

# CULTURALLY INCLUSIVE EDUCATION FOR THE **SPEECH SCIENCES**

## GENDER & COMMUNICATION LAB

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# OBJECTIVES

## Students will...

- Identify basic communication differences between males and females, including speech, voice, and acoustic measures
- Define terms and concepts related to gender, sex, and sexuality
- Identify treatment targets and areas of focus for gender spectrum communication therapy
- Reflect on systemic and personal challenges facing gender-diverse clients which impacts their access to healthcare

“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..”

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World Health Organization  
"Gender and Health"

# 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

# 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

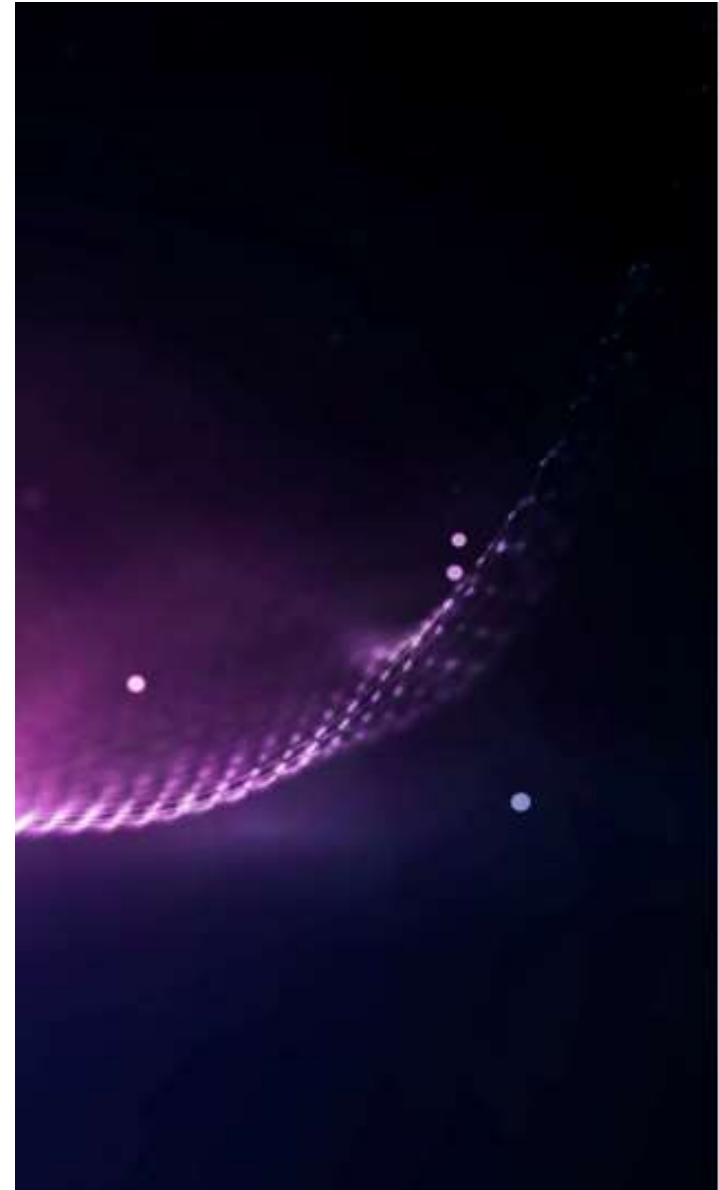
## **NON-BINARY**

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



# Perception of Speaker's Gender

- What contributes to the perception of a speaker's gender?

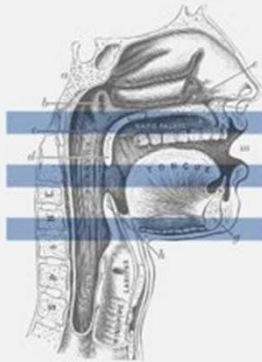




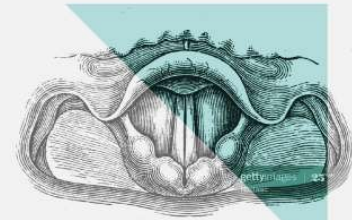
# ACOUSTIC DIFFERENCES



**Pitch**



**Resonance**



**Vocal Quality**

# LISTENING ACTIVITY



- Listen and rate each singer
  - What aspects of the singer's voice were you listening for?
  - Were you surprised when the singer was revealed?

1	2	3	4	5
Masculine		Gender Neutral		Feminine





What is the role of the SLP in  
providing care to  
gender-diverse clients?



# 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

# GENDER-AFFIRMING COMMUNICATION CARE

- Alleviate **vocal dysphoria** and increase **vocal congruence**
- American Speech-Language-Hearing Association (ASHA) says a voice problem may be present if...
  - voice quality, pitch, and loudness differ or are inappropriate for an individual's age, **gender**, cultural background, or geographic location
  - an individual **expresses concern about having an abnormal voice** that does not meet daily needs—even if others do not perceive it as different or deviant

Gender-diverse clients face barriers  
to accessing healthcare, including access  
to communication therapy services



Why does that happen?  
What is your role as a healthcare provider?

# Transgender Medical Care and Access



- 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)

## Barriers to Healthcare

- Gender-affirming services are denied at rates as high as 50% for some insurance providers (Bakko & Karrari, 2020)
- 2.7% of private insurance providers specifically cover gender-affirming voice therapy and 76% provide no coverage (DeVore et al., 2021)
- 33% of transgender people surveyed do not pursue medical appointments due to cost (James et al., 2016)

## Psychological and Socioeconomic Considerations

- Patients who reported no outside social support from friends/family attended significantly more voice therapy visits than those who had support
- Patients with private health insurance were 19 times more likely to complete voice therapy compared to any other insurance provider

McKenna, Gustin, et al., 2022



What barriers are present for gender-diverse clients?

Why are barriers present?

How do barriers impact SLP services?



# Gender Based Therapy Intervention: Behavioral and Medical

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- Behavioral
  - Gender spectrum communication therapy
- Medical
  - Hormones
  - Surgical



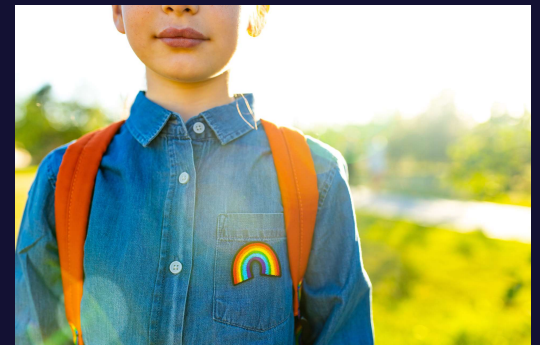
# Acoustic Activity: Feminization

Voice recordings were taken pre- and post- behavioral voice intervention for feminization



Your task:  
Extract mean  $f_0$ , and formants  
(  $F1 \rightarrow F4$ ) for the vowel in the  
word “hot”

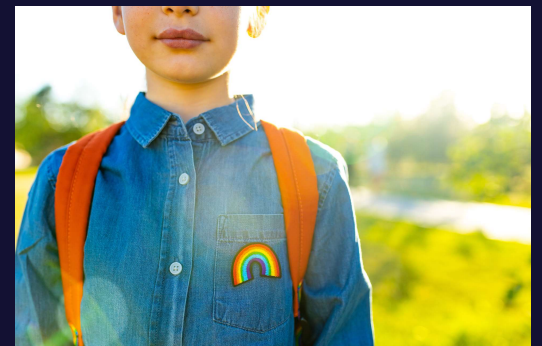
What changes do you notice?



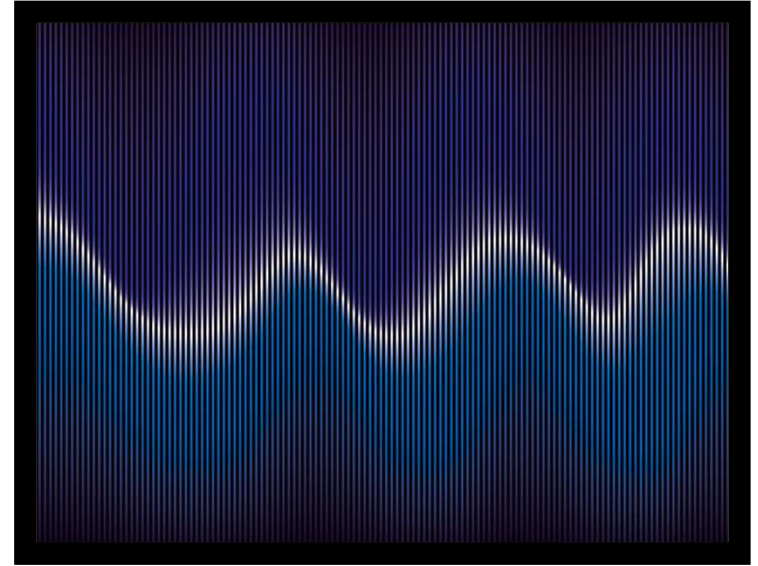
# Acoustic Activity: Feminization

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Measure	Voicemail pre	Voicemail post
Mean pitch (Hz)		
F1 (Hz)		
F2 (Hz)		
F3 (Hz)		
F4 (Hz)		

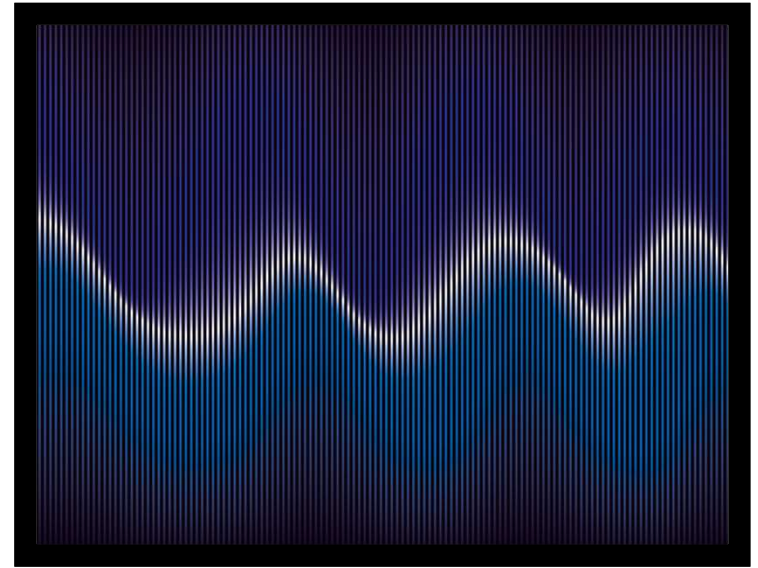


# Voice Masculinization



- Listen to the voice samples recorded while the speaker was taking the hormone Testosterone
- Extract mean speaking  $f_0$  and minimum  $f_0$  for each week
- What do you notice?

# Voice Masculinization



	1 day	3 weeks	6 weeks	9 weeks	12 weeks	16 weeks	20 weeks
Mean speaking pitch							
Min pitch							

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## 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.





# Resources used in this Presentation

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- Voice Samples
  - Singers: <https://www.youtube.com/watch?v=rdOwcDElqXc> and <https://www.youtube.com/watch?v=NHozn0YXAeE>
  - Voice Feminization:
  - Voice on Testosterone: [https://www.youtube.com/watch?v=4\\_Z8BCHOCEU](https://www.youtube.com/watch?v=4_Z8BCHOCEU)
- Bakko, M., & Kattari, S. K. (2020). Transgender-Related Insurance Denials as Barriers to Transgender Healthcare: Differences in Experience by Insurance Type. *Journal of General Internal Medicine*, 35(6), 1693–1700.
- DeVore, E. K., Gadkaree, S. K., Richburg, K., Banaszak, E. M., Wang, T. V., Naunheim, M. R., & Shaye, D. A. (2021). Coverage for Gender-Affirming Voice Surgery and Therapy for Transgender Individuals. *The Laryngoscope*, 131(3), E896–E902.
- James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *Executive Summary of the Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality.
- McKenna, V.S., Gustin, R., Hobek, A., Howell, R., Shanley, S., & Patel, T. (2022). Factors related to treatment attendance for patients seeking gender-affirming voice therapy. *American Journal of Speech-language Pathology*, in revision.

# Additional 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