

**Voice and Communication
Therapy for the
Transgender/Gender Diverse
Client**

A Comprehensive Clinical Guide

Third Edition

Voice and Communication Therapy for the Transgender/Gender Diverse Client

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Edited by

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Preface

We are proud and humbled that 12 years on from our first edition in 2006, this text remains the only comprehensive clinical guide to voice and communication therapy for the transgender/gender diverse client. The number of voice clinicians, coaches, and trainers serving the needs of transgender/gender diverse people has continued to grow rapidly. The pressing need for such a text, as well as comprehensive graduate school planning around this topic, appears only to be increasing.

It was our hope at the writing of the second edition in 2012 that evidence-based practice would increase even further. This hope has been met by an exponential growth in research that touches on all aspects of working with transgender and gender diverse people. Since 2012, ASHA's special interest groups Voice and Voice Disorders, SIG 3, and Higher Education, SIG 10, have dedicated two online *Perspectives* publications to transgender work, the *International Journal of Transgenderism* has published a standards of care version 7 voice and communication companion document, and there has been a host of research articles published in the US and internationally that raise, and seek to answer, a multitude of critical questions.

In this third edition we have continued to blend research, clinically based guidelines, and art. Many of the same, and several new, contributing experts in the area of transgender voice and communication have consulted with one another and compared notes, and have further refined the crucible of the first and second editions. We have presented here the most up-to-date research and proven approaches to this challenging and endlessly satisfying

specialty of voice. We are particularly honoured to have had Aaron Devor, PhD, from the University of Victoria, Canada, who holds the only chair in Transgender Studies, write our foreword. We are also pleased to have included the voice of the transgender actress Delia Kropp, whose perspective on voice sheds a personal and unique light for voice coaches, trainers, and speech-language pathologists.

In this edition, the transmasculine chapter is almost a text unto itself, with current research, and a comprehensive approach to assessment and therapy. Case studies are included, making the chapter excellent food for therapists embarking on working with trans men. We are also particularly pleased to have included a final chapter focusing on trans youth, entitled "A Call to Action." The increase in the number of young people transitioning has quite rightly gained the attention of clinicians and researchers across all disciplines. In our final chapter of this edition, we have provided a starting point for further discussion; a discussion that will hopefully lead to fluent and comprehensive services for young people in the school setting, and the integration of all necessary services in adolescent gender clinics.

Unique to this edition is a PluralPlus companion website with access to numerous resources, paired with each chapter, that enhance the already extensive in-text references. These include study questions as food for thought, which we hope will help graduate program planners and students to formalize their learning in this area of their voice training and clinical practice.

Working with transgender clients remains a humbling experience. It requires openness to the occasional intensely

emotional session, and the ability to recognize the apparently fine line between voice clinician and psychotherapist. To this end, the psychotherapy and counseling chapters in this edition have been updated and extended to increase specific programmatic approaches, such as Adler's "Windows to the Voice." The Singing Chapter, also deeply grounded in the "soul" of our work, now includes a section on choral work.

The editors and contributing authors continue to assume that the reader has a moderate degree of voice as well as clinical expertise. As in the previous editions, we stress the importance of gaining voice experience before working with this population. Approaches that have been presented should still be interpreted as guidelines. Specific explanations and suggestions have been limited to allow for clinical individualism and creativity. We do not presume to know all of the answers.

We noted in the preface of the second edition that transgender women and men

are transitioning with greater confidence. Support from employers and peers allows them to express who they are with openness and honesty. This continues to be the case, though we must never become complacent about educating the general population about transgender issues. We must continue to guide our clients as they navigate social and professional transitions across a landscape where consistent acceptance is not necessarily a given.

We remain deeply grateful to the many transgender and gender diverse clients who teach us to constantly question the meaning of "normal," and who entrust us with helping them to finally give an honest, genuine voice to personal truths that they may have heretofore kept silent. We continue to feel confident that any clinician, coach, or trainer embarking on a new journey in this area of expertise will feel honoured and equally grateful.

Sandy Hirsch, MS, CCC-SLP

Foreword

More than 30 years ago, when gender was still very binary and I was still in graduate school, I had my first practical lesson in voice therapy. I had made friends with a doctoral student named Alan. Although as a graduate student he was less athletic than he had once been, Alan had been an elite gymnast who had competed at the highest levels of sport. His background in sport showed in his broad shoulders, and in his heavily muscled upper body and arms. Alan was short in stature, but other than that, everything about his physical appearance was resolutely masculine and cisgender. However, Alan had an unusually high-pitched voice for a man and one day he complained to me that he was routinely mistaken for “Ellen” on the phone. I had no training as a voice therapist, but I had been studying gender for some years already, so I ventured to make a suggestion. “Alan,” I said. “You’re just too nice. Try being more rude on the phone.” Sure enough, a couple of weeks later he came back to me to tell me that it had worked like a charm. When he stopped being so nice, the gender binary and sexism still being extremely strong, people on the phone recognized him as Alan, and the plague of being mistaken for “Ellen” was gone from his life.

Alan’s story gave me just a very small glimpse into how much more goes into making a correct auditory gender impression. Most members of the general public, trans as well as cis, seem to assume that the most important, indeed the only, element that truly conveys gender is the pitch of one’s voice. Although this is certainly important, as Alan’s story and those of countless “whiskey-voiced” women illustrate, pitch alone may not be the deciding factor

tipping the scales toward, or away from, an individual being correctly gendered. As noted throughout this volume, voice generally remains a larger challenge for adult trans women than for trans men due to the powerful effects of testosterone on voice. As also noted throughout this book, such challenges for both transfeminine and trans-masculine people are far from insurmountable with good training, much hard work, and patience.

In the decades since graduate school, I have devoted most of my career to working in trans and, more recently, non-binary communities, and with people who research and provide services to trans and non-binary folks. Despite the fact that voice is such a significant factor in attaining gender congruence, remarkably little professional attention had been given to voice until the inclusion of a section on voice and communication in the 2011 7th Version of the World Professional Association’s *Standards of Care for the Health of Transsexual, Transgender, and Gender-nonconforming People*. Prior to 2011, other than speech and communications specialists, most professionals working in the field were heavily focused on hormone therapy and surgery as the requisite treatments for trans people. Speech and voice weren’t considered core to a successful transition. As a member of the World Professional Association for Transgender Health (WPATH) *Standards of Care* committee for the 6th and 7th Versions, I witnessed the efforts of Richard Adler and his colleagues as they argued hard to convince the *Standards of Care* committee that we needed to include a small section on Voice and Communication Therapy in version 7. Thankfully, this is now an

established part of the *Standards of Care*, which I have been assisting in having translated from English into an additional 17 languages. Voice and communications therapy are now recognized as essential to offer to people transitioning around the world.

I also know from numerous private one-to-one conversations with a great many trans and non-binary people that many people feel insecure about the sound of their voice. Despite this, there is relatively little public conversation among trans and non-binary folks about voice and speech training, especially among trans masculine people. I suspect that this is, in part, due to a certain degree of self-consciousness and reluctance to call attention to one's voice when one feels that it may be less persuasive than they wish it to be. I also suspect that some of the relative silence on this issue is born of the mistaken belief that there is little that can be done other than to live with the effects of testosterone—mostly happily for those on the transmasculine spectrum, not so for those on the transfeminine spectrum, and in complex ways for non-binary people. Certainly, the authors and consumers of this edited collection know that this is far from true, and one especially welcome addition in this third edition of *Voice and Communication Therapy for the Transgender/Gender Diverse Client* is a significant chapter addressing the previously underserved voice and communication needs of transmasculine individuals.

My positions as the world's only Chair in Transgender Studies and as the Founder

and Academic Director of the world's largest Transgender Archives (part of the University of Victoria Libraries in Victoria, British Columbia, Canada) provide me with a unique perspective on the historical position of voice and communication therapy for the transgender/gender diverse client. There is simply nothing else like these books, now or in the past. The first two editions filled a void and have already made huge contributions to improving the lives of transgender people around the globe.

This third volume has the potential to make an even more valuable contribution to "training the trainers" by building on the work of the first two editions and by so doing, providing a larger and better informed cadre of speech language professionals with specialized skills of benefit to trans and non-binary people. It is my hope that the knowledge transmitted by this volume will encourage more trans and non-binary people to feel confident that, should they seek out professional help to reach their voice goals, they will be met with effective and compassionate assistance.

It has been an honour to be a part of this important project.

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Acknowledgments

Dr. Adler would like to acknowledge the hundreds of transmasculine and transfeminine clients he has worked with over the past 35 years. Their enthusiasm, determination and bravery inspired Dr. Adler to advocate for equality and acceptance of Transgender Communities and to mentor other SLPs to do the same. Some special thanks go to his husband Dave Purcell for his support and encouragement. Dr. Adler would also like to thank his many undergraduate and graduate students over the many years of University teaching, supervision and research who have been excellent students, clinicians, researchers and learners. Their respect, acceptance and enthusiasm for training/therapy with Transmasculine and Transfeminine clients was very inspiring and helped him move forward each time an obstacle seemed to try and get in his way. Dr. Adler wants to thank his co-authors/co-editors Sandy Hirsch and Jack Pickering for their encouragement, love, patience, and enthusiasm with this edition and for being able to be there to talk when he needed extra encouragement. Finally, he would also like to thank the ASHA staff who were helpful as he pursued his research, teaching, and clinical work with Transgender clients. Finally, he would like to thank the many ASHA members (professors, clinicians, and researchers) who he contacted and who had become mentors who encouraged him to continue his work throughout his career.

Sandy Hirsch would like to acknowledge her husband, Jim West, for his editing ears, eagle eye, and ever-loving patience; also her sons Finn and Johnny West, for their pride, love and encouragement; to her siblings, Nicky and Peter Hirsch for their listening and humour; and to innumerable friends

who have buoyed her throughout this project. Thanks to her brilliant, passionate colleagues all over the world, tirelessly doing research and clinical work in the area of gender diverse voice and communication training. She expresses deep gratitude to her co-editors Richard Adler and Jack Pickering; their gracious, egoless intelligence and commitment is second-to-none. Sandy is humbled by her clients who teach her as much, and often more, than she teaches them. Finally, thanks to, and in loving memory of her parents, John and Becky Hirsch, who encouraged Sandy to turn a thing on its side so as to develop a unique perspective.

Jack Pickering would like to acknowledge all of the transgender and gender non-conforming people who have been involved in the Saint Rose program, as well as those he has met along the way because of his experience in transgender voice and communication. Thanks to Dan Kayajian, an incredible co-director, and the multitude of graduate students who have made the program work and grow for over 10 years. He wishes to thank Arlene Lev for that initial phone contact, asking if he knew anyone who worked on voice with people who are transgender. Jack is grateful for his colleagues at The College of Saint Rose who encourage, support, and provide an exceptional place to work. Jack thanks his wife, Kelly, and the boys, Matthew and Benjamin, for their love and support. Special thanks to Richard and Sandy for asking him to be part of this incredible project! Finally, Jack acknowledges John Pettit, his first mentor and the individual who got him interested in voice almost 40 years ago. Dr. Pettit encouraged him to do a thesis at the University of Maine, a study that focused on gender and voice.

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Editors



Richard K. Adler, PhD, CCC-SLP, ASHA Fellow, is now retired and a Professor Emeritus from Minnesota State University Moorhead, Moorhead, MN. He has a BA in speech correction from Long Island University, Brooklyn, an MA in Speech/Linguistics from New York University, an MA in Speech-Language Pathology from the University of Akron, Ohio, and a PhD in Psycholinguistics and Communication from the Ohio University, Athens, Ohio. Dr. Adler's career has spanned nearly 50 years as an SLP in public schools, hospitals, private practice, university teaching, clinical supervision, research, mentoring, consulting, and writing. He has published many articles on such subjects as Teaching, Voice and Communication for Transgender individuals, Voice Disorders, Counseling, and TBI.

Dr. Adler has also presented nearly 90 workshops and seminars at local, and several state and national conferences including the ASHA convention, The World Professional Association for Transgender Health (WPATH) symposia, and several State Speech and Hearing Association Conventions. He has provided voice and communication training/therapy for Transgender clients for the past 35 years and is currently mentoring students, faculty, and clinical SLPs in this area. Dr. Adler has also been an invited keynote speaker throughout the US, Europe, and Asia in the area of Transgender Voice and Communication. He was the first SLP to be appointed to the writing committee for the WPATH Standards of Care, VII and he was a founding member and the first chair of the standing committee on Voice and Communication issues for WPATH. Dr. Adler lives in Ann Arbor, Michigan with his husband Dave.



Sandy Hirsch, MS, CCC-SLP, is a private practitioner with Give Voice in Seattle, WA. She received her BA in French and Classics with a minor in music (singing) in 1981 from Lancaster University, UK. Following, she pursued a career in theatre and moved to the United States from London in 1982. Ms. Hirsch received her MS in Speech and Hearing Sciences from the University of Washington in 1989. She has been an ASHA-certified SLP since 1990, focusing on voice and neurological disorders. She has practiced in hospital and school settings. For over 25 years, Ms. Hirsch has made voice and communication modification with gender diverse people the focus of her private practice. She is a member of the Ingersoll Transgender Professional Consult

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Since 2007, Ms. Hirsch has been teaching workshops nationally and internationally to clinicians, voice coaches and trainers who are committed to improving the quality of life of gender diverse people. She has presented extensively on gender diverse voice and communication modification at the Esprit Gala in Port Angeles, WA, ASHA, the Voice Foundation Symposium, the Art and Science of Performance Voice in Seattle, WA, Gender Odyssey and CPATH. Ms. Hirsch has been a guest lecturer at the University of Washington and Western Washington University as well as for medical residents in Seattle. In addition to this text, she has contributed to ASHA's SIG 10 Higher Education *Perspectives* publication, and her work has been featured extensively in newsprint, as well as on national radio and television media. Privately, Ms. Hirsch continues to pursue her passion for languages as well as classical and jazz singing.



Jack Pickering, PhD, CCC-SLP, is a Professor of Communication Sciences and Disorders at The College of Saint Rose in Albany, New York and speech-language pathologist for Capital Region ENT. For over 10 years, he has directed the college's Voice and Communication Program for People in the Transgender Community with Dan Kayajian, MS, CCC-SLP. Jack has been an ASHA-certified SLP since 1984, focusing on the assessment and treatment of voice disorders. He received his BA and MA from the University of Maine, and his doctoral degree in Speech and Hearing Sciences at Ohio University in 1990. His teaching interests include voice disorders, transgender voice and communication, motor speech disorders, and counseling for communication disorders.

Jack has given over 160 presentations and has published in the areas of voice disorders, transgender voice and communication, issues in higher education, and computer applications. He was the Chair of the Department of Communication Sciences and Disorders at The College of Saint Rose, 1999–2004; and Interim Dean of the Saint Rose School of Education during the 2005–2006 academic year. Jack also served as the President of the New York State Speech-Language-Hearing Association in 2006. In 2010, he was presented with the Distinguished Clinician Award from the New York State Speech-Language-Hearing Association, and was the 2011 and 2012 American Speech-Language-Hearing Foundation's Clinical Achievement Award winner for the state of New York. This recognition was based on his work in transgender voice and communication. Jack is a member of the World Professional Association for Transgender Health (WPATH).

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To our families; with love and thanks for their undying patience, yet again

To our clients who trust us to help them with their courageous journey

In memory of those who lost hope

1

A Multidisciplinary Approach to Transgender Health

*Maria Södersten, Ulrika Nygren, Stellan Hertegård,
and Cecilia Dhejne*

Introduction

Transgender health care varies around the world. In many countries, transgender people live on the margin of the society with insecure conditions to support themselves, with risks to become victims of hate crimes, including murder, or laws that make gender non-confirming expressions illegal (Winter et al., 2016). To support transgender health care around the world, the World Professional Association for Transgender Health (WPATH) issues Standards of Care (SOC). A multidisciplinary approach is recommended by WPATH in SOC number 7 (Coleman et al., 2012), since several specialized professionals are needed for assessments and different interventions to establish the best care for a transgender individual.

This chapter aims to introduce the reader to a multidisciplinary approach to transgender health from the standpoint of the field of voice and communication within the context of a multidisciplinary model established and implemented in Sweden. The chapter contains information about definitions and diagnoses; legislation and statistics

of the large increase of transgender individuals seeking medical help; the organization of our multidisciplinary team; routines for voice assessment, voice and communication therapy, and pitch-raising surgery; and examples of educational and quality enhancement activities.

Definitions and Diagnoses

Gender identity refers to an innate and deeply felt psychological identification as a female, male, or a non-binary gender. Gender identity may be congruent or incongruent with the sex assigned at birth. Gender dysphoria refers to the discomfort or distress that gender incongruence may cause. The clinical presentation for a person with gender dysphoria generally includes discomfort with the sex characteristics of the assigned sex at birth and an urge for medical help to alter the phenotypic expression of the body. Requests may include treatment with sex hormones, surgery to change primary and secondary sex characteristics, voice modification, saving germ cells for

later parenthood, pitch-raising surgery and hair removal in individuals who were assigned male at birth, psychiatric support or psychotherapy during the transition, and a new legal gender.

If gender incongruence causes distress, the individual could meet the criteria for a formal diagnosis. According to the American Psychiatric Association's (APA) current diagnostic system, the *Diagnostic and Statistical Manual for Mental Disorders, Fifth Edition* (DSM-5) from 2013, the diagnosis is labeled Gender Dysphoria. According to the World Health Organization's (WHO, 2010) *International Classification of Diseases and Related Health Problems, 10th Revision* (ICD-10), Gender Identity Disorders (F64) are Transsexualism (F64.0), Other Gender Identity Disorders (F64.8), or Gender Identity Disorder Not Otherwise Specified (F64.9).

For many years there has been a discussion questioning that a formal diagnosis of gender dysphoria is classified as a psychiatric diagnosis according to both DSM-5 and ICD-10. A revision of the diagnostic systems has been needed to meet the new research knowledge, policies and laws, human rights, as well as changed norms and attitudes in society. There has been a lot of effort made to move the gender dysphoria diagnosis from DSM-5 to reduce stigma (Pfäfflin, 2011), but to secure access to health care the diagnosis is still included in the DSM-5. In the revision of ICD-10 to ICD-11 it is proposed that gender identity disorders will be re-conceptualized to Gender Incongruence and moved from the Chapter "Mental and Behavioural Disorders" to a new chapter named "Conditions Related to Sexual Health" (Reed et al., 2016). The proposed changes in the ICD-11 are considered, according to the authors, "to be (a) more reflective of current scientific evidence and

best practices; (b) more responsive to the needs, experience, and human rights of vulnerable populations; and (c) more supportive of the provision of accessible and high-quality health care services" (Reed et al., 2016, p. 218). The ICD-11 is expected to be launched in 2018. The proposed move of the diagnoses from the psychiatric chapter to a chapter for conditions related to sexual health in ICD-11 will certainly affect transgender health care, but how is difficult to say.

The terminology and concepts within the area of gender incongruence and gender dysphoria have changed over the years. Previously it was common that experts talked about "sex change" from male-to-female (MtF) or from female-to-male (FtM) transsexuals, and later the word "sex correction" was used. Today the words "gender-affirming" or "gender-confirming" treatment are more and more used, which better reflect what the transition is about. Trans* (with an asterisk) is an umbrella term used if one wants to include all different trans identities, not only transgender women or men, within the gender identity spectrum. Transmasculine is a broad term used to describe a person assigned female sex at birth having a gender expression leaning toward the masculine, whereas transfeminine describes a person assigned male at birth having a gender expression leaning toward the feminine (Zeluf et al., 2016). Persons with gender identity in congruency with the sex assigned at birth are named cisgender persons or cispersons. WPATH recommends the use of "transgender woman" for someone with a female gender identity who was assigned male at birth and "transgender man" for someone with a male gender identity who was assigned female at birth. We will in this chapter use the terms "transgender women" and "transgender men," since

they are so far in the majority among those who seek gender-affirming voice and communication therapy. All transgender individuals do not need medical health care, but some do. In this chapter, we will use the word “patient” when we describe the clinical work with transgender individuals who need assessments and interventions within medical health care.

Legislation and Statistics

The transgender health care organizations for transgender people differ around the world. In many countries, there are no medical services available at all, while multidisciplinary teams exist in some countries, although waiting time and costs for treatment differ.

Sweden was the first country in the world to enact a law regulating a person’s legal right to change her or his sex assigned at birth. The law was created in 1972 and revised in 2013 by omitting a former sterilization prerequisite (Dhejne, 2017). The current law states that: (a) if the person has for a long time had a feeling of not belonging to the gender assigned at birth; (b) has lived in accordance with that experienced gender identity during a time; and (c) is anticipated to continue to live in this gender identity in the future, he or she can obtain permission for legal gender recognition and gender-affirming genital surgery. Requirements are that the person is over 18 years and has a residence permit in Sweden. Currently, there is a suggestion to legally allow change of assigned sex at birth at the age of 12 years with permission from parents or guardians, and at the age of 15 years without. The Legal Board of the National Board of Health and Welfare handles applications from all persons who re-

quest a legal sex change and permission for gender-affirming genital surgery. This procedure puts Sweden in a unique situation to assess trends and changes in number of applications and decisions about sex change over the years.

Statistics since 1960 are available regarding the number of applications, permissions, genital surgeries, new legal status, as well as withdrawals and regrets reported by Wålinder (1971), Landén, Wålinder, and Lundström (1996), and more recently Dhejne, Öberg, Arver, and Landén (2014). From 1972 to 2010 the incidence of applications increased significantly for both transgender men and transgender women. For transgender men, the increase was 0.16 to 0.42/100,000/year, and for transgender women from 0.23 to 0.73/100,000/year. The point prevalence in 2010 for transgender men was 1:13,120 and for transgender women 1:7,750. The average ratio during the period 1972 to 2010 was 1:1.66 (transgender men:transgender women) and the number of approved applications was 89%. A large increase of applications was found after 2000 as shown in Figure 1-1, especially after the 2013 law revision, when the request for sterilization was removed, along with the implicit requirement for gender-affirming genital surgery. A substantial increase of persons seeking medical help because of gender dysphoria or gender incongruence has been reported from many other countries as well, also including children, adolescents, and non-binary people (for an overview, see Dhejne, 2017).

The average regret rate, defined as applications to the National Board of Health and Welfare for reversal to the sex assigned at birth, was 2.2 percent for both sexes during the 50 years 1960 to 2010. From 2001 to 2010, the regret rate decreased significantly to 0.3 percent over the 10-year period (Dhejne

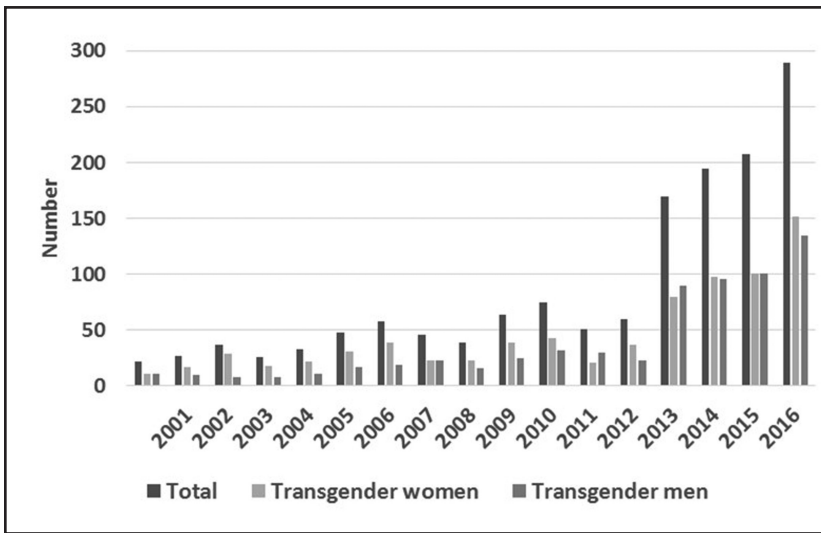


Figure 1–1. Number of applications for legal sex change and gender-affirming genital surgery to the National Board of Health and Welfare in Sweden from 2000 to 2016, presented as total number, and for transgender women and transgender men separated.

et al., 2014). During 2016, approximately 910 individuals >18 years of age and 410 youths <18 years of age were referred to the gender teams in all of Sweden to start assessment because of gender incongruence (Statistics from the Swedish Association for Transsexual Health).

There is a growing interest regarding a potential link between gender dysphoria and Autism Spectrum Disorder (ASD), and clinicians report seeing more gender dysphoric individuals with ASD (de Vries, Nons, Cohen-Kettenis, Berckelaer-Onnes, & Doreleijers, 2010; Jacobs, Rachlin, Erickson-Schroth, & Janssen 2014). A recent systematic review showed higher prevalence of ASD in children and adolescents with gender dysphoria, compared with the general population, whereas studies on adults showed conflicting results. Firm conclusions regarding adults were also hampered by a limited amount of studies (Glidden, Bouman, Jones, & Arcelius, 2016).

Organization of Specialized Multidisciplinary Gender Teams

Multidisciplinary gender teams are recommended by WPATH in the SOC 7 (Coleman et al. 2012), and in some countries, such teams have been developed. In Sweden, multidisciplinary teams have been developed since 2007, when the Swedish Association for Transsexual Health was launched. Today there are six specialized psychiatric gender teams, all at university hospitals. Those teams are responsible for the diagnostic assessments and coordination of gender-affirming medical interventions. One to four speech-language pathologists (SLPs) are for the moment associated with each gender team. Through the Swedish national health insurance system, the costs for medical care, such as diagnostic assessment, hormone treatment, voice and communication ther-

apy, most surgeries including pitch-raising surgery, and hair removal, are covered. Because of the increasing number of patients seeking medical help, the waiting time for assessment and treatments are, for many patients, unacceptably long.

The psychiatric gender teams consist of psychiatrists, psychologists, and social workers and follow a consensus program for evaluating gender dysphoria. The program was updated in 2015 by the National Board of Health and Welfare to make it more congruent with WPATH's SOC 7 (Coleman et al., 2012). The main changes were: (a) a more flexible and individualized evaluation process; (b) that gender-affirming medical treatment should not be reserved for transgender persons who fulfill the criteria of Transsexualism, but could also be offered to those with "other gender identity disorders" and "unspecified gender identity disorder"; (c) fertility preservation should be offered to patients prior to gender-affirming medical

treatment; and (d) facial feminization surgery and hip liposuction could be offered in some cases. The guidelines also emphasize the importance of working in multidisciplinary teams. The diagnostic evaluation procedure is adjusted to the person's needs and varies between 6 and 12 months in Sweden (National Board of Health and Welfare, 2015), as seen in Figure 1-2.

A recent review of 38 cross-sectional studies showed that psychiatric disorders, such as depression and anxiety, are significantly more common among transgender people in the beginning and after the transition, compared with a cisgender population, but also that psychiatric well-being improves during gender-affirming medical interventions (Dhejne et al., 2011; Dhejne, Van Vlerken, Heylens, & Arcelus, 2016).

After the psychiatric assessment resulting in a confirmed diagnosis, the patients are referred to endocrinologists for hormonal treatment, speech-language pathologists for

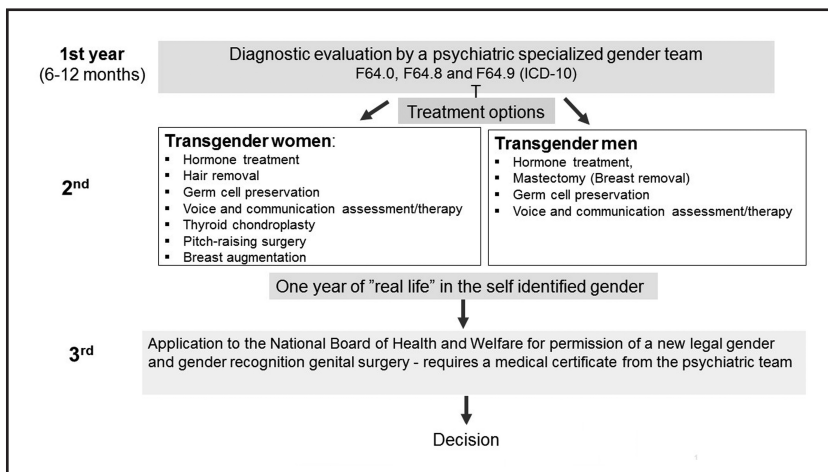


Figure 1-2. Flow chart showing the procedure for diagnostics and treatment options for transgender women and transgender men. The treatment starts after a diagnosis has been confirmed and can vary for different patients. Voice and communication therapy often continues later than during the second year. Pitch-raising surgery may be performed after voice therapy, often later than during the second year, and followed by post-surgery voice therapy. Hormone treatment will continue lifelong.

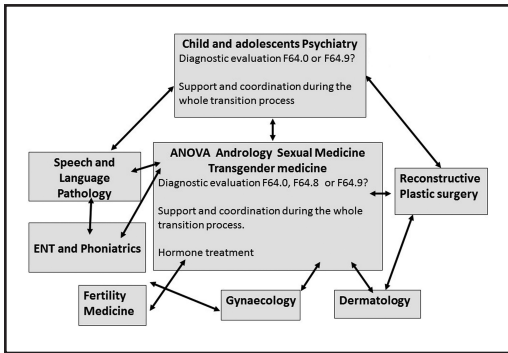


Figure 1–3. Flow chart showing the complex referral ways and interactions between the different specialists in the extended gender team at Karolinska University Hospital. Courtesy of Karolinska University Hospital.

voice assessment and if needed voice and communication therapy, ENT-physicians specialized in phoniatrics for laryngeal assessment, gynecologists for germ cell preservation, dermatologists for hair removal (for transgender women), and reconstructive plastic surgeons for gender-affirming surgical interventions. Individuals requesting a new legal sex and genital surgery must live in the self-identified gender for one year. After that they can apply to the National Board of Health and Welfare, and a certificate is required from the psychiatric gender team, supporting the application. Although the gender team tries to follow the ideal clinical program as shown in Figure 1–2, very often patients are referred back and forth between the specialists. Thus, a more realistic picture of the clinical work is shown in Figure 1–3.

The extended gender team at Karolinska University Hospital has regular meetings to discuss administrative issues such as waiting lists, new procedures, and, if needed, difficult cases. An advantage of a multidisciplinary team is that all professionals working with intervention, such as SLPs and surgeons, can be in close contact with the psychiatric team when needed. Many

patients are vulnerable because of affective and anxiety disorders. (Dhejne et al., 2016). Thus, SLPs meet and can have a relatively long contact with patients who may also be depressed or have anxiety disorders. It is a great advantage that the SLP, or a surgeon, can get support from a psychiatrist, psychologist, or other mental health professionals, if needed. Sometimes the psychiatric team needs to be informed, for example, by an SLP, that a patient is not emotionally stable during a period when the patient does not have regular contact with the psychiatric team.

Once a year, the extended gender team at Karolinska University Hospital organizes a day to educate the general public, patients, family members, trans organizations, and health care personnel about gender dysphoria, assessments, treatments, and recent research. Representatives from each professional area participate with short lectures, thus reflecting that the work with transgender patients within health care is multidisciplinary.

Voice Assessments, Gender-Affirming Voice and Communication Therapy, and Pitch-Raising Surgery

As seen in Figure 1–2, patients are referred for voice assessment when the psychiatric evaluation has led to a decision about a gender dysphoria diagnosis, such as Transsexualism (F64.0) or, since 2015, the diagnoses “Other Gender Identity Disorders” (F64.8) and “Gender Identity Disorders Not Otherwise Specified” (F64.9). That means that some patients are rather early in their transition process when they first meet the SLP. Some individuals may not yet present themselves in accordance to their self-identified gender role, or may not have thought about their voice much, whereas others have been

living in the self-identified gender for a long time and may experience voice dysphoria. Our clinical experience is that it is of value, for both the patient and the SLP, to meet early in the process for information, a baseline voice recording, vocal hygiene instructions, and if needed, a plan for voice and communication therapy and/or follow-up. The clinical procedure and therapy programs at Karolinska University Hospital, as described by Södersten, Nygren, Hertegård, and Dhejne (2015), follow the chapter about Voice and Communication Therapy in SOC 7 (Coleman et al., 2012), as well as WPATH's Companion Document for Voice and Communication (Davies, Papp, & Antoni, 2015). When non-binary individuals are referred because of voice dysphoria, they go through part of the voice assessments described below. Since no questionnaires or therapy programs are yet developed for this group, assessment and therapy are individually designed until research data are available.

Voice Assessment for Transgender Women

The voice assessment includes: (a) an interview to obtain demographic data; (b) patient self-evaluations using the Transsexual Voice Questionnaire, TVQ^{MF} (Dacakis, Davies, Oates, Douglas, & Johnston, 2013), and the Voice Handicap Index (VHI) if the transgender woman shows signs of a voice disorder (Jacobson et al. 1997; Ohlsson & Dotevall, 2009); (c) audio recordings carried out according to a standard setting in a sound-treated booth, as well as (d) videolaryngostroboscopy, optimally carried out before the voice therapy starts. If the patient is concerned by a prominent thyroid cartilage, the shape of the larynx is video-recorded from the front and the side of the neck, during rest and swallowing.

Audio Recordings for Transgender Women

The speech material used for the audio recordings are: (a) reading of a standard text and narrating to a series of pictures in habitual voice, comprising a Speech Range Profile (SRP) visualized in Figure 1-4A and B; (b) sustained vowels; (c) reading of the standard text in a loud voice and heard over pink noise presented through headphones at a level of 70 dBA; (d) a Voice Range Profile (VRP), as seen in Figure 1-4C, performed to document the physiological voice range for frequency and sound pressure level (SPL) described by Ternström, Pabon, and Södersten (2016). We follow the guidelines by Hallin, Fröst, Holmberg, and Södersten (2012), which have also been used in other studies of transgender individuals (Holmberg, Oates, Dacakis, & Grant, 2010; Sanchez, Oates, Dacakis, & Holmberg, 2014).

For transgender women, the recordings are carried out before and after gender-affirming feminizing voice and communication therapy (see Figure 1-4), and after 6 months follow-up. A VRP is not recorded again after voice therapy, since it is not expected to change. If pitch-raising surgery is performed, recordings are done before and after surgery (see Figure 1-5), and at follow-up, optimally after 3, 6, and 12 months.

Voice Assessment for Transgender Men

As for transgender women, the assessment for transgender men includes an interview and self-evaluations of the voice related to gender identity, although no reliable or valid questionnaire yet exists. If the transgender man shows signs of a voice disorder, the VHI is used. Audio recordings are completed following the standard setting in a sound-treated booth. Transgender men are

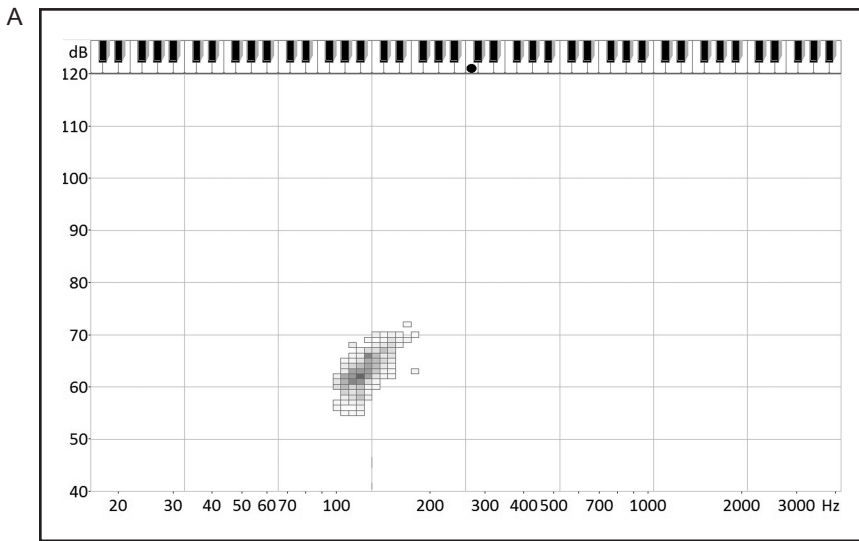


Figure 1–4. Speech Range Profiles from readings of a standard text and narration to pictures (A) before voice therapy and (B) after eight sessions of voice therapy for the same transgender woman. The x-axis shows fundamental frequency (in Hz) and the y-axis sound pressure level (in dB at 30 cm). The average f_0 increased from a male frequency of 120 Hz before therapy to a female frequency of 197 Hz after. The average sound pressure level, measured using L_{eq} , increased from 64 to 70 dB. Her Voice Range Profile is shown in (C) with min f_0 of 78 Hz indicated.

referred for videolaryngostroboscopy only if they have symptoms related to a voice disorder other than those related to the expected voice change during treatment with testosterone. Through the assessment, transgender men are screened for potential voice problems, so that voice therapy can be offered, if needed (Azul, Nygren, Södersten, & Neuschaefer-Rube, 2017; Nygren, Nordenskjöld, Arver, & Södersten, 2016).

Audio Recordings for Transgender Men

Audio recordings are done using the same speech material as for transgender women. The recordings of SRPs and VRPs are recommended to be carried out before hormone treatment once testosterone starts, after 3 or 6 months, and after 12 months (Figure 1-6) to follow the voice change during testosterone treatment (Deuster, Di

Vincenzo, Szukaj, Am Zehnhoff-Dinnesen, & Dobel, 2016; Nygren et al., 2016).

Data Analyses of the Audio Recordings.

The voice recordings for both transgender women and transgender men are analyzed audio-perceptually. The speech and voice range profiles are analyzed acoustically using fundamental frequency measures (average f_0 , minimum f_0 , and maximum f_0) and sound pressure level measures (L_{eq} , minimum and maximum SPL) following the recommendations by Hallin et al. (2012) and Ternström et al. (2016).

Gender-Affirming Voice and Communication Therapy for Transgender Women

Voice and communication therapy with the goal to feminize the voice to be congruent

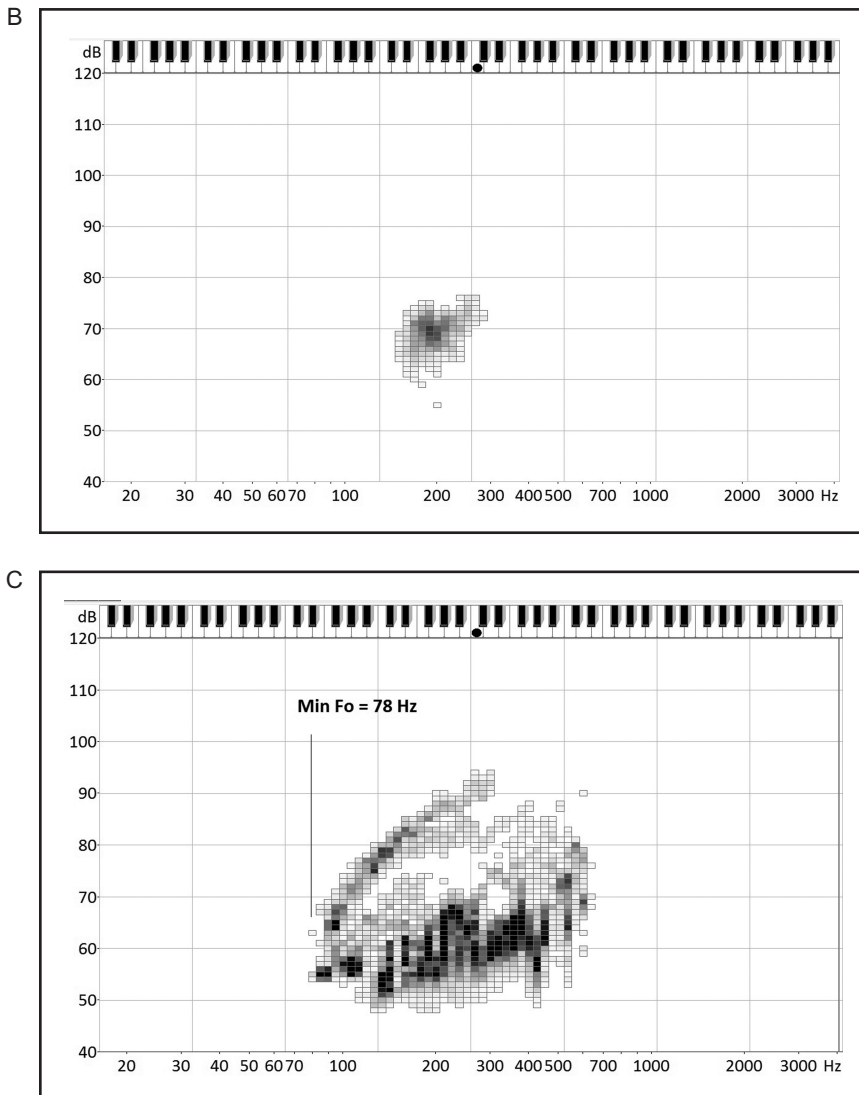


Figure 1-4. (continued)

with the person's self-identified gender is an important part of gender-affirming treatment. To be perceived as the self-identified gender has been acknowledged as a predictor for good outcomes and reduced gender dysphoria (Coleman et al., 2012; Smith, van Goozen, Kuiper, & Cohen-Kettenis, 2005; Van de Grift et al., 2016).

Voice therapy comprises breathing, relaxation, and vocal function exercises to in-

crease vocal flexibility and prevent vocal fatigue (e.g., Angadi, Croake, & Stemple, 2017; Söderpalm, Larsson, & Almquist, 2004). To feminize the voice, it is necessary to adapt fundamental frequency, sound pressure level, voice quality, and articulation to reach a female-sounding voice. Specific chapters in this book (Chapters 7, 8, 10–13) give detailed information about voice and communication therapy. Although evidence for

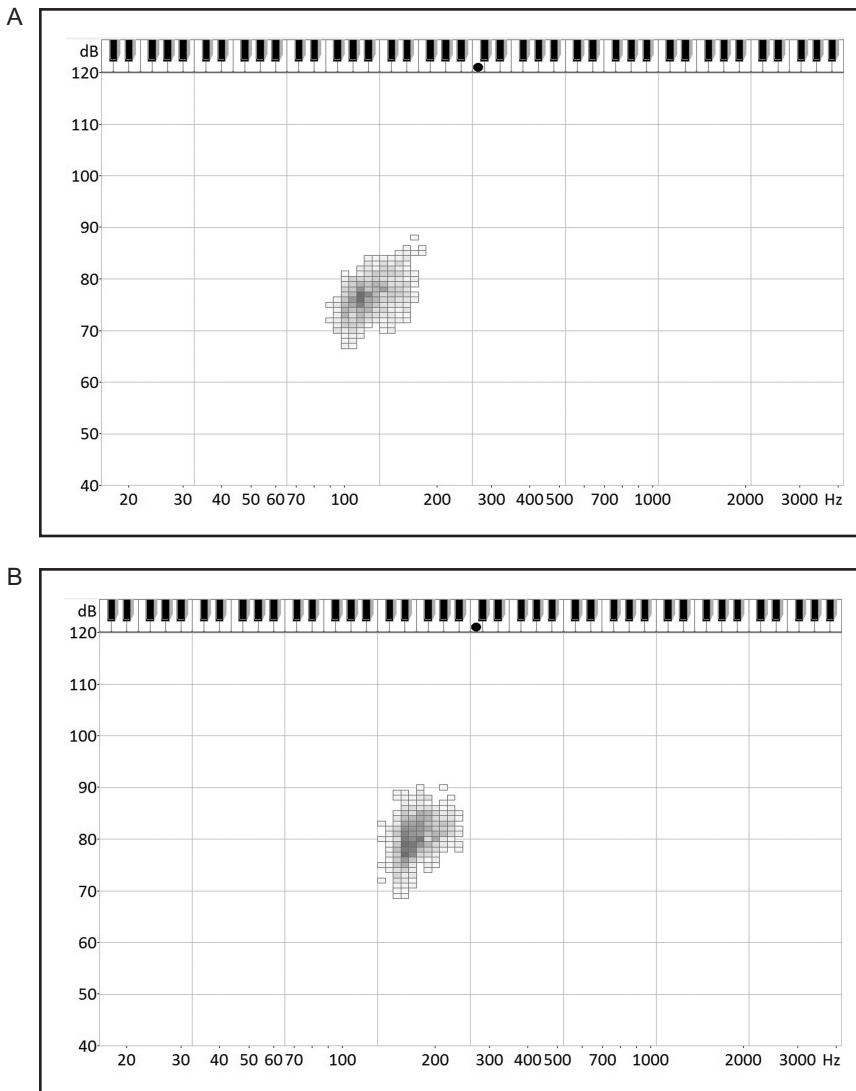


Figure 1–5. Speech Range Profiles (A and B) and Voice Range Profiles (C and D) before (A and C) and after (B and D) surgery with CTA for one transgender woman. The x-axis shows fundamental frequency (in Hz) and the y-axis sound pressure level (in dB at 15 cm). Average f_0 increased from a male frequency of 120 Hz (A) before surgery to 170 Hz after (B) and the sound level increased from 78 to 82 dB (15 cm). The desired increase in min f_0 from 78 Hz (C) to 131 Hz (D) is shown. Note also the decrease of max f_0 from 740 Hz to 440 Hz, which is not desired, as that reduces the frequency range.

feminizing voice and communication therapy is still scarce, there is an increasing number of publications supporting positive outcomes (for a review, see Oates, 2012; Oates & Dakakis, 2015; Chapter 6 in this book).

Pitch-Raising Surgery and Thyroid Chondroplasty

Surgery is an option after voice and communication therapy has been carried out.

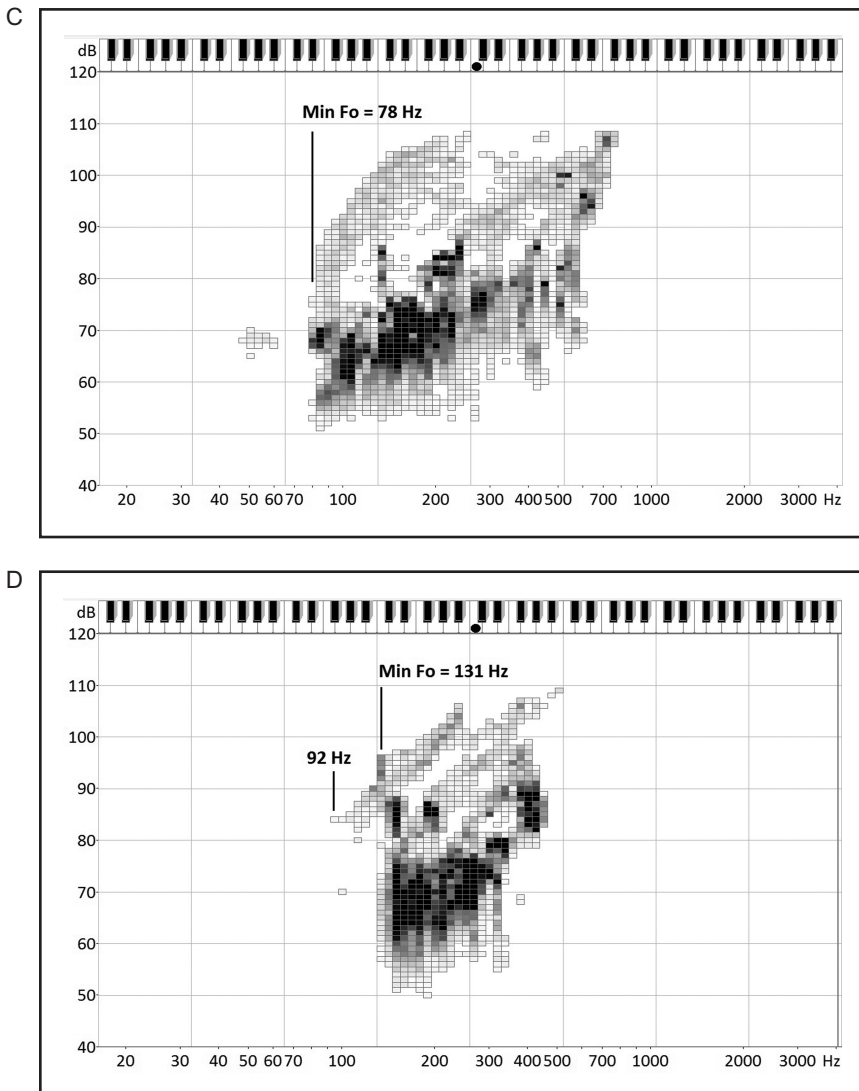
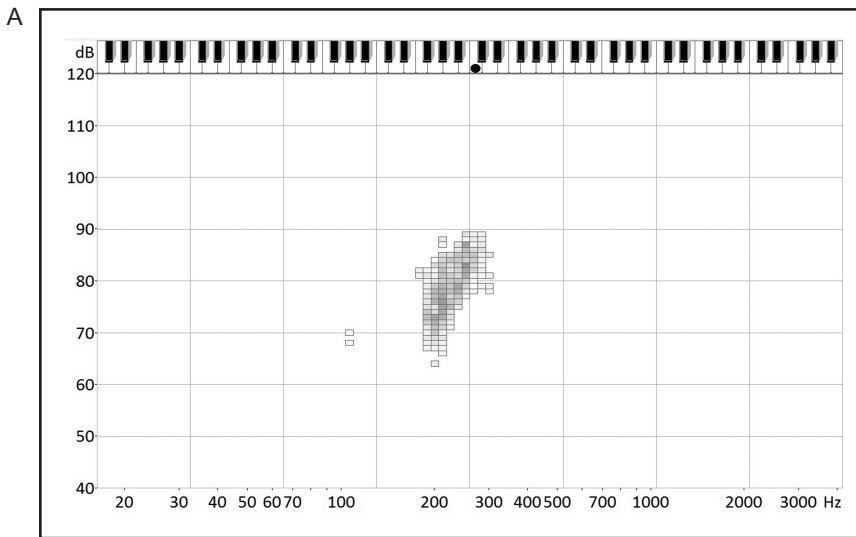


Figure 1–5. (continued)

The criteria for considering pitch-raising surgery are: (a) inability or great difficulties for the patient to modify pitch; (b) difficulties transferring a female pitch to everyday situations; (c) involuntary pitch drops when coughing and sneezing; and (d) severe vocal fatigue or strain when using a female voice. The decision is usually made during a joint meeting with the patient, the SLP, and the ENT-surgeon present. Audio record-

ings, data from acoustic analyses, patient's self-evaluations, and vocal fold status from videolaryngostroboscopy are available before and after voice and communication therapy, and form the basis for the discussion and decision.

Two surgical techniques have been used at Karolinska University Hospital over the years: cricothyroid approximation (CTA) and glottoplasty (GP), that is, an anterior web

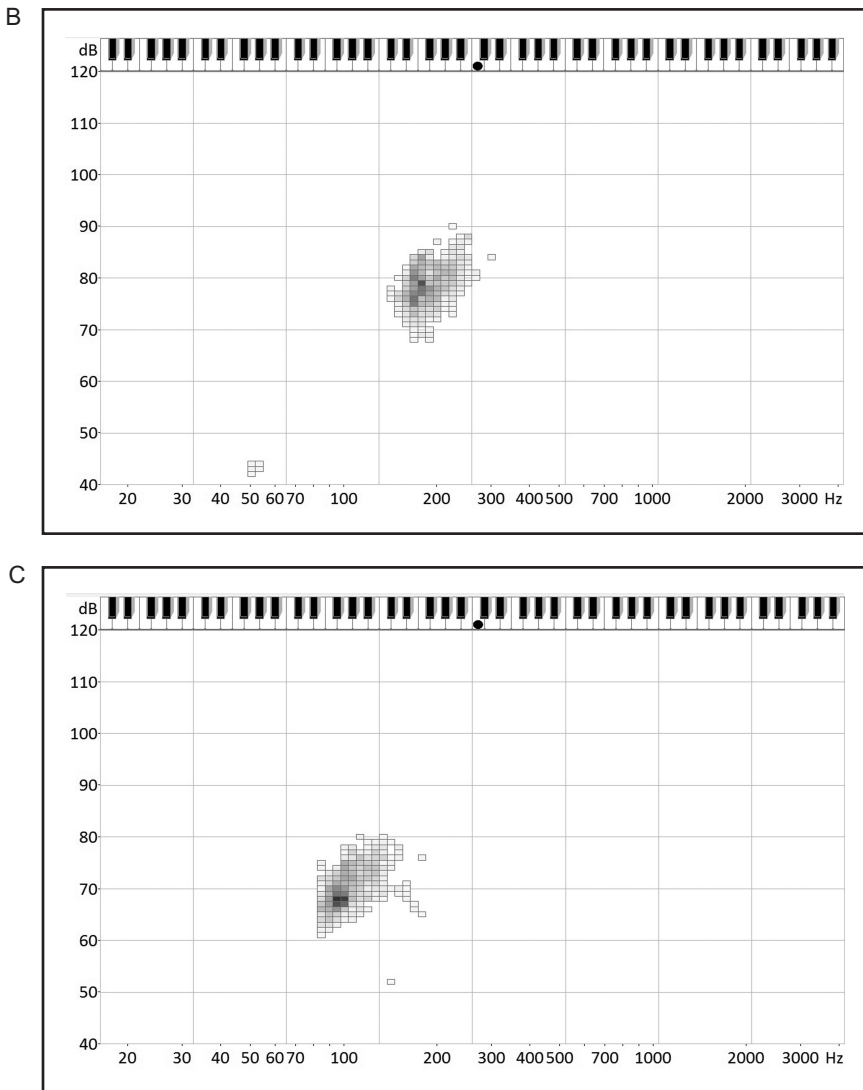


Figures 1–6. Speech Range Profiles (**A**, **B**, and **C**) and Voice Range Profiles (**D**, **E**, and **F**) for one transgender man before (**A** and **D**) testosterone treatment, after 3 months (**B** and **E**), and after 12 months (**C** and **F**). The x-axis shows fundamental frequency (in Hz), and the y-axis sound pressure level (in dB). The average f_0 decreased from a female pitch of 221 Hz (**A**) before treatment to 185 Hz (**B**) after 3 months, and to a male pitch of 103 Hz (**C**) after one year of testosterone treatment. In the Voice Range Profiles the min f_0 is indicated with a decrease from 175 Hz (**D**) before to 104 Hz (**E**) after three months, and to 73 Hz (**F**) after one year. Note that the L_{eq} data for figure (**C**) could be recalculated to 78 dB at 15 cm distance for comparison (+ 6 dB).

formation. Postoperative voice therapy is given at our hospital, since it is common that the voice becomes weaker and dysphonic and experiences a limited pitch range after surgery (e.g., Song & Jiang 2017). The postoperative voice therapy focuses mainly on vocal hygiene education and voice ergonomics, relaxed phonation, improving the voice quality if dysphonia occurs, and varying pitch to prevent a limited voice range.

In a systematic review by Van Damme, Cosyns, Deman, Van den Eede, and Van Borsel (2017), 20 studies were selected for analyses. CTA had been used in 8, anterior web formation in 6, and other techniques or combinations in 6. Among the results, a substantial rise in speaking f_0 after surgery was found for all techniques, and a majority of the patients were satisfied. An even more recent systematic review and meta-analysis

of 13 studies confirmed some of the findings by Van Damme et al. (2017), but also that the vocal fold shortening techniques appeared to result in a larger increase of speaking f_0 and less dysphonia (Song & Jiang, 2017). In a retrospective study, we recently analyzed data from 24 patients and compared long-term voice outcomes between CTA and GP, based on data from SRPs and VRPs and patients' subjective ratings (Kelly, Hertegård, Eriksson, Nygren, & Södersten, 2018). Both surgery techniques showed an increase of average f_0 after voice therapy and after surgery, and were stable after that, in agreement with results from other studies (Song & Jiang, 2017; Van Damme et al., 2017). There were statistically significant differences regarding VRP and self-rated data in favor of GP. Since a limited pitch range and hoarseness are common af-



Figures 1–6. (continued)

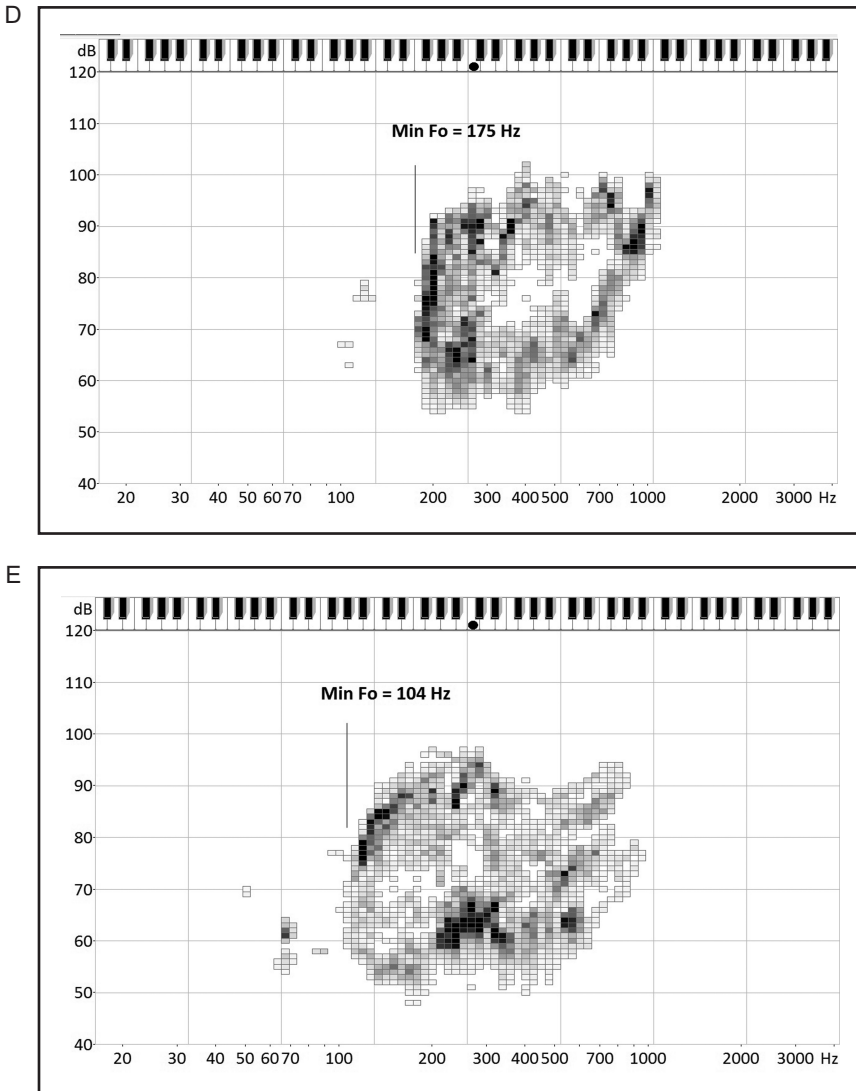
ter pitch-raising surgery (Kelly et al., in press; Kim, 2017; Song & Jiang, 2017; Van Damme et al., 2017), postoperative voice therapy is strongly recommended.

Some transgender women need to reduce the prominent notch of their thyroid cartilage (Matai, Cheesman, & Clarke, 2003). The patients who ask for surgery are usually allowed it if the diagnosis of Gender Dysphoria has been given. Exclusion criteria are age <18 years (because the larynx

may still grow), local infection, other local anatomical deviations, and special psychiatric conditions, such as dysmorphophobia.

Voice Therapy for Transgender Men

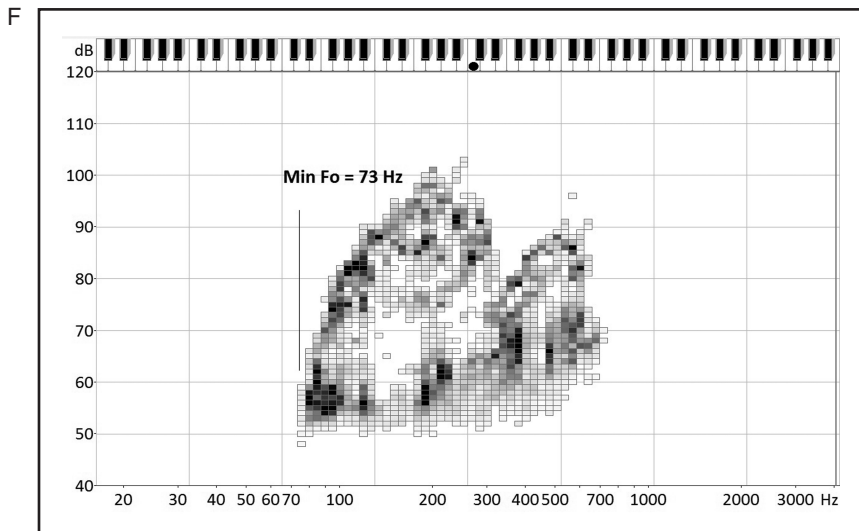
Performing voice recordings before the start of testosterone treatment and during treatment gives a great opportunity for the



Figures 1–6. (continued)

patient and the SLP to follow the voice masculinization process. Testosterone treatment causes a masculinization of the voice, which is true for a majority of transgender men. Usually satisfaction with the voice gradually increases during the testosterone treatment (Deuster et al., 2016; Nygren et al., 2016). However, recent studies have shown that the number of individuals who experience vocal fatigue, vocal instability, difficulties projecting the voice or increased

loudness, and dissatisfaction with voice pitch or voice quality is not negligible (Azul, 2015; Azul et al., 2017). In one study, approximately 24% of transgender men engaged in a period of voice therapy according to results from a retrospective longitudinal study of 50 individuals (Nygren et al., 2016). This finding is in accordance with results from other studies that also emphasize that the need for voice therapy for transgender men should not be underesti-



Figures 1–6. (continued)

mated (Cosyns et al., 2014; Nygren, 2014; Scheidt, Kob, Willmes, & Neuschaefer-Rube, 2004; Söderpalm et al., 2004; Van Borsel, De Cuyper, Rubens, & Destaerke, 2000).

Voice therapy for transgender men mainly includes exercises to reduce vocal fatigue and vocal instability, as well as exercises to lower the voice pitch, increase voice sound pressure level, project the voice, and improve voice quality (Nygren, 2014; Söderpalm et al., 2004). Patients' self-ratings of the voice, e.g., "satisfaction with the voice" related to their gender identity, are especially important when decisions about voice therapy are made, due to the heterogeneity of the transmasculine population (Azul, 2015; Papp, 2011). See Chapter 9 for further information about transmasculine clients' voices.

Educational Activities and Quality Enhancement of Care

To work with transgender individuals requires training to achieve the special competence needed, as stated in WPATH's SOC

7 (Coleman et al., 2012). The rapid development of the transgender field also requires *continuous* education and updates for colleagues within all professions who work with transgender women, transgender men, and non-binary individuals. Many initiatives for continuing education are taking place around the world, for example, papers written for ASHA's Special Interest Group in Higher Education (SIG 10).

The European Professional Association for Transgender Health (EPATH) was officially launched during the WPATH conference in Bangkok in February 2014. In March 2015, the first conference arranged by EPATH was held in Ghent in Belgium, and in April 2017 the second was arranged in Belgrade, Serbia. The goal of EPATH is to promote mental, physical, and social health and increase the quality of life among transgender people in Europe, and to ensure transgender people's rights for healthy development and well-being. The conferences arranged by EPATH and WPATH give very good updates on current research within the field of transgender health.