

CULTURALLY INCLUSIVE EDUCATION FOR THE **SPEECH SCIENCES**

GENDER & COMMUNICATION

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This module series is funded by:
Advancing Academic-Research Careers Award from the
American Speech-Language-Hearing Association

College of Allied Health Sciences at the
University of Cincinnati





OUTLINE

Gender Differences for Communication

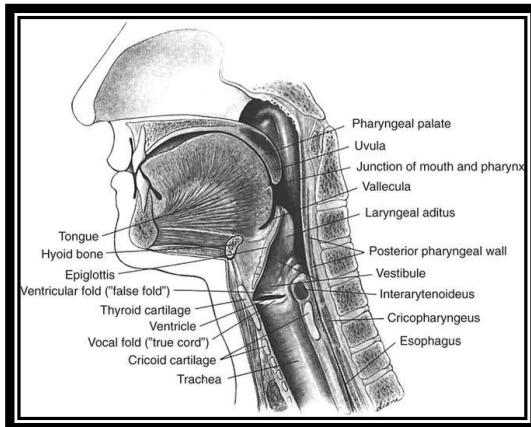
- Anatomy/Physiology
- Acoustics
- Perception

Gender Spectrum Communication Therapy

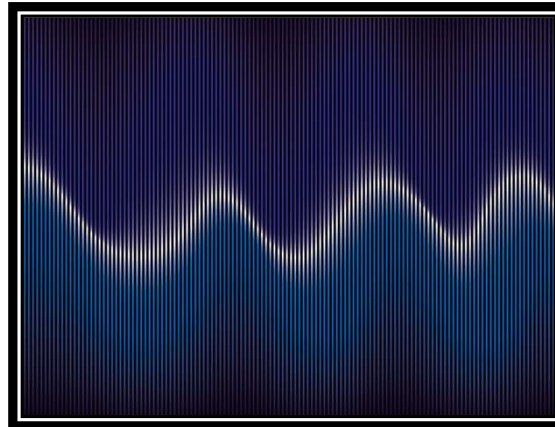
- What is it?
- Why does it matter?
- What does it look like?



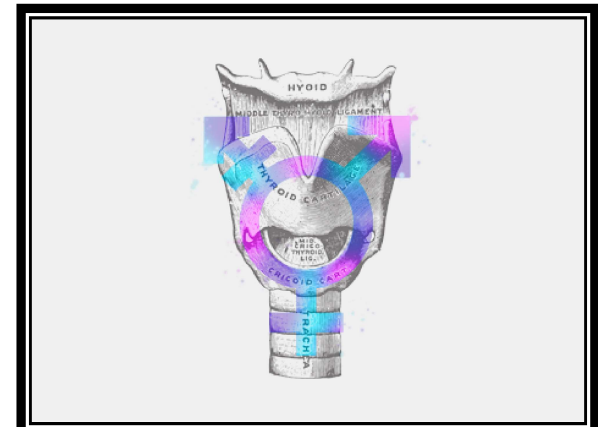
PRE-REQUISITE KNOWLEDGE



**Anatomy for
Speech and Voice**



**Traditional Speech
and Voice Acoustics**



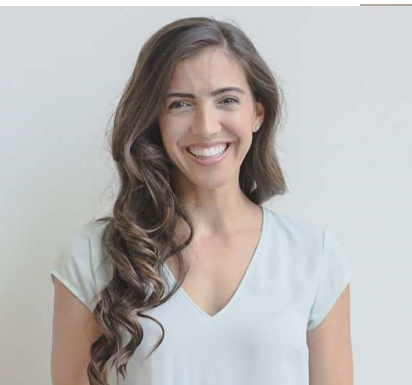
**Basic Terminology
Related to Gender,
Sex, and Sexuality**



“Gender refers to the characteristics of women, men, girls and boys that are socially constructed. This includes norms, behaviors and roles associated with being a woman, man, girl or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time.”

World Health Organization
"Gender and Health"



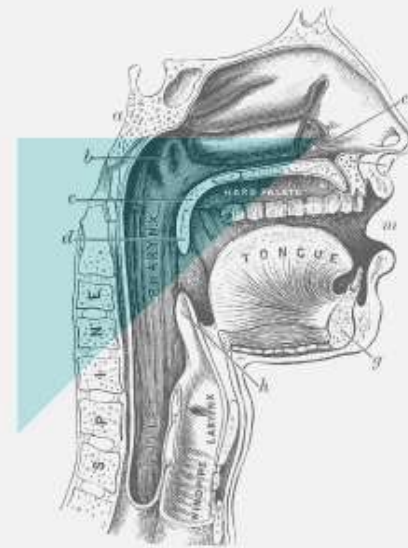


Gender Differences for Communication



The Human Larynx and Vocal Tract

- Lungs: power for the voice
- Larynx: sound source
- Vocal tract (pharynx, nasal and oral cavities): shapes the sounds into meaning



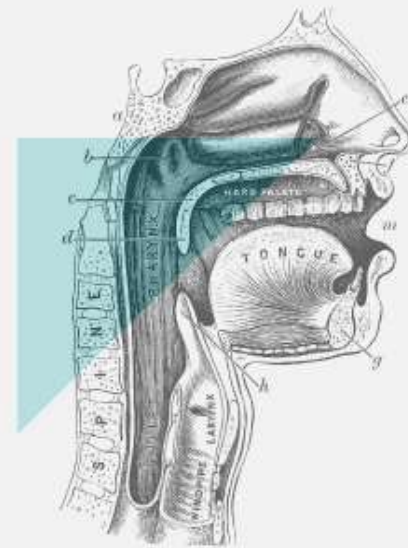
Male vs. Female Differences

Males

- Longer and thicker vocal folds
- Larger lung capacities
- Longer vocal tract

Females

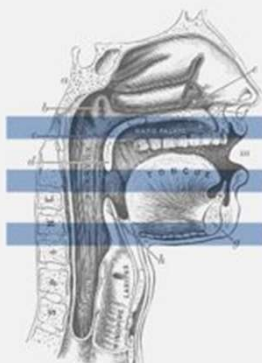
- Shorter and thinner vocal folds
- Smaller lung capacities
- Shorter vocal tract



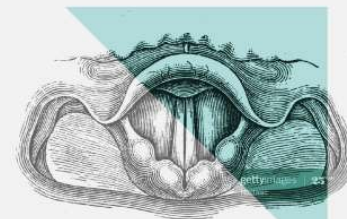
ACOUSTIC DIFFERENCES



Pitch



Resonance



Vocal Quality



PITCH



- Male
 - Lower speaking fundamental frequency (90 – 150 Hz)
 - Smaller pitch range during conversational speech
- Female
 - Higher speaking fundamental frequency (180 – 250 Hz)
 - Greater range of pitch and intonation during conversational speech



RESONANCE



- Male
 - Lower formants
 - Smaller space between formants
- Female
 - Higher formants
 - Larger space between formants
 - Precise articulation



VOCAL QUALITY

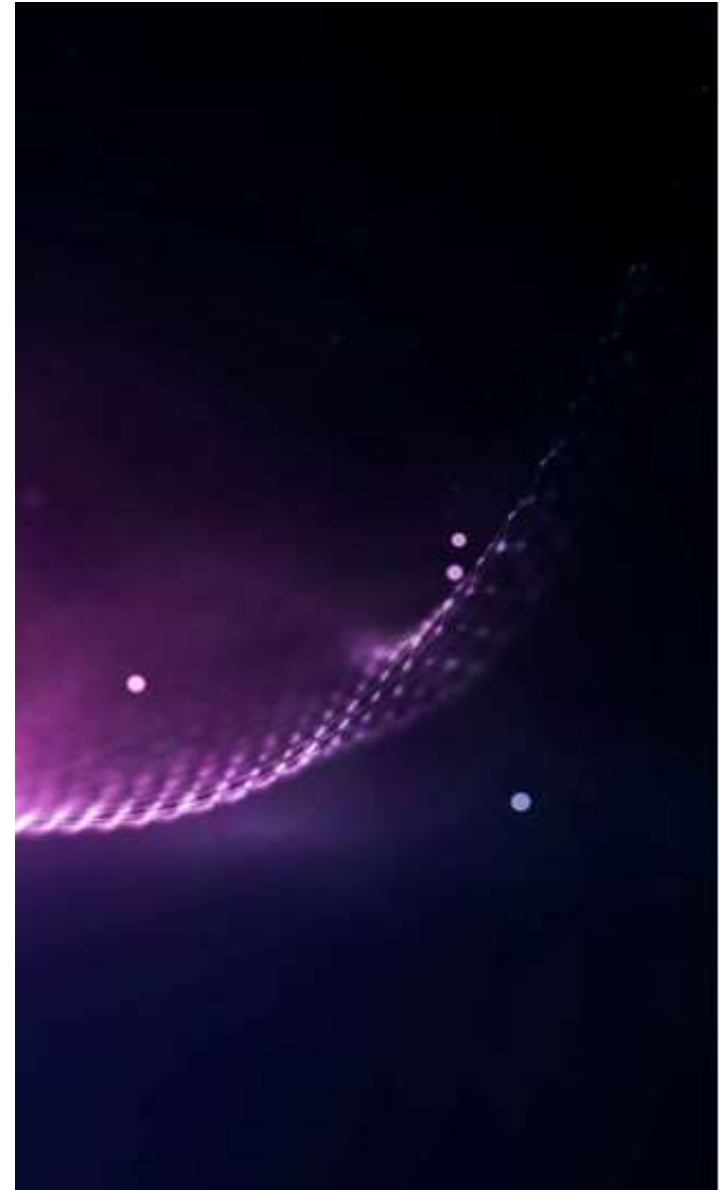


- Male
 - Greater use of vocal fry
- Female
 - Greater use of breathy vocal quality



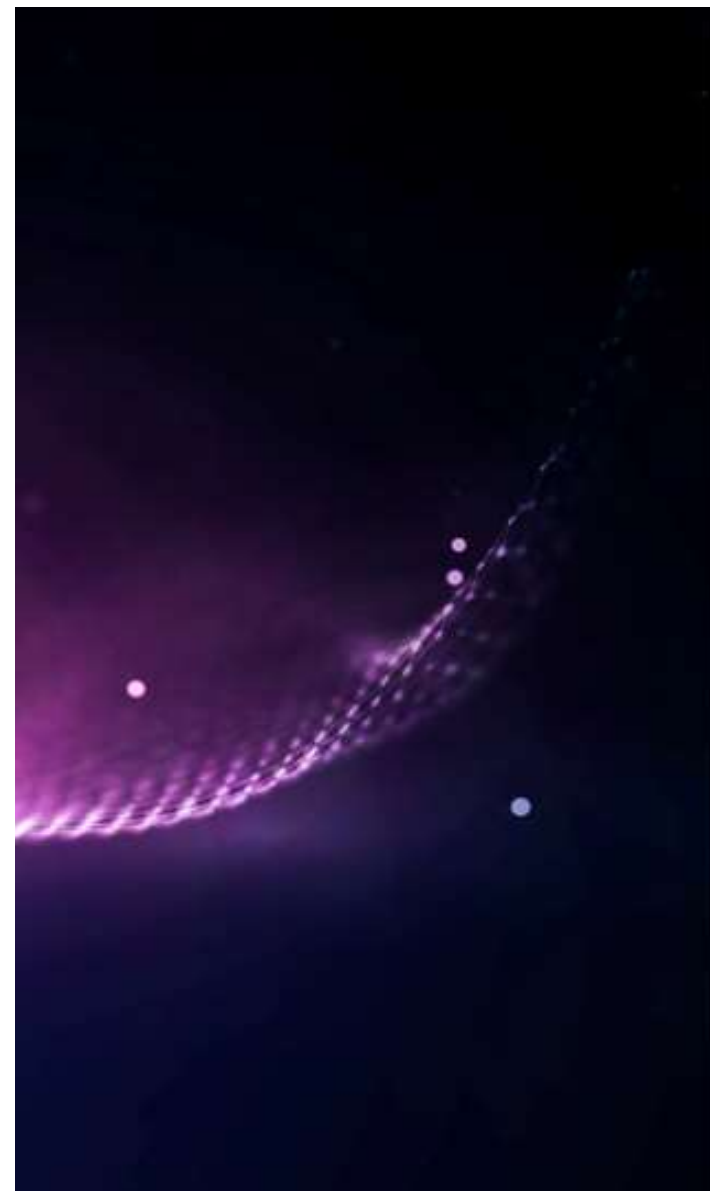
Perception of Speaker's Gender

- Whiteside (1998) modified speech recordings of male and female speakers
 - Vowel acoustics changes to combine male fundamental frequency with female formants or female fundamental frequency with male formants
 - Listeners rated the modified recordings on a binary scale of "man" or "woman"

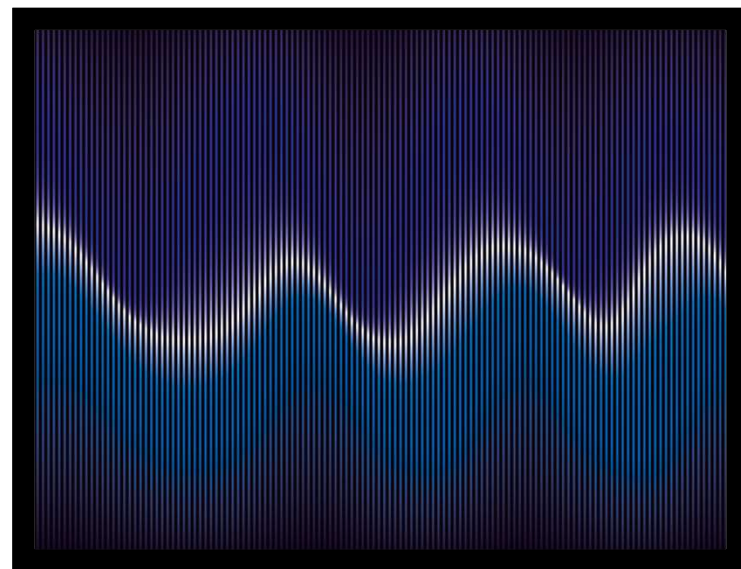


Perception of Speaker's Gender, cont

- Listeners perceived male pitch with female formants as "man" an average of 94% of the time (78 – 100%)
- Listeners perceived female pitch with male formants as "woman" only 84% of the time (36 – 100%)



Pitch and Formants' roles in Gender Perception



- Pitch is the most salient auditory cue for a speaker's gender
- Formants have less of a role in determining a speaker's gender, though the impact formants have on masculine/feminine speech may be different



What do we do when a patient's voice, speech, or communication is not aligned with their gender?



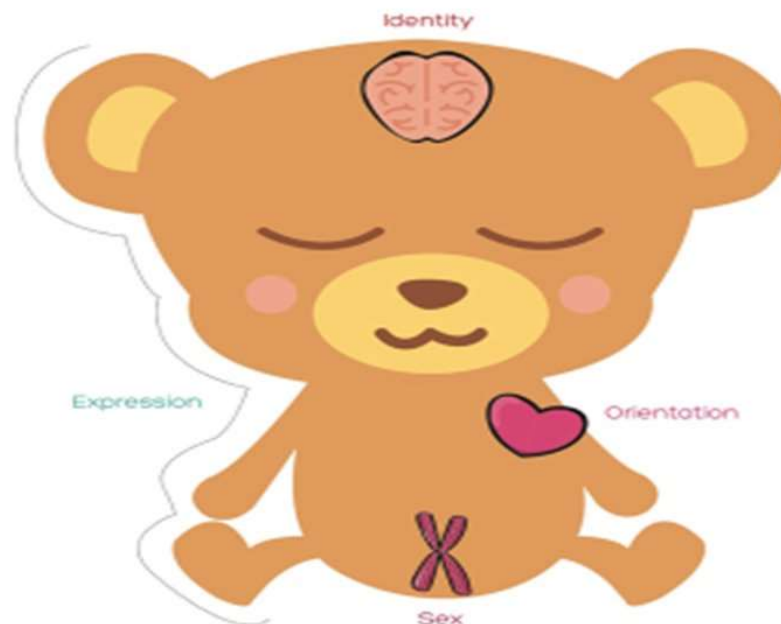
How do we use what we know about speech and voice science to help these patients?



Gender Spectrum Communication Therapy



THE GENDER BEAR



Trans/transgender - Lived experiences and sense of personal identity differ from assigned gender at birth
 Cisgender - Lived experiences and sense of personal identity match assigned gender at birth
 Gender queer/fluid - Identify with neither, all, or a combination of gender identities.



Transgender People Are Medically Underserved and Highly Marginalized

- 28% delayed seeking medical care due to past discrimination
- 41% reported having attempted suicide (26x higher than the general population)
- 50% reported having to teach their providers about their own healthcare
- 19% were outright denied medical care
- 26% reported current or former alcohol or drug use to cope with mistreatment

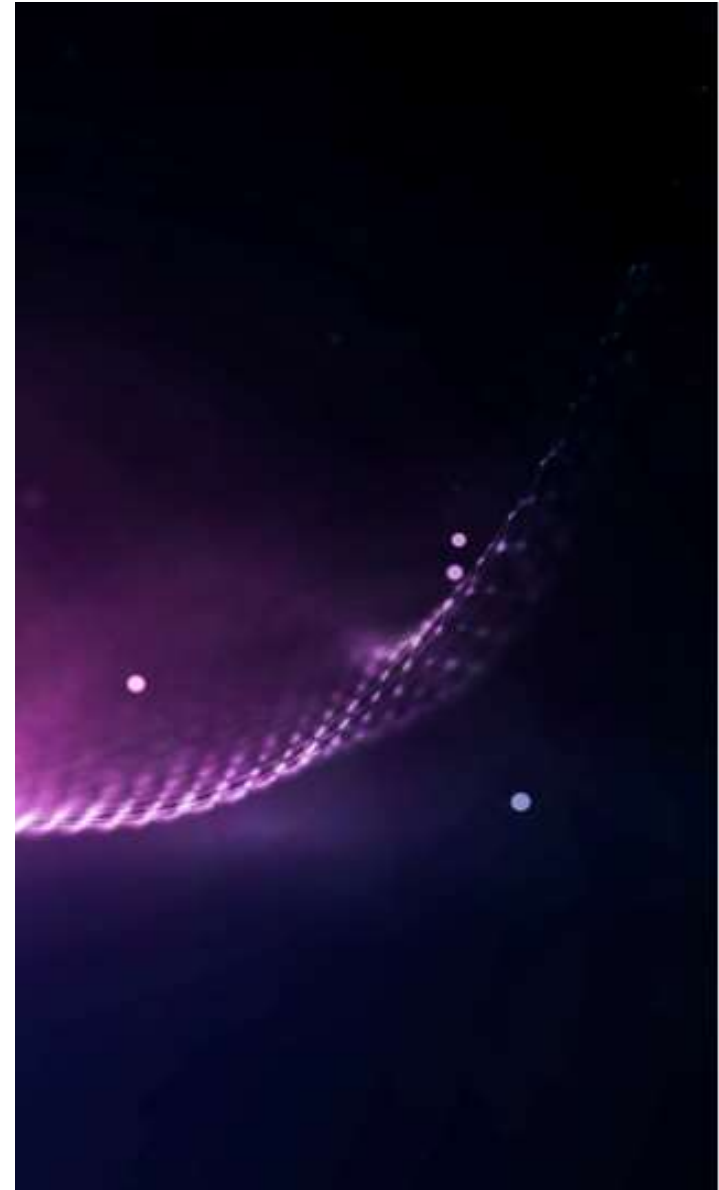
The 2011 National Transgender Discrimination Survey (n= 6,456)



Gender dysphoria

(DSM V: F64.0)

- Distress or discomfort that may occur when gender identity and birth-assigned sex are not completely congruent
- Pathologizes the gender experience, however it meets the criteria for insurance coverage of medication, surgeries, therapies etc.



What is Gender Affirming Care?



Healthcare that facilitates the affirmation of gender
and alleviates gender dysphoria

We can provide gender affirming care in two ways:

- Address general health concerns in a culturally competent manner
- Address health concerns specific to transgender persons

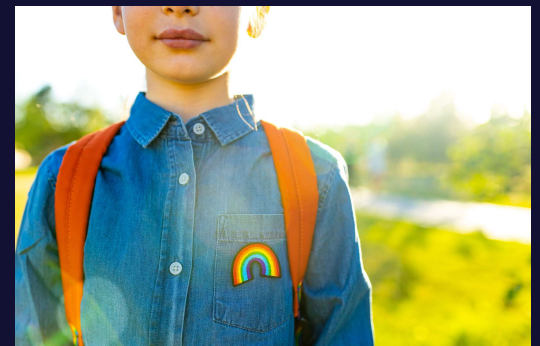


Why Gender Affirming Care Matters

The ability to access gender-affirming medical interventions has an overall positive impact on physical health mental health, and quality of life



Gender-affirming interventions reduce rejection, discrimination, and victimization by aligning physical characteristics with gender identity



Important Gender Related Terminology

TRANSGENDER

Individuals feel a disconnect from the gender they were assigned at birth based on their assigned sex

CISGENDER

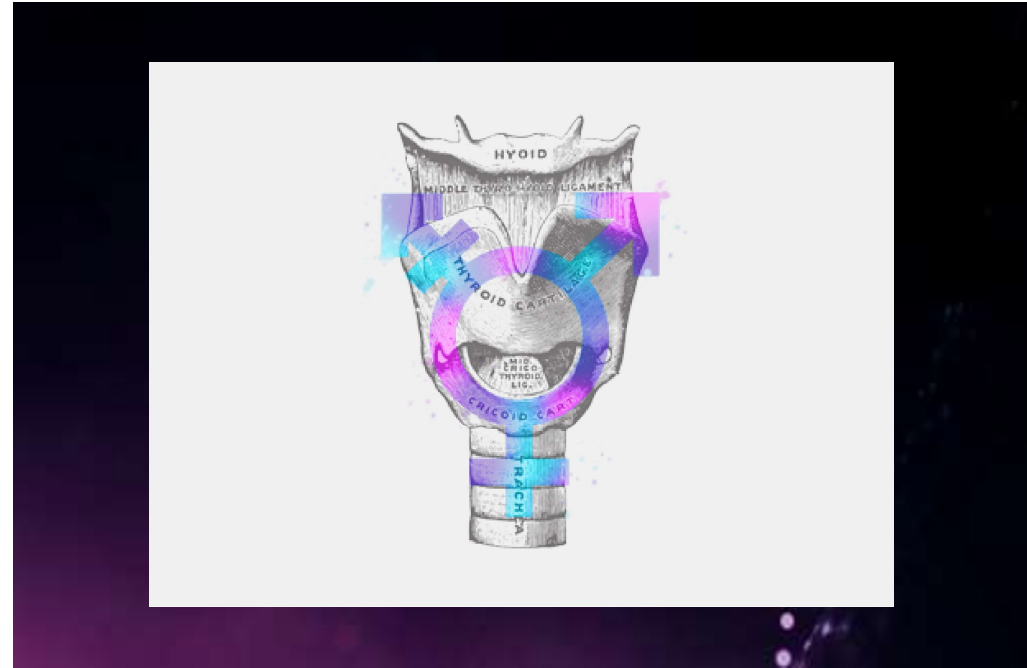
Refers to a person whose personal identity matches their assigned gender at birth

NON-BINARY

The umbrella term covering all gender identities and expressions outside the gender binary



Gender Spectrum Communication Therapy



- Help individuals find and develop voice and communication that reflects the individual's sense of gender, so that the outside expression reflects the person inside
- Voice therapy is a means for reducing risk of depression, anxiety, and self-harm related to gender dysphoria



What Does Gender Spectrum Communication Therapy Look Like?

PITCH

INTONATION

**NON-VERBAL
LANGUAGE**

RESONANCE

WORD CHOICE

SPEECH SOUNDS



Patient Centered Goals

- Feminine Communication
- Masculine Communication
- Gender Neutral Communication



THERAPY ACTIVITY EXAMPLES

- Female speakers are known for speaking with a more “forward, nasal resonance”
 - Therapy exercise "subtly smile while talking"
- Male speakers are known for speaking with "darker, oral resonance"
 - Therapy exercise "round lips while talking"



“Voice therapy for transgender people is a true blessing. If someone is willing to put the time in, outside of the therapy session, they can see wonderful changes in the pitch of their voice (without surgery). Voice therapy has not only allowed me to reach the pitch I want for my voice, it has boosted my confidence level because I no longer get mis gendered”.



Conclusion

Gender identity is just one part of who we are.
How someone is perceived can impact their view
of themselves and their quality of life.

Gender-related communication therapy uses
speech and voice scientific concepts to shape the
speaker's communication to meet their expression
needs.



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Resources

World Professional Organization for Transgender Health (WPATH)

<https://www.wpath.org/>

"Gender-Affirming Voice and Communication Change for Transgender and Gender-Diverse People"
American Speech-Language-Hearing Association

<https://www.asha.org/public/speech/disorders/voice-and-communication-change-for-transgender-people/>

"Transgender Voice Therapy"

University of Cincinnati, UC Health

<https://www.uchealth.com/en/treatments/transgender-voice-therapy>



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THANK YOU

