

THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

BACKGROUND & PURPOSE

- Testosterone (T) therapy in transgender men (female to male) is associated with a deepening of the voice to a pitch range perceived as male.
- For men who were assigned female at birth, lower voice is one of the most sought-after effects of hormone treatment, although the extent and timing of changes are less than expected for some. For example, one survey found that 7 of 16 transgender men had expected their voices to change more rapidly or to a greater extent on T (Van Borsel et al, 2000).
- There is sparse prospective data on the timing and extent to which the voice changes in response to the introduction of T in adulthood.
- The largest study to date found that the majority of mean fundamental frequency (MF0) change occurs in the first 6 months of intramuscular T (Nygren, 2016).
- The present study investigates patterns in timing and degree of voice change in transgender men naïve to T therapy.

METHOD

- Participants were **7 transgender men** age 18-39 years who did not receive any speech or voice therapy during the study. Each participant received intramuscular T esters (50-100 mg every 2 weeks) for 12 months.
- A control group of **2 transgender women (TW)** received estradiol and anti-androgens.
- Voice assessments were performed twice prior to hormone treatment, and at 3, 6, 9 and 12 months after starting. Mean fundamental frequency (MFO) was measured during sustained vowels, reading, and monologue, and total range measured from glissandos up and down.
- Sex hormone levels were measured every three months with liquid chromatography-tandem mass spectrometry.

Trans Male Voice During the First Year of Testosterone: Make No Assumptions Adrienne B. Hancock PhD¹, Kayla Childs MA¹, Michael S. Irwig MD, FACE² ¹GW Department of Speech, Language, and Hearing Sciences, ²Beth Israel Deaconess Medical Center/Harvard

Mean F0 During Reading at Baseline and 3, 6, 9, 12 Months After Starting Hormone Treatment



Mean F0 During Reading at Baseline and 12 months, Set in Total Semitone Range



Mean F0 male range. **Total Range**

•After 12 months, MFO was lower within total range for all participants except 1.

Hancock, A.B., Childs, K.D., & Irwig, M.S. (2017). Trans male voice in the first year of testosterone therapy: Make no assumptions. J Speech Lang Hear Res., 60(9), 2472-2482.

RESULTS

•All transgender men reached the **typical male MFO** range within 6 months of T therapy. Only 1 transgender woman elevated her MF0; it remained within typical

•In transgender men, four patterns of MFO decrease over time emerged, as shown to the left.

1.Minimal change During Months 0-3 only

2.Change Over Months 0-6 Only

3.Change Over Months 3-9 Only

4.Similar change over 12 months

•Overall range **decreased** for all participants except **1**.

•All participants lost the highest notes in their range.

•As for the low notes, **some maintained or lost notes at** the low end (2, 5, 6, 7) while others gained new notes at the low end, with an overall effect of ranges shifted downward (1, 3, 4).

CONCLUSIONS

There is great heterogeneity in the timing and degree of voice change with T. Within the first 3 months some participants experienced no decrease in MF0 while others showed their greatest decrease.

Clinicians should counsel transgender men that:

• the majority of lowering will occur within 6-9 months of starting T therapy

• they will likely lose the highest notes in their ranges • they may gain notes at the bottom of their ranges

THIS STUDY NOW PUBLISHED: