



### Introduction

The word transgender is an “umbrella definition used for an individual who is living in a gender other than his or her own biological gender” (Adler, 2006, 5). A near infinite list of terms exist that can be used to refer to transgender individuals. Throughout this poster, male-to-female transgender clients may be referred as transgender women or MtF clients; female-to-male transgender clients may be referred to as transgender men or FtM clients. The term cisgender will be used to specify individuals who identify with the gender they were assigned at birth.

**“Possessing knowledge of a culture does not constitute competency, although it is a good start.”**  
(Hancock & Haskin, 2015, 206)

Not all speech-language pathologists have the knowledge required to work with transgender clients. In an online survey of speech-language pathologists, approximately half of the respondents reported not undergoing transgender speech and communication courses in their master’s education (Hancock & Haskin, 2015, 210). While this statistic can be explained by the respondents attending graduate school before the relative popularity of transgender voice therapy, it is still a startling number because it calls into question the cultural competency of these clinicians. According to Hancock and Haskin (2015) “[p]ossessing knowledge of a culture does not constitute competency, although it is a good start,” (p. 206).

Transgender clients may seek voice therapy in order to present as their gender, or in order to “pass,” which may improve their quality of life (Hancock, Krissinger, & Owen, 2011). The aim of this poster is to expand readers’ knowledge of effective voice therapy targets and techniques for transgender clients.

**Table 1: Potential voice therapy targets**

Target	Transgender males	Transgender females
Fundamental frequency Not effective in isolation (Hancock, et al., 2013; Hancock & Helenius, 2012; Palmer, et al., 2010)	<ul style="list-style-type: none"> <li>May be lowered with hormonal therapy (Nygren, et al., 2015)</li> <li>Stabilization (Thornton, 2008)</li> </ul>	<ul style="list-style-type: none"> <li>Should be raised above 165 Hz (as cited in McNeill, et al., 2008)</li> <li>Should be raised to “neutral range” of 145-165 Hz (as cited in Thornton, 2008)</li> </ul>
Intonation Not effective in isolation (Hancock, et al., 2013)	<ul style="list-style-type: none"> <li>More downward intonation (Hancock, et al., 2013)</li> <li>Stabilization (Thornton, 2008)</li> </ul>	More upward intonation (Hancock, et al., 2013)
Resonance Not effective in isolation (Hancock & Helenius, 2012)	More chest resonance (Thornton, 2008)	<ul style="list-style-type: none"> <li>More head resonance (Thornton, 2008)</li> <li>More forward oral resonance (Hancock &amp; Helenius, 2012)</li> </ul>
Vocal hygiene Not effective in isolation (Palmer, et al., 2010)	Healthy vocal habits should be addressed (Palmer, et al., 2010)	Healthy vocal habits should be addressed (Palmer, et al., 2010)

### Therapy targets

A review of the literature reveals that there is not a consensus on appropriate therapy targets for transgender clients, and it is impossible to describe all of the possible therapy targets described - both effective and ineffective. Fundamental frequency is often targeted but may not be effective as the sole target (Palmer, Dietsch, & Searl, 2010, 124). In addition to fundamental frequency, suggested voice therapy targets include, but are not limited to, intonation and resonance (Thornton, 2008, 274). Finally, increasing vocal hygiene can be an important therapy goal for the transgender population (Palmer, et al., 2010). Overall, research indicates that targets are not effective in isolation, as indicated in Table 1.

Fundamental frequency is targeted frequently in transgender voice therapy. Generally, transgender women aim to raise their fundamental frequency, while transgender men aim to lower their fundamental frequency (Thornton, 2008). While there is debate amongst researchers what the perceptual thresholds of pitch are, it is generally agreed that pitch can influence listener perceptions (McNeill, Wilson, Clark, & Deakin, 2008; Thornton, 2008). According to Colton, Casper, and Leonard (as cited in Gelfer & Tice, 2012) cisgender males have an average range of 107 Hz to 132 Hz, while cisgender females have an average range of 189 Hz to 224 Hz (p. 335); Spencer (as cited in McNeill, et al., 2008) suggests that the threshold above which voices are perceived as female is 165 Hz (p. 727). Oates (as cited in Thornton, 2008) gives a “neutral range” of 145 Hz to 165 Hz as a target (p. 274).

Hancock, Colton, and Douglas (2013) examined intonation patterns of cisgender male, cisgender female, transgender male, and transgender female speakers, and found that there was not a statistical difference between these four groups; the researchers suggest that using more upward intonations and less downward intonations may help MtF clients be perceived as female, but did not find an exact number of intonations that shift listener perception.

Changing the transgender speaker’s resonance can be an effective therapy target. Transgender women may wish to shift their natural resonance towards a forward oral resonance (Hancock & Helenius, 2012, 314). According to Thornton (2008), transgender women should focus on using head resonance while not eliminating chest resonance (p. 275). Transgender men, on the other hand, should use more chest resonance (Thornton, 2008, 274).

Vocal hygiene can be an important target in therapy, not for perceptual reasons, but rather to prevent vocal misuse. The male-to-female transgender participants in one study presented with laryngeal hyperfunction symptoms, such as bilateral ventricular fold contraction that are congruent with trying to raise fundamental frequency (Palmer, et al., 2010, 124). In a chart review of 25 transgender clients at a university voice clinic, reducing vocal abusive behavior was the goal for 14 clients; increasing vocal hygiene was a goal for nine clients (Hancock & Garabedian, 2013, 61), which indicates that proper vocal hygiene should be considered as a therapy target for transgender clients.

### Therapy techniques and approaches

Like therapy for any other concern, transgender voice therapy should be tailored to the client. A successful approach will take into account several appropriate therapy targets and ideally utilize available evidence. Some approaches have been developed for use with transgender clients, such as Gelfer’s approach. Many techniques designed for other populations may be adapted for use with the transgender population. Two such techniques are the LVRT approach and Stemple’s vocal exercises.

Gelfer’s approach focuses on raising fundamental frequency, but also addresses other targets (Gelfer, 1999). Gelfer’s technique starts by selecting a target frequency based on the client’s natural abilities, then habituating that pitch at the syllable level, then word, phrase, sentence, and multiple sentences levels (Gelfer, 1999). Word and phrase intonation, voice quality, and frequency range are also addressed during the course of the therapy period (Gelfer, 1999). This effective technique utilizes several targets that can raise the speakers’ perceived femininity.

The Lessac Resonant Voice Therapy (LVRT) approach is a useful tool to use with clients (Hirsch, 2006). It is similar to Gelfer’s approach in that there is a training hierarchy, however, it focuses on resonance rather than pitch. An example of modified training starts by mastering oral resonance via humming in contexts that range from syllables (/mi/) to short phrases (“meet me Peter”) (Hirsch, 2006, 216). The phrases grow more complex, until the phrases become questions ten syllables or more in length (Hirsch, 2006).

Stemple’s vocal function exercises were investigated as a therapy technique to be used in conjunction with symptomatic voice therapy (Gelfer & Van Dong, 2013). It was found that the addition of the exercises did not increase the effectiveness of the therapy when compared to similar studies (Gelfer & Van Dong, 2013). However, vocal function exercises may help reduce vocal abusive behaviors. Therefore, while not effective in the sense that the exercises increase the listeners’ perception of the transgender woman’s femininity, Stemple’s vocal function exercises may be effective in meeting other therapy targets.

### Measuring success

Many studies have determined the success of transgender voice therapy through post-treatment fundamental frequency, listener perceptions of gender, patient satisfaction, or a combination of these of these factors.

McNeill, et al. (2008) found that a patient’s satisfaction with her voice does not always correspond with fundamental frequency (p. 732).

If listener perception is chosen as a criterion of success, research indicates that the speech-language therapist can accurately predict how the client’s voice will be perceived (McNeil, et al., 2008) Listener perception can sometimes be correlated with the speaker’s satisfaction with her voice (Palmer, et al. 2010, 124).

It is important to note that not every transgender speaker is concerned with “passing” (Hancock & Haskin, 2015). Therefore, not unlike other therapies, success criteria should be agreed upon by the clinician and client.

**Figure 1: Reasons transgender men may seek voice therapy** (Nygren, et al., 2015, 5)



### Special considerations for FtM clients

Transgender women are more likely than transgender men to seek voice therapy (Hancock, et al., 2013, 203). While transgender men can and do undergo voice therapy (Nygren, Nordenskjold, Sarver, & Sodersten, 2015), there is markedly less data concerning vocal therapy for this specific population.

One of the reasons that female-to-male transgender individuals are less likely to seek voice therapy is that hormonal therapy may sufficiently lower their fundamental frequency (Nygren, et al., 2015, 9). Some of the reasons that transgender men may seek therapy include vocal instability, hoarse quality of voice, pitch lowering, and juvenile-sounding voice (Nygren, et al., 2015, 5). See Figure 1 for more reasons that transgender men may seek voice therapy.

Like therapy for MtF clients, therapy approaches like easy onset can be utilized to help FtM clients (Adler & Van Borsel, 2006).

### Conclusion

In conclusion, transgender voice therapy is subject to many variables, just like voice therapy for cisgender individuals. Effective therapy combines multiple therapy targets in order to maximize success. Possible therapy targets for both MtF and FtM clients include fundamental frequency, intonation, resonance, and vocal hygiene.

Therapy approaches can be adapted from evidence based approaches utilized in cisgender voice therapy, such as the LVRT approach or Stemple’s vocal exercises. While Stemple’s vocal exercises were not found to increase the effectiveness of symptomatic voice therapy, the exercises could be used to target vocal hygiene.

Success can be determined in multiple ways; it is up the client and clinician to determine what parameters are appropriate for the client. Some ways to measure success are post-treatment fundamental frequency, listener perceptions of gender, patient satisfaction with voice, or a combination of these factors.

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