Voice therapy discharge
Background

1974, Boone’s criteria for voice therapy discharge:
1. Improved laryngeal appearance
2. Patient sounded better
3. Patient thought his/her voice was better
4. Patient experienced no change in voice
5. Patient self-discharged
Background

Portone, et al., 2011

1. improved laryngeal appearance
2. voice quality has improved, per patient report
3. patient progress had plateaued
Lack of formal discharge criteria for voice therapy
What is success?
For example..

3- 24 voice therapy sessions
Discharge rationale

1. All of the prescribed sessions in a specific voice therapy program were complete
2. SLP thought the patient had met therapy goals
3. No reason for discharge provided
Problem

• Attrition
• Relapse
• Need for discharge criteria that are independent from the number and duration of voice therapy sessions.
• Individualized treatment planning
Determine the criteria deemed most salient by voice-specialized SLPs in deciding voice therapy discharge.

Do these criteria differ between novice and experienced therapists?

Ascertain the patient’s perspective on voice therapy discharge.
Methods

Step 1
Clinical consensus group

7 SLPs at UPVC
- Independently generate items thought to be important for patient discharge
  - Consider outcomes in lit
- Master list created
Results: Step 1

**Step 1**
Clinical consensus group

**Results**
4 themes
1. Laryngeal appearance
2. Acoustic/Aero measures
3. Patient reported voice outcomes (VHI, etc)
4. SLP perception

Survey developed for distribution
Methods, Step 2

Step 2

Survey distribution
Fall Voice 2016
Scottsdale, AZ
ASHA convention 2016
Philadelphia, PA

120 distributed
50 completed
Results, Step 2:

Percentage of time dedicated to voice

- 0-25%: 0.42
- 26-50%: 0.26
- 51-75%: 0.12
- 76-100%: 0.2
Results, Step 2:

Average # voice therapy sessions conducted per patient

- 1-4 sessions: 0.58
- 5-8 sessions: 0.26
- 9-12 sessions: 0.14
- 13+ sessions: 0.02
Results: laryngeal appearance

Importance of Laryngeal Factors in Determining Discharge Readiness

- Percentage of SLPs
- Importance of Laryngeal Factors
- Laryngeal appearance improved from baseline
- Larynx Normal
Results: Acoustic/Aero vs. PRO

<table>
<thead>
<tr>
<th>Percentage of SLPs</th>
<th>Improvements in Acoustic/Aerodynamic measurements from baseline</th>
<th>Voice Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td><img src="image1" alt="Bar chart" /></td>
<td><img src="image2" alt="Bar chart" /></td>
</tr>
<tr>
<td>Mildly important</td>
<td><img src="image3" alt="Bar chart" /></td>
<td><img src="image4" alt="Bar chart" /></td>
</tr>
<tr>
<td>Mild to moderately important</td>
<td><img src="image5" alt="Bar chart" /></td>
<td><img src="image6" alt="Bar chart" /></td>
</tr>
<tr>
<td>Moderately important</td>
<td><img src="image7" alt="Bar chart" /></td>
<td><img src="image8" alt="Bar chart" /></td>
</tr>
<tr>
<td>Very important</td>
<td><img src="image9" alt="Bar chart" /></td>
<td><img src="image10" alt="Bar chart" /></td>
</tr>
</tbody>
</table>
Patient Perception Factors in Determining Discharge Readiness.
Top 3 SLP Perception Factors in Determining Discharge Readiness

- Differinates between good and bad voice
- Sounds better than baseline
- Takes responsibility for voice production
1. Can independently use a better voice (85%)
2. Can function with voice (85%)
3. Differentiates between good and bad voice (65%)
4. Takes responsibility for voice (60%)
5. Sounds better (52%)

Top Criteria for Discharging Patients from Voice Therapy by Degree of Importance
Novice vs. Experienced SLPs

- Differentiates Between Good & Bad Voice - Novice
- Takes Responsibility For Voice - Novice
- Independently Uses Better Voice - Novice
- Can Function With Voice - Novice
- Sounds Better From Baseline - Novice

Legend:
- 2 = Mild to moderately important
- 3 = Moderately important
- 4 = Very important
Focus group: a moderated conversation that people have about a specific topic.

1. Developed a pilot script

2. Moderator and staff trained in note-taking
   a) Capture details e.g. speaker order, non-verbal body language, participants’ reactions to the individual speaking, observable signs of discomfort or distraction.
Methods, Step 3

$N = 5$ patients who had completed voice therapy

Qualitative statistician
1. Codebook development
   a. Interpretive labels referring to topics and opinions

2. Two data analysts trained in the use of the codebook.

3. Independently code focus group transcripts with the assistance of Atlas.ti software.

4. Thematic analysis conducted to determine the patterns and most salient topics emerging from the focus group data.
Voice therapy patients knew it was time to exit therapy when...

The sound of their voice had improved.

People whom I called [on the phone] tell me I have a great voice. Somebody told me just last weekend how charming my voice is. I don’t really know what it sounds like but once [my therapist] recorded me in a session and I was like, “Wow! I enunciate really clearly!”

Their throat felt better physically.

My throat started feeling better, and it wasn’t hurting as much when I spoke. That’s when I knew it was basically time for me to go.

They had learned what they could, and were ready to apply what they had learned in therapy outside of the therapy room.

I felt I was at the point that, well, now I have to put it into practice.
Reported trusting their therapists’ opinions of when it was time to stop therapy

Improvements to the sound and feel of their voice

Increased confidence in their vocal production abilities

A sense that they were no longer “progressing” in therapy

Needed to implement what they had been taught in practice
Discussion

• Novice and experienced clinicians agreed on the top five criteria deemed “very important” for discharging patients from voice therapy.

• Across experience levels, transfer voice techniques to conversational speech was the most important factor in determining that a patient was ready for discharge.
  • transfer to conversation was the most challenging and the most beneficial aspect of voice therapy. (Ziegler AS, et al 2014)
Discussion

• the patient’s ability to discriminate between good and bad voice productions.
• to sound better because of treatment.
  • also deemed important across published therapy programs (Lee Silverman Voice Therapy, Vocal Function Exercises, Resonant Voice Therapy, Manual Circumlaryngeal Therapy) according to the voice therapy taxonomy. (VanStan JH, et al, 2015)
Discussion

• Sounding better from baseline corroborates Boone’s endorsement of this discharge criteria as being important.
• Results support the therapy discharge definition developed by Portone & colleagues (2011).
Discussion

- Lack of agreement on the importance of improvement in acoustic and aerodynamic outcomes following treatment as a metric of discharge readiness.
  - 20% Not at all important
  - 25% Moderately important
Discussion

- Patients and SLPs agree that generalizability of voice therapy techniques to activities of daily living, and sounding better are indicative of a readiness for discharge
People with voice problems have difficulty with voice in conversation.
Assessment of voice is moving towards measurement of physiology in real-life contexts.
Voice treatment with a focus (entirely or mostly) on conversation is key to
  • Successful outcomes
  • Efficient time management
Treatment discharge based on functional patient factors is valued and desired by patients and SLPs alike.

I get hoarse when I talk
Final thoughts
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