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## Access to Gender-Affirming Voice Services Among Emerging Adults in the Gender-Expansive Community

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ACCESS TO GENDER-AFFIRMING VOICE SERVICES AMONG EMERGING  
ADULTS IN THE GENDER-EXPANSIVE COMMUNITY

Erin O. Wind

A Thesis Submitted in Partial Fulfillment Of The Requirement For The Degree Of  
Master of Science in Communication Sciences & Disorders

Longwood University

Department of Social Work & Communication Sciences and Disorders Program

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Directed by Dr. Shannon Salley

Emerging adulthood, occurring between the ages of 18 to 25, is a time of significant identity exploration. This age group has the highest prevalence of individuals who are transgender or nonbinary; however, there is minimal current research on access to gender-affirming voice services among this demographic. This study utilized a healthcare access framework by Levesque et al. (2013) to analyze organizational barriers to care including approachability, acceptability, availability, affordability, and appropriateness for this population.

The researchers collected data from 104 participants with an electronic survey. Survey data showed most participants (64%) are aware of and desire gender-affirming voice services. Of the participants who indicated desire for gender-affirming voice services, 93% reported that they never received services from a voice professional. Affordability, approachability, and acceptability were the most significant organizational barriers to access with affordability (68%) being the most significant. Awareness of services was a barrier to access with 46% reporting either a lack of awareness of gender-affirming voice services or a lack of awareness of these services provided by speech-language pathologists. The most used sources for information on gender-affirming voice services included friends; national, state, and local LGBTQ+ websites; LGBTQ+ community centers, and various social media outlets. This health-seeking information may be useful in providing better outreach to gender-expansive emerging adults.

Keywords: gender-expansive, transgender, nonbinary, gender-affirmation, gender-affirming voice services, emerging adulthood.

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## GLOSSARY OF TERMS

Definitions developed with references to Gay & Lesbian Alliance Against Defamation (GLAAD), Human Rights Campaign (HRC), It Gets Better Project, and National Center for Transgender Equality (NCTE).

Term	Definition
Agender	Agender refers to a person who does not connect or only scarcely connects with a gender (It Gets Better Project).
Androgynous	A person who is androgynous is someone who presents as neither male nor female (It Gets Better Project).
Cisgender	Cisgender is a term used to describe a person whose sex assigned at birth and gender identity are aligned (It Gets Better Project).
Gender-expansive	Gender-expansive is a term that refers collectively to those whose gender identity is non-cisgender. While some consider gender-expansive to include only identities outside of the gender binary (e.g. nonbinary, genderqueer, gender-nonconforming, etc.), others use this term to comprehensively describe all transgender and nonbinary identities (It Gets Better Project; HRC). In this text, gender-expansive encompasses the latter definition and refers to all transgender and nonbinary identities.
Gender-expression	Refers to how a person outwardly expresses their gender including how they dress, names, pronouns, voice, hair, behaviors, and other external gender markers (GLAAD; NCTE).
Gender identity	A person's internal knowledge and sense of their gender. One's internal sense of their gender may be the same as their sex assigned at birth or may be different or partially different (GLAAD; It Gets Better Project).
Gender fluid	Identity that refers to a person whose gender is unfixed and/or fluctuates over time (HRC; It Gets Better Project).
Gender nonconforming	Term that refers to those who do not conform to traditional gender expectations (HRC; It Gets Better Project).
Genderqueer	A term that refers to a person whose gender identity falls outside a traditional male or female gender binary. This could mean a person does not identify with either male or female or they may identify as both (HRC; It Gets Better Project).



Intersex	A person with varied sexual anatomy. Differences can vary and may include varied genitalia, chromosomes, internal sex organs, hormone production and/or response, and/or secondary sex characteristics (HRC; It Gets Better Project).
LGBTQ+	An acronym representing lesbian, gay, bisexual transgender, queer, and other sexualities and gender identities within the community.
Nonbinary	Nonbinary can refer to a specific identity that falls outside of binary of man and woman, or it may be used as an umbrella term to encompass all identities that fall outside of the traditional gender binary (HRC; It Gets Better Project; NCTE).
Out	To be out or to come out refers to the process of accepting one's own gender identity and can involve sharing this gender identity with others (HRC; It Gets Better Project). A person may be out in some environments but not in others. For example, a person may be out to their friends but not to their family or may be out to their friends and family but not their workplace.
Sex assigned at birth	Sex given to a child at the time of birth based on their external anatomy (GLAAD, HRC, It Gets Better Project).
Transgender	A word that describes a person whose gender identity does not align with their sex assigned at birth (GLAAD; HRC; It Gets Better Project; NCTE).
Transition	Transition is the process in which a person aligns their gender identity with their gender expression. Transitioning can include social, legal, and/or medical transition (GLAAD; HRC; It Gets Better Project; NCTE).
Transfeminine	Refers to a person whose gender identity and sex assigned at birth differ and whose gender expression is feminine in nature.
Transmasculine	Refers to a person whose gender identity and sex assigned at birth differ and whose gender expression is masculine in nature.
Quoigender	A gender identity with multiple possible meanings that can be used to refer to a gender identity that is confusing to the individual, someone who is questioning their gender, or someone with a complicated relationship with gender.

## **CHAPTER I**

### **INTRODUCTION**

The Williams Institute (2016) reports there are approximately 1.3 million transgender American adults (Herman et al., 2022) and trend analysis indicates this population is continually growing (Meerwijk & Sevelius, 2017). Additionally, 2021 data shows there are 1.2 million American adults who are nonbinary (Wilson & Meyer, 2021). Among the transgender and nonbinary population, there is a desire for transition-related care including counseling, hormone replacement therapy (HRT), puberty-blocking hormones, surgeries, and other procedures that help align gender identity and expression (James et al., 2016). This transition-related care can include gender-affirming voice services, which is voice therapy designed to align an individual's voice with their gender identity. According to the 2015 U.S. Transgender Survey (James et al., 2016), 57% of transwomen and nonbinary participants assigned male at birth either sought or wish to seek voice therapy services, making it the second most desired transition-related procedure for this population.

According to the American Speech-Language-Hearing Association (ASHA), gender-affirming voice services for these diverse populations are within the scope of practice for speech-language pathologists. ASHA specifies that this domain of service delivery consists of educating and treating individuals about verbal and non-verbal voice characteristics aligned with their gender identity (ASHA, 2016). Additionally, ASHA

endorses the World Professional Association for Transgender Health's (WPATH) standards of care for voice and communication specialists working with transgender and gender diverse clients (ASHA, n.d.-c). In their Standards of Care, WPATH recommends that voice and communication specialists working with this population receive specialized education focused on developing expertise in vocal functioning, communication, and well-being of transgender and gender-diverse people. WPATH also notes that voice and communication specialists should assess current and desired voice and communication function and develop intervention plans that are appropriate for the needs of the individual (Coleman et al., 2022).

Gender-affirming voice services are not only desired by, but also considered beneficial to transgender and nonbinary individuals (Hancock et al., 2011; James et al., 2016; Kennedy & Thibeault, 2020; Moog & Sund, 2021; Oates & Dacakis, 2015). Studies show that voice-gender incongruence can negatively affect quality of life and personal safety for transwomen and demonstrate links between positive perceptions of one's own voice to a higher quality of life within this population (Hancock et al., 2011; Oates & Dacakis, 2015). Recent research also indicates that transmasculine individuals experience a range of gender-related vocal issues and may benefit from voice services provided by speech-language pathologists (Azul et al., 2018; Pasternak & Francis, 2019). A study by Kennedy and Thibeault (2020) showed that an overwhelming majority of transmasculine, transfeminine, and nonbinary individuals experienced voice-gender incongruence in the past. Most participants in all three groups indicated voice-gender incongruence was either a moderate, big, or very big problem for them. Research by Moog and Sund (2021) bolstered these findings. They reported 68% of transgender and

nonbinary respondents indicated a desire to receive gender-affirming voice services. These studies demonstrate the need and desire for services within transfeminine, transmasculine, and nonbinary groups. However, despite the well-established need for gender-affirming voice services as well as the clear scope of practice and standards of care outlined for speech-language pathologists, current literature demonstrates that there are several barriers to access for transgender and nonbinary individuals (Hancock & Downs, 2021; Kennedy & Thibeault, 2020; Moog & Sund, 2021).

## **CHAPTER II**

### **REVIEW OF LITERATURE**

Data from the 2015 U.S. Transgender Survey indicates that access to gender-affirming care is a problem among those in the gender-expansive community. One notable statistic from the survey showed that although 78% of respondents reported they desired hormone therapy, only 49% reported receiving it (James et al., 2016). The survey also reported that 25% of respondents indicated they experienced problems with their insurance due to being transgender, including denial of routine care or denial of transgender-related care, within the past year. Fifty-five percent reported their insurance denied coverage of transition-related surgery, 25% reported insurance denial of coverage for hormones, and 33% reported not seeing a doctor due to cost. (James et al., 2016). Problems with insurance and cost were not the only barriers to access. In the same survey, 33% reported that, within the past year, they had at least one negative experience with a healthcare provider related to their gender identity including verbal harassment, treatment refusal, or needing to educate the provider on aspects of being transgender. Additionally, 23% stated that fear of mistreatment by a provider kept them from seeing a doctor (James et al., 2016). The U.S. Transgender Survey is not the only research that demonstrates these barriers to access; results from a 2014 study by Cruz, which analyzed data from the National Transgender Discrimination Survey, indicated that discrimination and affordability affected access to care among transgender and gender nonconforming

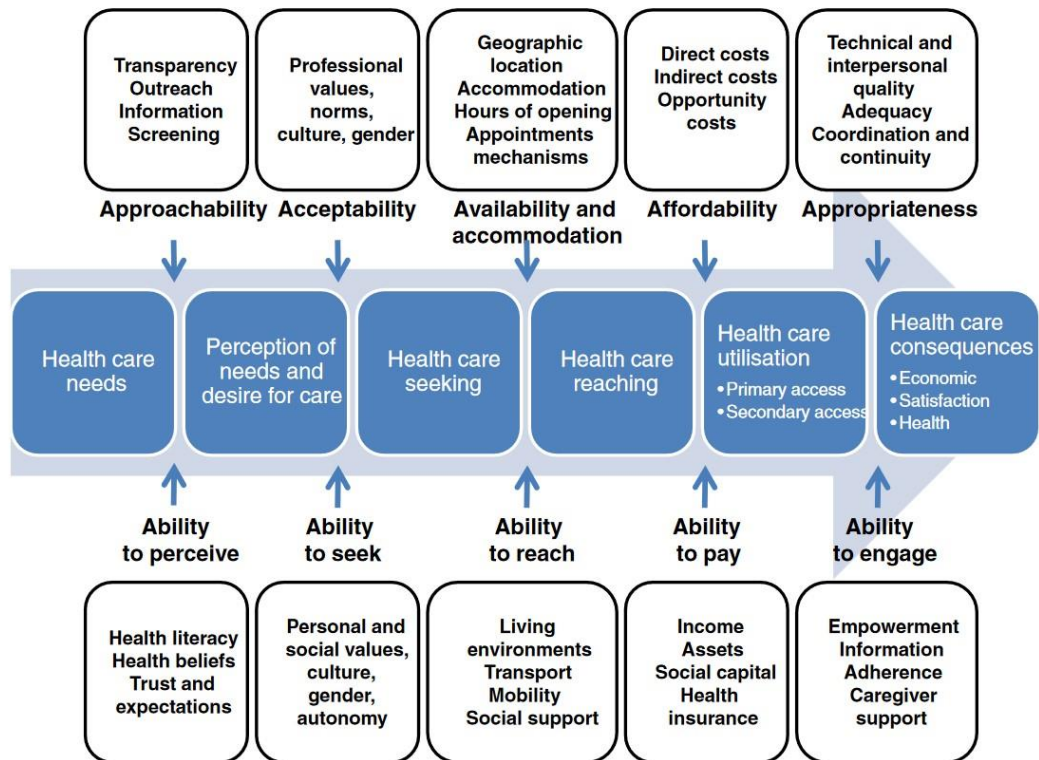
individuals, including postponement of services. In a separate study on the healthcare experiences of genderqueer and nonbinary young adults by Lykens et al. (2018), results indicated that respondents felt misunderstood by providers and that providers lacked the training and knowledge needed to provide them appropriate care. Overall, these studies demonstrate barriers to access to transition-related care and that affordability, fear of discrimination, and provider concerns are among those barriers.

Currently, limited research exists on the barriers that transgender and nonbinary adult populations encounter when attempting to access gender-affirming voice services specifically; however, some scholars who have studied the topic (Hancock & Downs, 2021; Moog & Sund, 2021) use a conceptual framework from Levesque et al. (2013) that describes five dimensions of access that affect accessibility to service. These dimensions include (a) approachability; (b) acceptability; (c) availability; (d) affordability; and (e) appropriateness, and they have five corresponding abilities that pertain to an individual's ability to interact with those dimensions of accessibility. The dimensions represent organizational barriers while the abilities to interact represent individual or personal barriers related to access. Figure 1 provides an illustration of this framework in detail.

Current research indicates the transgender and nonbinary population experiences barriers to service in multiple dimensions of accessibility at the organizational level (Hancock & Downs, 2021; Kennedy & Thibeault, 2020; Moog & Sund, 2021). This section will examine the organizational barriers to gender-affirming voice services found in the literature as they relate specifically to the five dimensions in Levesque et al.'s (2013) framework.

**Figure 1**

*A conceptual framework of access to health care*



*Note.* From “Patient-centred access to health care: Conceptualising access at the interface of health systems and populations,” by J. F. Levesque, M. F. Harris, and G. Russell, 2013, *International Journal for Equity in Health*, 12(18), p. 6 (<https://doi.org/10.1186/1475-9276-12-18>). Copyright 2013 Levesque et al.

## **Approachability**

Approachability refers to the ability of those requiring health services to identify the existence of services, perceive a need for these services, and reach out to providers (Levesque et al., 2013). According to Kennedy and Thibeault’s (2020) study on health information-seeking behaviors in the transgender community, 55% of transmasculine, transfeminine, and nonbinary participants reported they would not know what sort of help was available from speech-language pathologists. Another study by Moog and Sund

(2021) analyzing clinician and consumer perspectives on voice services reported that 71.9% of all transgender and nonbinary respondents did not feel they were knowledgeable on gender-affirming voice services. These studies support earlier research by Sawyer et al. (2014) on awareness of speech services among transgender individuals in Illinois, which found that 47% of transgender respondents did not know what type of services speech-language pathologists provide. The survey also indicated that none of the participants received a referral to a speech language pathologist by a medical professional, and some reported that providers did not inform them of the services speech-language pathologists provide related to transitioning (Sawyer et al., 2014). In a recent qualitative study by Hancock and Downs (2021), a lack of knowledge of services emerged as the most prominent barrier to service for transgender people of color. Results from the study indicated that participants were largely uninformed or misinformed about voice-related processes despite being well-informed about transition processes unrelated to voice.

The dimension of approachability can include transparency, outreach, and information about services. Therefore, difficulty finding reliable and trustworthy information can create a barrier to access pertaining to this dimension. A 2017 study by Evans et al. demonstrated the need for more reliable and trustworthy online information regarding transgender health. This is notable because recent research analyzing the online and offline resource-seeking behaviors of LGBTQ+ youth found that 65% used the internet for health-seeking purposes (McInroy et al., 2019). Additionally, research by Kennedy and Thibeault (2020) on transgender health-seeking behaviors found that 73% of respondents reported previously searching for gender-affirming voice services. When



describing the process, 58% indicated it was effortful, 65% stated it was frustrating, and 78% reported concern about the quality of information. When asked what types of information they found most trustworthy, 92% of respondents cited LGBTQIA+ community organizations; 88% cited speech-language pathologists; 64% cited doctors, nurses, and other health care providers; and 56% cited websites as resources they trust.

A more recent study by Magrath et al. (2022) indicated that the readability of online health information pertaining to gender-affirming voice services may also be a concern. Magrath et al. (2022) found that readability scores indicated websites required at least a 12<sup>th</sup>-grade reading level. This is notably higher than the recommendations of the American Medical Association, which suggests materials be at no higher than a 6<sup>th</sup> grade reading level (Weiss, 2007). The researchers also analyzed the Patient Education Materials Assessment Tool for Printable Materials (PEMAT-P) scores for understandability and actionability and reported information about transgender voice care found on websites was neither understandable nor actionable on average (Magrath et al., 2022). These studies suggest a barrier in the dimension of approachability pertaining to identifying the existence of services as well as finding accessible, trustworthy, understandable, and actionable information about necessary services and how they may impact health.

### **Availability and Affordability**

Availability and affordability also emerged from the literature as barriers to service for the transgender and nonbinary population. Availability is the physical existence of services while affordability relates to the ability of a person to expend the economic and time costs related to a service (Levesque et al., 2013). According to Moog

and Sund (2021), 57% of transgender and nonbinary consumers and 57% of clinicians indicated that gender-affirming voice services do not seem available. In this same study, 76% of transgender and nonbinary respondents indicated that cost seemed like a barrier to care, and 76% believed their insurance would not cover these costs. In a separate study, 71% of respondents cited affordability as an obstacle, and 52% indicated that a lack of health insurance was a barrier to seeking help (Kennedy & Thibeault, 2020). Hancock and Downs (2021) found that affordability was also an obstacle for some transgender people of color; however, lack of knowledge of services was a larger barrier.

Availability of insurance coverage may directly relate to affordability. As of 2021, 22 states and the District of Columbia have laws which require insurance coverage for medically necessary care related to gender-affirmation (ASHA, n.d.-a). However, in most states it is not clear whether this includes voice therapy. Additionally, 21 states and the District of Columbia offer coverage for care related to gender-affirmation for those with Medicaid. Of those 21 states, two states and the District of Columbia exclude voice therapy in this coverage, and the other 19 states do not specify whether voice therapy is a covered service (ASHA, n.d.-a). Although more research is necessary on availability and affordability as barriers to gender-affirming voice services, the existing literature indicates these dimensions affect health-seeking behaviors and access to service for transgender and nonbinary individuals.

### **Appropriateness**

Appropriateness is characterized by an accurate fit between client needs and services provided, appropriate assessment and treatment, and quality of services—both technical and interpersonal (Levesque et al., 2013). Matthews et al. (2020) found that

only 20% of surveyed speech-language pathologists indicated they received training to work with the transgender community. This study supports earlier research by Sawyer et al. (2014) which found that 62% of clinicians stated they did not receive specific information in their education about working with this population, and only 8% of respondents agreed or strongly agreed their education prepared them for treating transgender individuals.

Studies by Sawyer et al. (2014) and Hancock and Haskin (2015) demonstrated that speech-language pathologists have a lack of comfort with providing gender-affirming voice services. Sawyer et al.'s 2014 study found that 59% of speech-language pathologists did not feel comfortable performing assessments for transgender clients, and 54% reported they did not feel comfortable providing treatment. Hancock and Haskin (2015) reported speech-language pathologists were willing to learn about transgender voice therapy but did not feel they had the appropriate clinical skill. Conversely, Moog and Sund (2021) found that 88.9% of clinicians felt competent in providing gender-affirming voice services. These findings contradict the comfort level found in the research by Sawyer et al. (2014) and Hancock and Haskin (2015). Moog and Sund (2021) recruited speech-language pathologist participants using voice-specific listservs, ASHA Special Interest Group 3, and VOICESERV, indicating that their sample likely had a high proportion of participants who specialize in voice. Sawyer et al. (2014) surveyed providers from across the field, which may account for inconsistent findings between the two studies. However, Hancock and Haskin (2015) recruited using the same voice-specific listservs. The significant gap in time between the two studies may account for the contradictory findings in this case.

In addition to minimal provider preparation, Moog and Sund's (2021) study indicated a barrier in appropriateness regarding perceptions of speech-language pathologists' competence from the consumers' perspective. This study reported 21% of transgender and nonbinary respondents felt providers were not competent in providing gender-affirming voice services, and 59% were unsure if providers are competent. Six participants in this study reported they previously received gender-affirming voice services. Of those that received services, three reported that providers are competent, one responded they are unsure if providers are competent, and two responded that they felt providers are not competent. This data supports previous findings of Sawyer et al. (2014) which indicated five of eight participants who previously received services from speech-language pathologists reported negative experiences. The services for four of the five participants were not related to gender, which highlights the importance of cultural competency among speech-language pathologists regardless of the type of treatment they provide.

The literature also suggests that the focus of existing research on gender-affirming voice services pertains to voice feminization, and there is little research on voice masculinization or gender-neutral voice (Azul, 2015b; Pasternak & Francis, 2019). However, recent literature demonstrates that a significant number of transmasculine and nonbinary individuals may also require gender-affirming voice services (Azul, 2015a; Azul et al., 2018; Kennedy & Thibeault, 2020; Moog & Sund, 2021). In their 2018 study on transmasculine speakers, Azul et al. reported 79% of transmasculine participants presented with voice concerns related to gender. In a later study by Kennedy and Thibeault (2020), 76% of respondents with a history of testosterone hormone therapy

reported continued voice concerns related to incongruence of voice and gender. Additionally, results from a 2021 study by Moog and Sund also indicated a need for transmasculine voice therapy with 73% of trans men indicating a desire for gender-affirming voice services. Results of the latter two studies also revealed a desire for gender-affirming voice services among nonbinary individuals. Kennedy and Thibeault (2020) found 90% of gender-neutral participants in their study reported current voice-gender incongruence, while Moog and Sund (2021) reported 58% of nonbinary respondents indicated a desire for gender-affirming voice services.

Previous literature indicates a need for more education in both gender-affirming voice services and cultural competency among speech-language pathologists to improve accessibility for the gender-expansive population. This is necessary to provide appropriate services to all those who may desire gender-affirming voice services.

### **Acceptability**

Levesque et al. (2013) described acceptability as “cultural and social factors determining the possibility for people to accept the aspects of the service” (p. 5). Findings by Moog and Sund (2021) showed 88% of transgender and nonbinary participants responded they would feel comfortable receiving gender-affirming voice services, with 76% indicating they felt providers supported their gender identity and expression. Notably, all the participants who previously received gender-affirming voice services indicated they felt providers supported their gender identity and expression. Conversely, a study by Kennedy and Thibeault (2020) reported 51% of transgender and nonbinary participants chose “this problem is embarrassing” as a barrier to seeking services. This response points to a level of discomfort that contradicts the higher comfort level

demonstrated by Moog and Sund's 2021 findings. This contradiction may be due to the presentation of the question and suggests the need for future research.

### **The Significance of Emerging Adulthood**

Emerging adulthood is a period between the ages of 18 and 25 that is distinct from both adolescence and young adulthood, and characterized by exploration of identity, instability, self-focus, feelings of being in transition, and possibilities (Arnett, 2004). For most, this period comes after a time of dependence during adolescence, yet before the responsibilities of adulthood that come with a career, marriage, and/or parenthood. Specifically, romantic relationships, work, and worldviews are areas often shaped and explored during this time (Arnett, 2000). For those in the gender-expansive community, this can also be a time for development of gender identity and an opportunity for exploration of that identity (Kuper et al., 2018). According to a qualitative study of gender identity development of transgender and gender non-conforming emerging adults by Kuper et al. (2018), emerging adulthood provides an opportunity for transgender and gender non-conforming individuals to transition socially and medically before the major milestones of adulthood occur. However, in the same study, participants reported that access to gender-affirming care such as hormone therapy or other procedures was an issue for them and prevented them from fully transitioning. Cost was a notable barrier (Kuper et al., 2018).

The age range with the highest prevalence of individuals who are part of the gender-expansive community is 18 to 24 years-old, with as much as 1.31% of this population being transgender (Herman et al., 2022). Additionally, of the 1.2 million American adults who are nonbinary, demographic analysis shows that 76% are between

the ages of 18 to 29 years-old (Wilson & Meyer, 2021). Despite this, there is no current research that analyzes access to gender-affirming voice services among this age group.

### **Purpose and Research Questions**

Current research suggests that difficulty accessing information and a lack of knowledge pertaining to gender-affirming voice services within the gender-expansive community may contribute to barriers to access to gender-affirming voice services on the organizational level. However, limited research exists on this topic, and there is no known current research that looks at access to services specifically within the emerging adult population. This study's aims include the following: first, the study aimed to deepen the understanding of the desire for and access to gender-affirming voice services among the emerging adult gender-expansive community. Thus, the researchers sought to answer, a) Do gender-expansive emerging adults desire gender-affirming voice services?; b) Do gender-expansive emerging adults who desire these services receive them?; and c) What are the organizational barriers to access for those who desire services but do not receive them?. The secondary aim of the study looked at the health information-seeking behaviors of the emerging adult population within the gender-expansive community.

## **CHAPTER III**

### **METHODS**

#### **Materials**

The researchers developed a quantitative survey to gain an understanding of the perspectives of the transgender and nonbinary population. We submitted the study and survey for IRB approval at Longwood University. After receiving approval under expedited review (approval reference #2021-12-28), the survey was distributed among the gender-expansive community. Survey questions sought to determine the population's awareness of gender-affirming voice services, understand how they gain information about services relating to gender affirmation, and gain insight into their personal experience with, or conceptions of speech-language pathologists. A review of the literature and previous surveys of this community informed survey development (Hays, 2013; Kennedy & Thibeault, 2020). The survey, found in Appendix A, consisted of three sections. The first contained demographic questions, the second focused on awareness of gender-affirming voice services and acquisition of information regarding services, and the third section concentrated on experiences with speech-language pathologists. Four members of the transgender and nonbinary community reviewed the study and provided feedback about the questions to confirm their appropriateness and pertinence to the community as well as ensure relevance and reliability.



## **Procedures**

Participants completed the anonymous survey between February and March of 2022 using the web-based platform, SurveyMonkey. The survey was distributed electronically using a snowball methodology utilizing word of mouth and social media platforms including Facebook, Instagram, and Reddit. The researchers also emailed 256 LGBTQ+ community centers of two- and four-year colleges requesting distribution of the survey. Determination of which community centers to contact included consideration of the size, location, and accessibility of contact information. Centers the researchers emailed represented all 50 states and the District of Columbia and included large and small institutions.

The researchers downloaded data from the online survey and stored the data in password-protected spreadsheets on password-protected computers. Data from the survey was predominantly quantitative, and the researchers used descriptive analysis to analyze the data. The survey contained an open-ended “other” response option for the question “If you have not received gender-affirming voice therapy what are the reasons?”, which required coding. The researchers coded these responses through a two-step process including inductive coding using two coders (Saldaña, 2013). All responses to this question were then subsequently grouped into larger categories, found in Appendix B, to better understand reasons for not receiving services.

## **Participants**

The inclusion criteria for participants required respondents be 18 years of age or older; have a gender identity and/or expression that differs from their sex assigned at birth; and live in the United States. To analyze responses of only those participants in the

stage of emerging adulthood, the researchers used only the data from those participants who reported they were between the ages of 18 to 24 years old in our analysis. Those who identified themselves as cisgender were considered part of the gender-expansive community if they also reported their gender identity or expression differed from their sex assigned at birth. Although cisgender typically describes those who are not transgender, there are differing uses and understandings of terminology to describe one's identity.

### ***Gender Identities***

Participants represented 14 different identities including cisgender man, trans man, transmasculine, cisgender woman, trans woman, transfeminine, nonbinary, gender-fluid, gender queer, agender, gender non-conforming, quogender, trans, and androgynous. There were also two respondents who were either currently questioning or unsure of their gender. Five respondents chose an "other" option with a free form field when reporting their gender identity. The researchers coded these responses in a way that maintains the integrity of the nuances of gender identity and selected to not group the responses. The "other" responses contained three that we kept the same as written, including quogender, androgynous, and trans. The researchers shortened the other two free form responses from "unsure, but not a man" to unsure, and "currently questioning - typically okay with cis woman but using she/they pronouns and considering non-binary/GNC possibilities" to questioning. The percentages of respondents' gender identities are in Table 1. This question allowed participants to select multiple options and many participants had various ways of categorizing their gender identity, therefore the total percentage is over 100%.

**Table 1***Gender Breakdown of Respondents*

Classification	Gender	Count	% (n = 104)
Nonbinary	Nonbinary	53	50.96%
Masculine	Transmasculine	29	27.88%
Masculine	Trans Man	27	25.96%
Nonbinary	Gender-fluid	23	22.12%
Nonbinary	Gender Queer	22	21.15%
Nonbinary	Gender non-conforming	19	18.27%
Feminine	Trans Woman	13	12.50%
Feminine	Transfeminine	9	8.65%
Nonbinary	Agender	9	8.65%
Feminine	Cisgender Woman	3	2.88%
Masculine	Cisgender Man	1	0.96%
Nonbinary	Other - Androgynous	1	0.96%
Nonbinary	Other - Questioning	1	0.96%
Nonbinary	Other - Quoigender	1	0.96%
Nonbinary	Other - Trans/Transgender	1	0.96%
Nonbinary	Other - Unsure	1	0.96%
Nonbinary	Two-spirit	0	0.00%
Nonbinary	Prefer not to answer	0	0.00%

*Note.* Gender identity was a multi-select response with the 104 participants selecting a total of 213 gender identities.

Percentages will add up to over 100.

Of these various identities, 44% are masculine, indicating they identified as transmasculine, trans man, or cisgender man. Eighteen percent identified as cisgender woman, trans woman, or transfeminine. Thirty-eight percent identified as nonbinary, which we defined as anyone who identified as both masculine and feminine, nonbinary, genderfluid, agender, gender queer, gender non-conforming, or androgynous, and did not also indicate any other feminine or masculine identity. Table 2 displays this breakdown.

**Table 2***Classification of Masculine, Feminine, or Nonbinary Identities*

Classification	Count	% (n = 104)
Masculine	45	43.27%
Feminine	19	18.27%
Nonbinary	40	38.46%

***Demographic Information***

Respondents were from across the United States with 26 states and all four regions of the country represented. A breakdown of geographic region representation is on Table 3 and community type breakdown is on Table 4. To compare this to the general US population over the age of 18 years old, the Midwest is 21%, Northeast is 18%, South is 38%, and West makes up 24% of the total population (U.S. Census Bureau, 2020).

**Table 3***Representation of Geographical Regions*

Region	Count	Percent
Midwest	27	25.96%
Northeast	19	18.27%
South	33	31.73%
West	24	23.08%
Unknown	1	0.96%

**Table 4***Representation of Community Type*

Community	Count	Percent
Rural	12	11.54%
Urban	45	43.27%
Suburban	47	45.19%

## CHAPTER IV

### RESULTS

#### **Desire for Gender-Affirming Voice Services**

There were 129 responses to the survey from emerging adult participants, and 104 of those responses were complete and eligible for inclusion. The researchers asked, “How much do you agree with the following statement: I believe it is important that my voice match my gender identity and/or expression,” and of the 104 respondents, 0% (0) stated they strongly disagree, 2.88% (3) said they disagree, 19.23% (20) were neutral, 43.27% (43) agreed, and 34.62% (36) strongly agreed with this statement. In total, 77.88% (81) of respondents either agreed or strongly agreed that it is important that their voice matches their gender identity and/or expression. In a separate question, we asked “Do you desire, or have you ever desired gender-affirming voice services?”. To differentiate between voice therapy and medical voice interventions for gender-affirmation, the survey question defined gender-affirmation voice services as voice training/therapy/coaching to align a person's voice with their gender identity and/or expression. Sixty four percent (67) responded yes, they desire gender-affirming voice services, 15.38% (16) said no, and 20.19% (21) reported that they were unaware of these services (see figure 2).

**Figure 2**

*Do you desire or have you ever desired gender-affirming voice services?*

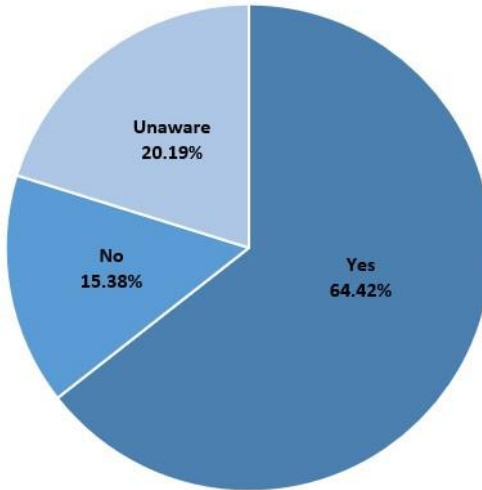


Table 5 shows a breakdown of this information by gender identity to help understand who specifically desires these services. We also analyzed whether there was a stronger desire for services among masculine, feminine, or nonbinary individuals. Responses showed 76.56% (34) of masculine individuals desired gender-affirming voice services while 11.11% (5) said they did not desire services, and 13.33% (6) stated they were unaware of these services. Of those who are feminine, 78.95% (15) said they do desire gender-affirming voice services, 10.53% (2) stated they do not desire them, and 10.53% (2) said they are unaware of these services (see table 6).

**Table 5***Desire for Gender-Affirming Voice Services by Gender Identity*

Gender	<i>n</i>	Yes	No	Unaware
Cisgender Man	1	100.00% (1)	0.00% (0)	0.00% (0)
Trans Man	27	77.78% (21)	7.41% (2)	14.81% (4)
Transmasculine	29	79.31% (23)	13.79% (4)	6.90% (2)
Cisgender Woman	3	0.00% (0)	66.67% (2)	33.33% (1)
Trans Woman	13	92.31% (12)	0.00% (0)	7.69% (1)
Transfeminine	9	100.00% (9)	0.00% (0)	0.00% (0)
Nonbinary	53	49.06% (26)	26.42% (14)	24.53% (13)
Gender-fluid	23	60.87% (14)	21.74% (5)	17.39% (4)
Gender Queer	22	54.55% (12)	18.18% (4)	27.27% (6)
Agender	9	77.78% (7)	11.11% (1)	11.11% (1)
Gender non-conforming	19	59.09% (13)	15.79% (3)	15.79% (3)
Other - Unsure	1	100.00% (1)	0.00% (0)	0.00% (0)
Other - Questioning	1	0.00% (0)	100.00% (1)	0.00% (0)
Other - Quoigender	1	0.00% (0)	100.00% (1)	0.00% (0)
Other -Trans/Transgender	1	100.00% (1)	0.00% (0)	0.00% (0)
Other - Androgynous	1	100.00% (1)	0.00% (0)	0.00% (0)

**Table 6***Desire for Services by Masculine, Feminine, or Nonbinary*

Classification	<i>n</i>	Yes	No	Unaware
Masculine	45	75.56% (34)	11.11% (5)	13.33% (6)
Feminine	19	78.95% (15)	10.53% (2)	10.53% (2)
Nonbinary	40	45.00% (18)	22.50% (9)	32.50% (13)

**Awareness of Gender-Affirming Voice Services**

Analysis of data regarding awareness includes all survey respondents rather than only those who reported they desired gender-affirming voice services and did not receive them. This is due to the nature of this dimension as it encompasses identification of the existence of services. Those who are unaware of the existence of services cannot ascertain whether they desire these services since they do not know they exist. Survey

results indicated 20% (21) of the 104 participants were not aware of the existence of gender-affirming voice services in general. Furthermore, six respondents who indicated they desired gender-affirming voice services specifically mentioned lack of awareness of services as a reason for not receiving services. Two of these respondents reported lack of awareness regarding how gender-affirming services might benefit them, with one respondent saying, “I do not have enough information about these services that are provided locally despite looking into them.”

To understand whether this population is aware of services speech-language pathologists provide, we asked, “Are you aware of gender-affirming voice services provided by speech-language pathologists?” Of those who did not indicate they were unaware of gender-affirming voice services generally ( $n = 83$ ), 56.63% (47) reported awareness of services provided by speech-language pathologists while 43.37% (36) reported being unaware of gender-affirming voice services provided by speech-language pathologists. When looking specifically at those who desire gender-affirming voice services ( $n = 67$ ), the awareness of services provided by speech-language pathologists increased slightly with 58.70% (40) reporting they were aware of services provided by speech-language pathologists and 40.30% (27) reporting they were not aware that speech-language pathologists provided this service (see table 7).

When analyzing awareness comprehensively and calculating all respondents who were unaware of gender-affirming voice services generally as well as respondents who desired services but were unaware of services provided by speech-language pathologists, nearly half (46%) of respondents reported one or more of these issues (see table 8).



**Table 7***Aware of Gender-Affirming Voice Services (GAVS) from Speech-language Pathologists*

Participants	<i>n</i>	Yes	No
All participants	104	45.19% (47)	54.81% (57)
Those not indicating unaware GAVS	83	56.63% (47)	43.37% (36)
Those desiring GAVS	67	59.70% (40)	40.30% (27)

**Table 8***Awareness of Gender-Affirming Voice Services (GAVS)*

Awareness	Count	% ( <i>n</i> = 104)
Unaware of GAVS generally	21	20.19%
Unaware of SLP-provided GAVS	27	25.96%
Total	48	46.15%

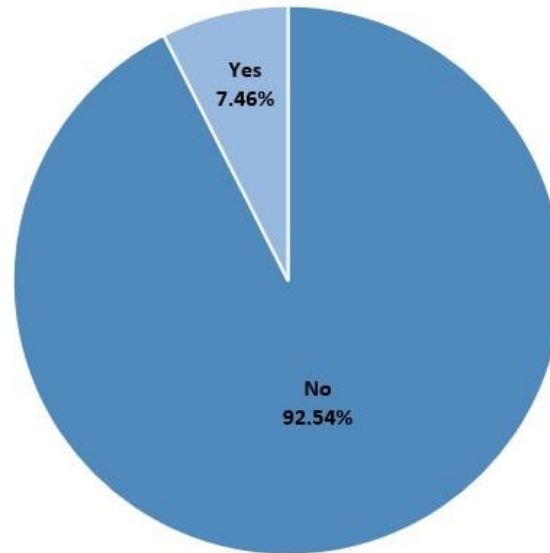
*Note.* Unaware of speech-language pathologist (SLP)-provided services includes those who indicated they desire gender-affirming voice services and also indicated they are unaware of services provided by SLPs.

### **Access to Gender-Affirming Voice Services**

To determine the number of respondents who have received desired gender-affirming voice services, the researchers looked at the respondents who answered yes to “Do you desire or have you ever desired gender-affirming voice services?” (*n* = 67). Of that sample, if they responded to “Have you ever received gender-affirming voice services (not including surgery or hormone therapy)?” with either “Yes - From a speech-language pathologist” or “Yes - From another professional” then they were considered as having received gender-affirming voice services. Of those who reported they desired services, 92.54% (62) reported that they have never received those services while 7.46% (5) reported that they had received services (see figure 3). Four of those who received services received them from a speech-language pathologist and one received services from a vocal coach.

### Figure 3

*Have you ever received gender-affirming voice services (GAVS)?*



*Note.* Includes only those who stated they desire GAVS ( $n = 67$ ).

Those respondents who reported they desire services but have not received them ( $n = 62$ ), reported why they did not receive those services by answering the question “If you have not received gender-affirming voice therapy what are the reasons?”. This question provided ten multi-select choices as well as an option to select “other” and provide a free form answer. The researchers coded answers to these free form responses through a two-step process including inductive coding using two coders (Saldaña, 2013). The initial coding agreement between two coders for “other” responses was calculated at 77.8% after examining 100% of the codes. The researchers then categorized all responses into larger groups to better understand the reasons for not receiving services. For example, those who responded, “It’s too expensive”, “My insurance doesn’t cover it”, or “Other: Financial” as a reason for not receiving services, were grouped into a category called Financial Concerns. We accounted for duplicates in these categories by counting

those who reported multiple factors within a single category only once. Appendix B provides definitions for all groups as well as a table with all responses prior to grouping.

Table 9 shows the data after grouping into larger categories.

**Table 9**

*Reasons for Not Receiving Gender-Affirming Voice Services with Groupings*

Reason	Count	% (n = 62)
Financial concerns	42	67.74%
Emotional – Embarrassed to talk to a professional about their voice	20	32.26%
Alternative intervention (medical or self-modification)	18	29.03%
Lack of availability of services	17	27.42%
Fear of discrimination by provider	13	20.97%
Provider concerns	10	16.13%
Lack of appropriateness of services (services do not meet needs)	8	12.90%
Personal barriers (lack of time/low priority)	8	12.90%
Lack of awareness	6	9.68%
Emotional – Other (anxiety/dysphoria)	3	4.84%
Not out yet	3	4.84%
Issues with health system navigation	2	3.23%
Currently seeking services	2	3.23%
Emotional – Fear of discrimination (by family or community)	2	3.23%
Secondary medical concerns	1	1.61%
Services not needed (unknown reason)	1	1.61%

Separately, the researchers divided responses into categories pertaining to the five dimensions of access based on definitions provided by Levesque et al. (2013) and prior research on access to gender-affirming voice services that used this framework (Hancock & Downs, 2021; Moog & Sund, 2021). The dimension groups consist of responses to the question “If you have not received gender-affirming voice services, what are the reasons?”, except for approachability which also includes data on whether respondents were aware of gender-affirming voice services generally and whether they were aware of services provided by speech-language pathologists. Table 10 details the factors related to

each dimension of accessibility. The factors are listed as they are grouped in Table 9 except for provider concerns, the components of which were split between acceptability and appropriateness for more accurate grouping.

**Table 10**

*Factors associated with dimensions of accessibility*

Dimension	Factors
Approachability	Unaware of gender-affirming voice services* Unaware of SLP-provided gender-affirming voice services* System navigation Lack of awareness
Acceptability	Fear of provider discrimination Emotional – Embarrassed to talk to a professional about their voice Other: Provider concerns Other: SLP concerns
Availability	Lack of availability of services
Affordability	Financial concerns
Appropriateness	Lack of appropriateness of services (services do not meet needs) Secondary medical concerns I don't think speech and voice specialists know about transgender voice

*Note.* \*Data is from separate questions regarding awareness of services. All other factors are responses to the question “If you have not received gender-affirming voice services, what are the reasons?”.

The researchers calculated the results by analyzing how many respondents selected factors within each of the dimensions and accounted for duplicates by only counting those who reported multiple factors within a single dimension once. Results indicated that the largest barrier by a significant margin was affordability with 68% of

respondents reporting factors associated with financial concerns as a reason for not receiving services they desired. The awareness aspect of approachability was the second largest barrier with 46% reporting either a lack of awareness of gender-affirming voice services generally or an awareness of and desire for services, but lack of awareness of services provided by speech-language pathologists. Similarly, 45% of respondents reported factors related to acceptability as reasons for not receiving services. Availability and appropriateness represented smaller barriers with 28% and 24% reporting factors associated with these respectively (see table 11).

**Table 11**

*Barriers to Service by Dimension*

Dimension	<i>n</i>	Count	Percent
Affordability	62	42	67.74%
Approachability (Awareness Only)	104	48	46.15%
Acceptability	62	28	45.16%
Availability	62	17	27.42%
Appropriateness	62	15	24.19%

**Health-Seeking Behaviors**

The researchers asked where emerging adults in the gender-expansive community look for information on gender-affirmation services. The most utilized source was friends, with 62.50% (65) of respondents indicating they use their friends to gain information on gender-affirmation services. The second-most utilized source was national LGBTQ+ websites with 51.92% (54) reporting this, followed by the social media site Reddit, with 41% (43) respondents indicating they use this as a source of information. State and local LGBTQ+ websites (32.69%), medical professionals (31.73%), mental health professionals (28.85%), and Twitter (17.31%) were also among the most utilized

sources for finding information on gender-affirmation services. Table 12 shows the complete list of sources used for information-seeking.

**Table 12**

*What sources did/do you use to gain information on gender-affirmation services?*

Sources	Count	% (n = 104)
Friends	65	62.50%
National LGBTQ+ Websites	54	51.92%
Reddit	43	41.35%
LGBTQ+ Community Center	40	38.46%
State/Local LGBTQ+ Websites	34	32.69%
Medical Professional	33	31.73%
Mental Health Professional	30	28.85%
Twitter	18	17.31%
Facebook	10	9.62%
Family	8	7.69%
TikTok	8	7.69%
I have never looked for this information	7	6.73%
Tumblr	4	3.85%
YouTube	3	2.88%
Planned Parenthood	2	1.92%
Google/Online Search	2	1.92%
Blogs	1	0.96%
Instagram	1	0.96%
Discord	1	0.96%
Other Websites	1	0.96%
PubMed	1	0.96%

The researchers also asked participants about what sources they use to learn about gender-affirming voice services specifically. The majority responded, “I have never looked for this information” with 31.73% (33) reporting this. Notably, over half of those who reported they never looked for this information also indicated they desire gender-affirming voice services. The second most selected response was “I am unaware of these services”, with 25.96% (27). As expected, most of these respondents also previously indicated that they either did not desire these services or they were unaware of gender-

affirming voice services. Friends were the most frequently cited source of information for gender-affirming voice services. LGBTQ+ community centers (12.50%), Reddit (11.54%), and YouTube (10.58%) were among the other most frequently reported sources. Table 13 contains the full list of sources.

**Table 13**

*From what sources have you learned specifically about gender-affirming voice services?*

Sources	Count	% (n = 104)
I have never looked for this information	33	31.73%
I am unaware of these services	27	25.96%
Friends	22	21.15%
LGBTQ+ Community Center	13	12.50%
Reddit	12	11.54%
YouTube	11	10.58%
TikTok	9	8.65%
National LGBTQ+ Websites	8	7.69%
Twitter	6	5.77%
Medical Professional	5	4.81%
Speech-Language Pathologist	5	4.81%
State/Local LGBTQ+ Websites	4	3.85%
Mental Health Professional	3	2.88%
Discord	2	1.92%
Tumblr	2	1.92%
Google/Online Search	2	1.92%
Family	1	0.96%
Facebook	1	0.96%
PubMed	1	0.96%
Voice Coach	1	0.96%

It is also notable that the total number of sources utilized for seeking gender-affirmation services generally is 366. The total number of sources used for learning about gender affirming voice services is 168. These numbers indicate that, on average, each respondent has 3.5 sources they utilize for information on gender-affirmation services,

and there is an average of 1.6 sources utilized for information pertaining to gender-affirming voice services.

Participants also answered a question regarding whether a professional has ever referred them to a speech-language pathologist. Of the 67 participants who reported they desire gender-affirming voice services, two (3%) reported a professional referred them to a speech-language pathologist. One participant cited their endocrinologist as the referral source while the other cited their physician. Of the two participants who received referrals, one subsequently received voice services from a speech-language pathologist.



## **CHAPTER V**

### **IMPLICATIONS AND CONCLUSIONS**

#### **Discussion**

Some emerging adults within the gender-expansive community report difficulty accessing desired services related to gender transition, preventing them from being able to fully transition during this important time of identity exploration and development (Kuper et al., 2018). Additionally, research on access to gender-affirming voice services among the general gender-expansive community shows that there are barriers to accessing these services within multiple dimensions of access (Hancock & Downs, 2021; Kennedy & Thibeault, 2020; Moog & Sund, 2021; Swayer et al., 2014). Although emerging adults show the highest prevalence of transgender and nonbinary gender individuals (Herman et al., 2022; Wilson & Meyer; 2021), there is minimal research on this age group.

The current study analyzed responses of 104 gender-expansive emerging adults, and results indicated that 78% agree or strongly agree that voice and gender congruence is important to them. Furthermore, 64% reported they desire or have desired gender-affirming voice services, yet of those who desire these services, 93% reported they never received them from a speech-language pathologist or any other voice professional. This data indicates possible barriers to access to these services among gender-expansive emerging adults. Using the health care access framework of Levesque et al. (2013), the

following section details barriers to the accessibility of gender-affirming voice services among gender-expansive emerging adults within the five dimensions of access.

### ***Approachability***

The current study looked at both the awareness of gender-affirming voice services generally as well as awareness of services provided by speech-language pathologists. The data indicates awareness of services is a barrier to care with nearly one in four respondents (24%) indicating they are either unaware of the existence of gender-affirming voice services or unaware of how they may benefit from gender-affirming voice services. Results also indicate there is a lack of awareness of services provided by speech-language pathologists among gender-expansive emerging adults as 40% of those who desire services are not aware of services provided by speech-language pathologists.

When compared to previous research on awareness of gender-affirming voice services provided by speech-language pathologists among all ages of gender-expansive individuals, data from this study suggests that gender-expansive emerging adults may have slightly more awareness of these services. Regardless, this study indicates that, overall, lack of awareness of existence of services may be a barrier to access among gender-expansive emerging adults. This data parallels findings of previous studies of gender-expansive individuals of all ages (Hancock & Downs, 2021; Kennedy & Thibeault, 2020; Moog & Sund, 2021; Sawyer et al., 2014). Furthermore, some respondents indicated a lack of knowledge pertaining to how gender-affirming voice services may benefit them even after looking for information on the topic. This substantiates prior findings by Magrath et al. (2022), which indicated a lack of understandability and actionability of online information on transgender voice care.

In addition to awareness of services, issues with system navigation also fall within the dimension of approachability. Although only two respondents (3%) desiring gender-affirming voice services reported issues with system navigation, one respondent expressed issues with being unsure of how to gain a referral for voice services. This is notable since previous research indicated that a lack of referrals to speech-language pathologists for gender-affirming voice services was an issue for those who desired services (Sawyer et al., 2014). Data from the current study also showed that only 3% of participants who desired gender-affirming voice services received a referral to a speech-language pathologist from a medical professional. The current WPATH Standards of Care specifically recommend medical professionals provide referrals to voice specialists when the client reports dissatisfaction with their voice and/or when undergoing voice surgery (Coleman, et al., 2022). This is significant partly because referrals are one way in which a patient may become aware of the existence of potential services. Furthermore, based on health information-seeking data gathered in this current study, 32% and 29% of gender-expansive emerging adults cite medical professionals and mental health professionals respectively as sources of information pertaining to gender-affirmation services generally. However, only 5% of respondents cited medical professionals and 3% cited mental health professionals as sources of information pertaining to gender-affirming voice services. Further research may be necessary to understand why this discrepancy exists.

For speech-language pathologists, these findings may implicate the need for more messaging about services in spaces where gender-expansive emerging adults look for health information. The data from this study indicates this may be a problem as 40% of

those who are aware of and desire gender-affirming voice services were not aware that speech-language pathologists provide this service. Additionally, based on responses from the current study as well as information from a previous study by Magrath et al. (2022), which reported a lack of readability, understandability, and actionability of online information about transgender voice care, it is beneficial for this information to follow health literacy guidelines to help increase readability and understandability of the content. Furthermore, educating the medical professionals who may refer clients to speech-language pathologists about gender-affirming voice services may be beneficial; however, fully understanding the reasoning behind a lack of referrals among medical professionals requires more research before drawing conclusions on this topic.

### ***Acceptability***

When compiling all aspects of acceptability, 45% of respondents who desired gender-affirming voice services but have not received them, cited one or more barriers related to the dimension of acceptability as a reason for not receiving those services. Results of the current study appear to reflect the concerns the gender-expansive population has regarding general health care as reported in the 2015 U.S. Transgender Survey. In that survey, 23% of respondents reported fear of discrimination as a reason for not receiving health services (James et al., 2016). In the current study, 21% cited that fear of discrimination by a provider related to their gender identity was a reason they have not received desired services. One participant who expressed discomfort related to providers stated they were, "...worried about a series of fetishizing and uncomfortable questions ruining any working relationship I might have with a voice coach, especially one closely officiated with a hospital or medical field." Another respondent who reported provider

concerns, expressed issues with the facility's staff related to scheduling. Additionally, a third voiced concerns about whether a provider would accept and respect their nonbinary identity.

Based on previous research of gender-affirming voice services specifically, acceptability represents a dimension in which data in the literature contains conflicting outcomes. However, when looking at specific aspects of acceptability, the results of this study show some similarities and some discrepancies among gender-expansive emerging adults and the general gender-expansive population. Moog and Sund (2021) reported that 24% of their respondents did not indicate they felt providers supported their gender identity and expression, which bears similarity to the 21% of gender-expansive emerging adults in the current study who stated they fear provider discrimination. However, data from a study by Kennedy and Thibeault (2020) indicated 51% of respondents felt the problem was embarrassing, compared to 32% in the current study. This demonstrates that while emerging adults may have similar concerns about discrimination from providers, they may find their voice concerns less embarrassing compared to the general gender-expansive population. However, more research is necessary to draw conclusions on this topic.

Although acceptability entails a variety of cultural and societal factors that seem difficult to overcome, there are measures speech-language pathologists can take that may ease fear of discrimination due to gender identity among this population. The Centers for Disease Control and Prevention (CDC) contends that patient-centered care can help create a more welcome environment for gender-expansive patients (CDC, 2022a). ASHA also provides guidance regarding cultural sensitivity as well as considerations such as

clinic modifications and information on how to support and work with transgender and gender-expansive individuals, which clinicians may utilize to help provide patient-centered care (ASHA, n.d.-b, n.d.-c). Having a high level of cultural competence may be particularly important as data from the current study indicates the most frequently cited source of information on both gender-affirmation care and gender-affirming voice services is from friends. This means a negative experience with a speech-language pathologist may reflect poorly in the eyes of the patient as well as those within their friendship circle.

### ***Availability***

Availability of services refers to the existence of services and the ability to attain them in a timely manner (Levesque et al., 2013). In this study, the response “There is no one who provides that sort of treatment in my area” as well as two “other” responses that referred specifically to a lack of availability of services represented the dimension of availability. In sum, 28% of respondents who desired gender-affirming voice services but have not received them reported there was a lack of availability of gender-affirming voice services in their area. Although it is difficult to speak to the causes of a lack of availability of these services, a lack of adequately prepared specialists in voice and upper airways within the field of speech-language pathology is a known issue that some leaders in the field are working to correct (Barkmeier-Kraemer & Hapner, 2022). Furthermore, previous research by Mathews et al. (2020) indicates that only 20% of speech-language pathologist participants reported that they previously received training for working with the transgender population. Additionally, Sawyer et al. (2014) reported in a separate study that 62% of speech-language pathologist respondents indicated they had not

received training for working with this population. It is possible that this shortage of expertise contributes to less availability of gender-affirming voice services; however, further research is necessary to determine causes as well as understand where availability is most scarce. Additionally, further research is also necessary to understand how increased use of telehealth may expand availability of services to areas that otherwise have a limited number of available resources for gender-affirming voice services.

### ***Affordability***

In this study, respondents who cited financial concerns as a reason for not receiving gender-affirming voice services reflected the dimension of affordability. A total of 68% of respondents reported one or more financial concerns as a reason for not receiving services, making affordability the most cited barrier to service by over 20 percentage points. Affordability among emerging adults is particularly salient as this is a demographic of individuals that have either not begun or are just beginning their careers. Considering that fact, it is surprising to find that results from this study show financial concerns are slightly less of a problem compared to previous studies of the general gender-expansive population. Moog and Sund (2021) reported that 76% of respondents indicated that cost was a barrier while Kennedy & Thibeault (2020) reported 71% of respondents cited affordability as an obstacle. Regardless of this slight difference, the data shows that affordability remains a significant obstacle to receiving gender-affirming voice services among emerging adults in the gender-expansive community.

According to ASHA's information on reimbursement of voice therapy for gender affirmation services, as of 2021, fewer than half of states and the District of Columbia require private payer coverage of care related to gender-affirmation, and most of those

states are unclear as to whether this coverage includes voice therapy. Additionally, fewer than half of states and the District of Columbia cover services for gender-affirmation under Medicaid, and three of those states exclude coverage for voice therapy (ASHA, n.d.-a). This lack of coverage or lack of clarity of coverage may contribute to the significant affordability barrier to gender-affirming voice services among emerging adults. Although affordability represents a dimension in which clinicians may have little control, clinician familiarity with state insurance law and knowing when a case for medical necessity is possible may be helpful when advocating and navigating payment for services.

### *Appropriateness*

Appropriateness of care refers to whether the services meet the need of the individual, whether there is appropriate assessment and treatment, and the quality of services—both technical and interpersonal (Levesque et al., 2013). Results from the current study speak to an issue raised in previous literature regarding a lack of focus on transmasculine and nonbinary gender-affirming voice needs (Azul, 2015b; Pasternak & Francis, 2019). One respondent from the current study expressed they had not received services partly because they were not sure if options existed for those who are nonbinary. Another respondent stated they did not receive desired services because, “Many speech and voice specialists (even among those who work with transgender patients/clients) do not specialize in transmasculine voice therapy.” These results also support previous findings of Moog and Sund (2021) as well as Kennedy and Thibeault (2020) which indicated a need for gender-affirming voice services among transmasculine and nonbinary individuals. In this study, 76% of transmasculine and 45% of nonbinary



respondents indicated a desire for gender-affirming voice services. Additionally, one transmasculine respondent reported voice changes after being on testosterone but stated they, “would love the opportunity to do more vocal training.”

Nearly one quarter (24%) of respondents who reported they desired gender-affirming voice services but have not received them indicate that a factor related to appropriateness was a barrier to receiving services. The main contributing factors relating to appropriateness were the belief that available services would not meet the needs of the individual and the perception that providers do not have the specific skill sets needed to provide the necessary services. A lack of preparation among some therapists may contribute to perceptions among the gender-expansive emerging adult community found in this study, though further research is necessary. Additionally, further research on the needs of transmasculine and nonbinary individuals regarding gender-affirming voice services may also help increase understanding of how to provide appropriate necessary services. It may also be prudent for those who are able to provide those services to make clear that services include those for transmasculine and nonbinary individuals.

### ***Individual Barriers and Other Reasons for not Receiving Services***

The scope of this study relates to barriers to access on the organizational level; however, it is necessary to acknowledge individual barriers also exist. Some individual barriers indicated within this study included not being out yet; personal factors such as a lack of time or services being a low priority; and other emotional factors such as fear of discrimination from their community or family, or feelings of anxiety or dysphoria. These barriers are important to acknowledge; however, the researchers did not perform an in-depth study here as it is out of the scope of the current analysis.

Some respondents also reported not receiving services for reasons that did not involve barriers to access. This included those who reported they did not receive services because they are in the process of seeking services currently, they do not require services (unknown reason), or they have utilized an alternative intervention. Alternative interventions included those who reported medical interventions (e.g., hormone therapy), self-modification of the voice, or those who reported they were otherwise pleased with their voice. This reason for not receiving desired services was the most significant of all those unrelated to personal or organizational barriers.

### ***Health-Seeking Behaviors***

A secondary aim of this study was to analyze health-seeking behaviors of the gender-expansive emerging adult population. Data from the current study revealed the most utilized sources of information pertaining to gender-affirmation are friends, national LGBTQ+ websites, Reddit, LGBTQ+ community centers, state and local LGBTQ+ websites, medical professionals, and mental health professionals. When analyzing the sources respondents reported they use specifically for seeking gender-affirming voice services, significantly more respondents indicated they have never searched for this information or that they were unaware of these services. However, the most utilized sources were friends, LGBTQ+ community centers, Reddit, YouTube, TikTok, and national LGBTQ+ websites.

Information on where gender-expansive emerging adults seek transition-related care is significant because the ability to find reliable information directly relates to approachability. Data from this study indicated awareness of services, a major element of approachability, was a barrier to access for 46% of gender-expansive emerging adults.

Understanding where this population looks for health information can inform how organizations reach individuals to provide accessible, accurate, understandable, and actionable information.

### **Limitations and Future Research**

The current study has a few significant limitations. The researchers utilized a snowball methodology for survey distribution involving social media websites such as Reddit, Facebook, and Instagram, which can potentially lead to a sampling bias. Additionally, the researchers sent emails to 256 colleges and universities for survey distribution, which may lead to a larger proportion of respondents who have access to college as well as at least some college education. Another significant limitation of this study is a lack of salient demographic information including information on the race and education level of respondents. This demographic information is significant as race and education can impact access to healthcare (CDC, 2022b), and race and socioeconomic status may impact access transition-related care (Gehi & Arkles, 2007). Furthermore, the lack of demographic information prevented this study from analyzing how intersectionality of gender identity and other minoritized identities may affect access. Future research on this topic should include collection of this demographic information to understand how the intersection of gender identity with race, education, socioeconomic status, and any other possible salient factors may impact access.

Another limitation of this study is that, except for awareness, the data is based on barriers to service only for those gender-expansive emerging adults who desire services but have not received them. However, it is possible that a person may not desire services because of one of the organizational barriers to access rather than a lack of need for the

service. Since the reason for not desiring services was unknown among those who indicated this, results include data only for those who desired services but did not receive them to maintain validity of the results. Most studies on access to gender-affirming voice services are based on quantitative data; however, qualitative research may also be useful to help more fully understand how barriers to service may affect desire for services. Future qualitative research is also necessary to gain more insight into the actual experiences of this population, which will help to contextualize current data regarding access to services.

It may also be beneficial for future research to study the knowledge of gender-affirming voice services provided by speech-language pathologists among physicians, mental health professionals, endocrinologists, and other health professionals who may work with the gender-expansive community. Additional research may help gain an understanding of how these medical professionals may inform or refer patients to these services when necessary. This is important due to the significant discrepancy found in this study between the utilization of medical and mental health professionals for information pertaining to gender-affirmation services compared to their utilization when seeking gender-affirming voice services. Additionally, a paucity of referrals among those who desire gender-affirming voice services may indicate underutilization of referrals to speech-language pathologists; however, further research would need to confirm this hypothesis.

Affordability is an area that may also benefit from further research as it is the most significant barrier to service. A better understanding of the specific causes of affordability issues is necessary before drawing conclusions and determining how to

address cost barriers. For example, research addressing whether problems with insurance coverage are an issue of a lack of coverage or an issue of insurance system navigation may be beneficial. Additionally, research indicating medical necessity of gender-affirming voice services may help with advocacy efforts as it pertains to laws surrounding insurance coverage.

There is no known research prior to this study that focuses on access to gender-affirming voice services among gender-expansive emerging adults specifically. It is unclear from this study whether there are significant differences between the experiences of emerging adults and those of the general gender-expansive population due to the relatively small amount of literature on this topic. Given the significance of emerging adulthood in the formation of identity (Arnett, 2000, 2004) and the opportunity of this period to be one where gender exploration may occur prior to encountering the responsibilities of adulthood (Kuper et al., 2018), more research may be necessary to clarify whether this population experiences significant differences in access.

## **Conclusions**

The purpose of this study was to understand the desire for and access to gender-affirming voice services among gender-expansive emerging adults. Results indicate that 64% of emerging adults within the gender-expansive community do desire gender-affirming voice services. Furthermore, 76% of those with masculine identities and 45% of those with nonbinary identities indicated they desired gender-affirming voice services, which supports previous literature indicating a need for voice services for those who are transmasculine or nonbinary (Azul, 2015a; Azul et al., 2018; Kennedy & Thibeault, 2020; Moog & Sund, 2021). Data also revealed that 93% of those who desire these

services do not receive them, indicating there are barriers to accessing these services. This study explored barriers to service on the organizational level and affordability, approachability, and acceptability emerged as the largest barriers to gender-affirming voice services among gender-expansive emerging adults.

Speech-language pathologists and professional organizations can take steps to help combat some of these barriers. Although affordability represents a difficult barrier to surmount, familiarity with state insurance law among clinicians and knowing when a case for medical necessity is possible may be helpful when navigating payment for services. Furthermore, speech-language pathologists can also advocate on a state or national level for more comprehensive insurance coverage for transition-related care that includes gender-affirming voice services.

Awareness is the barrier in which speech-language pathologists and professional organizations may have the most control. Prior research indicated that finding information on gender-affirming voice services is effortful and frustrating for members of the gender-expansive community, and there are concerns about whether information is accurate or trustworthy (Kennedy & Thibeault, 2020). Furthermore, much of this information is difficult to read, understand, and act upon (Magrath et al., 2022). It is possible that these issues contribute to a lack of awareness of services among gender-expansive emerging adults. Speech-language pathologists and professional organizations can help alleviate this barrier by providing outreach and information in spaces where gender-expansive emerging adults seek health information. The current study found that LGBTQ+ community centers; national, state, and local LGBTQ+ websites; mental health and medical professionals, and various social media platforms such as YouTube,

Facebook, TikTok, and Reddit are all places where gender-expansive emerging adults look for information on gender-affirmation or gender-affirming voice services. Using these spaces and resources to provide understandable and actionable information on gender-affirming voice services may help increase awareness of these services among those who may desire them.

In this study, acceptability arose as an issue often due to fear of provider discrimination. Although perceptions of medical professionals may be difficult to alter, an increase in cultural competence among speech-language pathologists regarding gender diversity may be a way to demonstrate acceptance of this community. Clinic modifications, learning basic information on issues of gender diversity, and understanding personal biases are all examples of ways a clinician can become more culturally competent in this area. ASHA provides information on how to deliver patient-centered care that includes information on cultural sensitivity, clinic modifications, and how to support and work with transgender and gender-expansive individuals (ASHA, n.d.-b, n.d.-c). Continuing education opportunities also exist on gender diversity and may be helpful for clinicians who would like more information. It is important that all clinicians, even those who do not work in gender-affirming voice care, maintain cultural competency in this area.

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## Appendix A. Survey

### Demographics and Participant Characteristics

1. What is your age?
  - A. Under 18
  - B. 18-24
  - C. 25-39
  - D. 40-54
  - E. 55-65
  - F. 65+
  
2. What sex were you assigned at birth?
  - A. Female
  - B. Male
  - C. Intersex
  - D. Prefer not to answer
  
3. Does your gender identity or expression match your sex assigned at birth?
  - A. Yes
  - B. No
  - C. Partially
  - D. Prefer not to answer
  
4. What is your gender identity or expression? Select all that apply:
  - A. Man
  - B. Transman
  - C. Transmasculine
  - D. Woman
  - E. Transwoman
  - F. Transfeminine
  - G. Nonbinary
  - H. Gender fluid
  - I. Two-Spirit
  - J. Agender
  - K. Gender Queer
  - L. Gender non-conforming
  - M. Other: \_\_\_\_\_
  - N. Prefer not to answer
  
5. In what state do you currently reside?
  - A. Drop-down: 50 states and DC
  
6. In what type of community do you live?
  - A. Rural
  - B. Urban
  - C. Suburban

7. Have you ever received hormone therapy for gender-affirmation?
- A. Yes – Testosterone
  - B. Yes – Estrogen
  - C. No
  - D. Prefer not to answer
8. How much do you agree with the following statement?  
I feel my voice matches my gender and/or expression.
- A. Strongly agree
  - B. Agree
  - C. Neutral
  - D. Disagree
  - E. Strongly disagree
9. How much do you agree with the following statement?  
I believe it is important that my voice match my gender and/or expression.
- A. Strongly agree
  - B. Agree
  - C. Neutral
  - D. Disagree
  - E. Strongly disagree

**Awareness of services (Approachability)**

10. What sources did/do you use to gain information on gender affirmation services?

Select all that apply:

- A. I have never looked for this information
  - B. Friends
  - C. Family
  - D. Medical Professional
  - E. Mental Health Professional
  - F. LGBTQ+ Community Center
  - G. National LGBTQ+ Websites (please specify)
  - H. State/Local LGBTQ+ Websites (please specify)
  - I. Facebook
  - J. Reddit
  - K. Twitter
  - L. Other sources (please specify)
11. Do you desire or have you ever desired gender-affirming **voice** services?
- A. Yes
  - B. No
  - C. Prefer not to answer



12. Have you ever sought information regarding gender-affirming **voice** services?
- A. Yes
  - B. No
  - C. Prefer not to answer

13. From what sources have you learned specifically about gender-affirming **voice** services? Select all that apply:

- A. I am unaware of these services
- B. I have never looked for this information
- C. Friends
- D. Family
- E. Medical Professional
- F. Mental Health Professional
- G. LGBTQ+ Community Center
- H. National LGBTQ+ Websites (please specify)
- I. State/Local LGBTQ+ Websites (please specify)
- J. Facebook
- K. Reddit
- L. Twitter
- M. Other sources (please specify)

14. Are you aware of gender-affirming **voice** services provided by speech-language pathologists?

- A. Yes
- B. No

**Satisfaction with Services (Appropriateness)**

15. Have you ever been referred to a speech-language pathologist for gender-affirming voice services?

- A. No
- B. Yes (please specify who referred you. e.g., Therapist, Physician, Endocrinologist, etc.) \_\_\_\_\_

16. Have you ever received gender-affirming voice services (not including surgery or hormone therapy)?

- A. No
- B. Yes – from a speech-language pathologist
- C. Yes – from another professional (Please specify, e.g. a vocal coach, etc.)

*If no to 16:*

17. If you have **not** received gender-affirming voice therapy what are the reasons? Select all that apply (Hays, 2013).

- A. I am pleased with my current voice quality
- B. I can successfully modify my voice without help
- C. I don't think it would make a difference
- D. I experienced voice changes when I started hormone therapy and I am satisfied with those changes
- E. I don't think speech and voice specialists know about transgender voice
- F. It's too expensive
- G. I think a therapist might discriminate against me because of my gender identity or expression
- H. There is no one who provides that sort of treatment in my location
- I. I am embarrassed to talk to a professional about my voice
- J. My insurance doesn't cover it
- K. Other (Please specify): \_\_\_\_\_

18. Have you ever received services from a **speech-language pathologist** for any reason other than gender-affirming voice services?

- A. Yes
- B. No

*If yes to 16(19a) or 18(19b):*

19a. How satisfied are you/were you with the outcome of your **gender-affirming voice** services provided by your speech-language pathologist?

- A. Very Satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very Dissatisfied

19b. How satisfied are you/were you with the outcome of the services provided by your speech-language pathologist?

- A. Very Satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very Dissatisfied

How much do you agree with the following statement?

20. I felt my clinician was competent in providing the services offered.

- A. Strongly agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

How much do you agree with the following statement?

21. I felt my gender identity and/or expression was supported by my speech-language pathologist.

- A. Strongly agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

How much do you agree with the following statement?

22. I felt my gender identity and/or expression was supported by the facility where my treatment occurred.

- A. Strongly agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree
- F. N/A – My treatment was offered online
- G. N/A – Other (Please specify

## Appendix B. Barrier Grouping Definitions and Responses

### Financial Concerns

Defined as people who chose:

- It's too expensive
- My insurance doesn't cover it
- Other: Financial

### Alternative Intervention or Otherwise Pleased with Voice

Defined as people who chose:

- I can successfully modify my voice without help
- I experienced voice changes when I started hormone therapy, and I am satisfied with those changes
- Other: Alternative Intervention – Self
- Other: Alternative Intervention – Medical
- I am pleased with my current voice quality

### Fear of Provider Discrimination

Defined as people who chose:

- I think a therapist might discriminate against me because of my gender identity or expression
- Other: Fear of Provider Discrimination

### Lack of Appropriateness of Services (services do not meet needs)

Defined as people who chose:

- I don't think it would make a difference
- Other: Appropriateness – Binary
- Other: Appropriateness – Goals

### Lack of Availability of Services

Defined as people who chose:

- There is no one who provides that sort of treatment in my location
- Other: Availability of Services

### Personal Barriers

Defined as people who chose:

- Other: Personal – Logistic
- Other: Personal – Priority (low)

### Lack of Awareness

Defined as people who chose:

- Other: Awareness – Existence
- Other: Awareness – Services

#### Emotional – Embarrassment

Defined as people who chose:

- I am embarrassed to talk to a professional about my voice

#### Emotional – Fear of Discrimination

Defined as people who chose:

- Other: Fear of discrimination

#### Emotional – Other

Defined as people who chose:

- Other: Emotional – Anxiety
- Other: Emotional – Dysphoria

#### System Navigation

Defined as people who chose:

- Other: System Navigation

#### Provider Concerns

Defined as people who chose:

- I don't think speech and voice specialists know about transgender voice
- Other: Provider Concerns
- Other: SLP Concerns

#### Currently Seeking Services

Defined as people who chose:

- Other: Currently Seeking

#### Not Out Yet

Defined as people who chose:

- Other: Not Out Yet

#### Secondary Medical Concerns

Defined as people who chose:

- Other: Secondary Medical Concerns

#### Services Not Needed

Defined as people who chose:

- Other: Services not needed

**Table 14***Reasons for Not Receiving Gender-Affirming Voice Services Without Groupings*

<b>Reason</b>	<b>Count</b>	<b>Percent (n=62)</b>
It's too expensive	35	56.45%
My insurance doesn't cover it	24	38.71%
I am embarrassed to talk to a professional about my voice	20	32.26%
There is no one who provides that sort of treatment in my location	15	24.19%
I think a therapist might discriminate against me because of my gender identity/expression	13	20.97%
I am pleased with my current voice quality	7	11.29%
I can successfully modify my voice without help	7	11.29%
I don't think it would make a difference	7	11.29%
I experienced voice changes when I started HRT and I am satisfied with those changes	7	11.29%
I don't think speech and voice specialists know about transgender voice	7	11.29%
Other: Personal – Logistics	6	9.68%
Other: Awareness – Existence	4	6.45%
Other: Alternative Intervention – Medical	3	4.84%
Other: Not out yet	3	4.84%
Other: Awareness – Services	2	3.23%
Other: Financial	2	3.23%
Other: System Navigation	2	3.23%
Other: SLP Concerns	2	3.23%
Other: Currently Seeking	2	3.23%
Other: Emotional - Dysphoric	2	3.23%
Other: Emotional – Fear of Discrimination	2	3.23%
Other: Emotional – Fear of Provider Discrimination	2	3.23%
Other: Alternative Intervention – Self	2	3.23%
Other: Personal - Priority	2	3.23%
Other: Availability of Services	2	3.23%
Other: Provider Concerns	1	1.61%
Other: Emotional – Anxiety	1	1.61%
Other: Appropriateness – Binary	1	1.61%
Other: Appropriateness – Goals	1	1.61%
Other: Secondary Medical Concerns	1	1.61%
Other: Services not needed (unknown reason)	1	1.61%