cognitive task
- Hierarchies: Performed each in real world, except no water or nudity in shower 😊

Goals

Mary met all of her goals:

- Returned to walking without a cane
- Returned to volunteering again
- Returned to taking the bus
- Improved her gait and confidence
- Greatly reduced her LOBs and Falls
- Taking care of all personal needs without the help of her husband
- Speaking at a volume where others did not ask her to repeat herself

How to get started with LSVT BIG and LSVT LOUD

- Ask your doctor for a referral and a prescription for a speech or physical/occupational therapy **evaluation** and **treatment**
- Visit www.lsvtglobal.com to find an LSVT LOUD or LSVT BIG Certified Clinician in your area
- Call our office at 1-888-438-5788 to have our staff assist you in locating clinicians

Take Home Points

- Your therapist will work with you on issues and situations that you perceive as a challenges to receiving or performing therapy
- All portions of LSVT BIG treatment can be adapted to your needs
- You can locate a clinician in your area by using the "Find a Clinician" tab at www.LSVTGlobal.com

Other Learning Opportunities

- Webinars - PD Community
 - FREE! Invite others!
 - "On Demand"
www.lsvtglobal.com/patient-resources/free-webinars
 - LIVE
www.lsvtglobal.com/patient-resources/free-live-webinars
- "Ask the Expert"-info@lsvtglobal.com
- LSVT Companion Home Edition
- LSVT LOUD and LSVT BIG Homework Helper DVDs (available in English only)
- Volunteering opportunities at local LSVT LOUD® and BIG® Certification Trainings for professionals

Take Home Points

- LSVT LOUD and LSVT BIG may be completed simultaneously or in succession
- LSVT LOUD and LSVT BIG have been applied to populations other than Parkinson disease with successful outcomes.
- Application of therapies to other diagnoses are made on a case by case basis based on stimulability testing and continual assessment

Questions????

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