



Literature Review

Re: Medical necessity of facial gender reassignment surgery for transgender women

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Table of Contents

I. Facial gender reassignment surgery is provided for the treatment, cure or relief of gender dysphoria.....	2
A. Gender dysphoria is an “illness or disease” under the plan.....	2
B. Changing sex characteristics is the standard and appropriate treatment for gender dysphoria.	4
II. Facial gender reassignment surgery is necessary for and appropriate to the treatment of gender dysphoria.....	6
A. Facial reassignment surgery is performed to change the sex of a face.	6
B. Peer-reviewed literature demonstrates that facial reassignment successfully alleviates gender dysphoria and improves social functioning.	19
III. Facial reassignment surgery is provided in accordance with generally accepted standards of medical care in the community.....	25
A. Medical opinions of professional societies and standards of care hold facial gender reassignment surgery in transgender women to be appropriate medical treatment.	25
B. Other insurers and external reviewers find this care to be medically necessary.	26
C. Sufficient data exists to cover this treatment.....	27
IV. A cosmetic exclusion is inapplicable because facial reassignment is not designed to improve appearance, but rather to change the sex of the face.	29
A. Medical authorities agree facial reassignment is not cosmetic. ..	30
B. Legal authorities conclude that facial reassignment is medically necessary, not cosmetic.	32
V. Conclusion	33

I. Facial gender reassignment surgery is provided for the treatment, cure or relief of gender dysphoria.

Facial gender reassignment surgery is a treatment that changes male secondary sex characteristics into female ones for the purpose of treating gender dysphoria.¹ The “procedures focus on the areas of the face that exhibit the greatest sexual dimorphism—forehead, orbits, nose, jaw, chin, and thyroid cartilage.”² Gender reassignment of the face has been shown to be highly effective in treating gender dysphoria.

A. Gender dysphoria is an “illness or disease” under the plan.

Gender dysphoria is “[o]ften experienced as depression, anxiety, irritation, and/or agitation, [it] describes the sense that something is very wrong”³ Before treatment, individuals with gender dysphoria “live in a dissociated state of mind and body.”⁴ Gender dysphoria is a disease in which there is “incongruence between the individual’s own perception of his/her sex and their biological phenotype.”⁵ Affected individuals

¹ These procedures include hairline lowering surgery, forehead reduction and contouring, brow lift (browplasty), nasal bone surgery (rhinoplasty), cheek alterations (augmentation and reduction), lip lift and lip filling, chin contouring (genioplasty), jaw contouring, and Adam’s apple reduction (chondrolaryngoplasty). Jenna L. Schall et al., *Breaking the Binary: The Identification of Trans-Women in Forensic Anthropology* 309:110220 *FORENSIC SCI. INT’L*, Feb. 28, 2020, doi:10.1016/j.forsciint.2020.110220.

² Fisher et al., *Facial Feminization Surgery Changes Perception of Patient Gender*, 40 *AESTHETIC SURGERY J.* 703, 703-704 (2019).

³ Randi Kaufman, *Introduction to Transgender Identity and Health*, in *THE FENWAY GUIDE TO LESBIAN, GAY, BISEXUAL, AND TRANSGENDER HEALTH* 331, 337 (Harvey Makadon et al. eds., 2008).

⁴ David Seil, *The Diagnosis and Treatment of Transgendered Patients* in *TRANSGENDER SUBJECTIVES: A CLINICIAN’S GUIDE* 115 (eds. Ubaldo Leli & Jack Drescher) (2004) (describing the diagnosis and treatment of 271 transgender patients between 1979 and 2001).

⁵ Ebba K. Lundqvist et al., *Quality of life improves early after gender reassignment surgery in transgender women*, 40 *EUR. J. OF PLASTIC SURGERY* 223 (2017).

have “a strong desire to undergo medical and surgical treatment ... in order to alleviate physical incongruence and gender dysphoria.”⁶ The condition is recognized under the World Health Organization’s International Classification of Diseases, Tenth Revision (ICD-10) as medical condition F64.0.⁷ It is defined as a “desire to live and be accepted as a member of the opposite sex, usually accompanied by a sense of discomfort with, or inappropriateness of, one’s anatomic sex, and a wish to have surgery and hormonal treatment to make one’s body as congruent as possible with one’s preferred sex.”⁸ Family and twin studies indicate a strong genetic component to gender dysphoria.⁹ The biological origin of this condition is reflected in the forthcoming ICD-11, in which re-names the condition “gender incongruence” and moves it from a mental health diagnosis to a physical one.¹⁰

While the exact biological correlates of gender identity have not been identified, magnetic resonance imaging studies have shown that the

⁶ *Id.*

⁷ World Health Organization, International Statistical Classification of Diseases and Related Health Problems, 10th Revision (2016), <http://apps.who.int/classifications/icd10/browse/2016/en#/F60-F69> (“A desire to live and be accepted as a member of the opposite sex, usually accompanied by a sense of discomfort with, or inappropriateness of, one’s anatomic sex, and a wish to have surgery and hormonal treatment to make one’s body as congruent as possible with one’s preferred sex.”).

⁸ World Health Organization, International Statistical Classification of Diseases and Related Health Problems, 10th Revision (2007), *available at* <http://apps.who.int/classifications/icd10/browse/2010/en#/F60-F69>.

⁹ *Id.*; Tinca J. C. Polderman et al., *The Biological Contributions to Gender Identity and Gender Diversity: Bringing Data to the Table*, 48 *BEHAVIOR GENETICS* 95-108 (2018).

¹⁰ World Health Organization, *ICD-11: Classifying disease to map the way we live and die* (2018), <http://www.who.int/health-topics/international-classification-of-diseases> (“Gender incongruence, meanwhile, has also been moved out of mental disorders in the ICD, into sexual health conditions. The rationale being that while evidence is now clear that it is not a mental disorder, and indeed classifying it in this can cause enormous stigma for people who are transgender, there remain significant health care needs that can best be met if the condition is coded under the ICD.”).

brains of transgender children, adolescents, and adults match the patterns associated with their affirmed sex rather than sex assigned at birth, even before any hormonal treatment.¹¹ The regions affected play a role in body perception and self-awareness.¹² The brain contains a detailed map of the body.¹³ Neurological problems such as phantom limbs and some symptoms experienced by stroke survivors are known to result from a disconnect between the body and brain's map of the body. Researchers believe that gender dysphoria is similarly caused by an incongruity between the physical body and the brain's internal map of the body, which includes sex-specific anatomy.¹⁴

B. Changing sex characteristics is the standard and appropriate treatment for gender dysphoria.

Males and females are sexually dimorphic, that is, they have distinct, sex-linked physical characteristics. Not only do males and females have readily apparent sex differences in genitals, reproductive organs and hormone levels, but males and females also have prominent differences in secondary sex characteristics. These differences can be seen in breasts, facial hair, fat distribution, muscle mass, height, body odor, skin texture, body hair, baldness, voice, Adam's apple, and facial features.

¹¹ Elyse Pine-Twaddle, *Medical Management Updates for Gender Minority Youth and Difficult Cases*, 29 *ADOLESCENT MEDICINE: STATE OF THE ART REVIEWS* 97, 98 (2018) (compiling the literature).

¹² *Id.*

¹³ V.S. Ramachandran and David Brang, *Phantom touch*, 4 *SCHOLARPEDIA* 8244 (2009), http://www.scholarpedia.org/article/Phantom_touch.

¹⁴ See e.g., Laura K. Case et al., *Altered White Matter and Sensory Response to Bodily Sensation in Female-to-Male Transgender Individuals*, 46 *ARCHIVES OF SEXUAL BEHAVIOR* 1223 (2017) (“[O]ur results suggest that aversion to gender-incongruous body parts is rapid and automatic at the sensory level.”); V.S. Ramachandran & Paul McGeoch, *Phantom Penises in Transsexuals: Evidence of an Innate Gender-Specific Body Image in the Brain*, 15 *J. OF CONSCIOUSNESS STUDIES* 8 (2008); V.S. Ramachandran, *THE TELL-TALE BRAIN: A NEUROSCIENTIST'S QUEST FOR WHAT MAKES US HUMAN* 259 (2010); V.S. Ramachandran and William Hirstein, *The Perception of Phantom Limbs. The D. O. Hebb lecture*, 121 *BRAIN* 1603 (1998).

Altering physical sex characteristics to match the brain is the standard treatment for gender dysphoria. According to the World Professional Association for Transgender Health (WPATH), the recognized effective treatment of gender dysphoria is a triadic approach of providing mental health treatment, hormone therapy, and surgeries.¹⁵ The WPATH *Standards of Care* recognize that for those who do not experience relief due to other measures, “surgery is essential and medically necessary to alleviate their gender dysphoria . . . relief from gender dysphoria cannot be achieved without modification of their primary and/or secondary sex characteristics to establish greater congruence.”¹⁶

The purpose of changing sex characteristics (or preventing their change during puberty) is to treat gender dysphoria. This purpose underscores the medical necessity of these treatments as opposed to being “cosmetic.” For example, genital reassignment surgery is not a cosmetic surgery performed to “improve the appearance” of a person’s genitals, but rather to change a penis into a vagina or vice versa. That is, it changes the sex of a person’s genitals, making the primary purpose of the surgery functional, not cosmetic. Likewise, facial reassignment surgery is not designed to “improve the appearance” of a person’s face, but rather to change a male face into a female one for the purpose of treating gender dysphoria.¹⁷ Accordingly, facial reassignment is one of the primary forms of sex reassignment surgery.¹⁸

¹⁵ See American Medical Association (AMA) House of Delegates’ Resolution 122, *Removing Financial Barriers to Care for Transgender Patients* at 1, ¶¶ 24-26 (April 18, 2008) (“An established body of medical research demonstrates the effectiveness and medical necessity of mental health care, hormone therapy and sex reassignment surgery as forms of therapeutic treatment for many people diagnosed with gender dysphoria.”).

¹⁶ WPATH, *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People* (7th Ed.), at 54-55, [https://s3.amazonaws.com/amo_hub_content/Association140/files/Standards%20of%20Care%20V7%20-%202011%20WPATH%20\(2\)\(1\).pdf](https://s3.amazonaws.com/amo_hub_content/Association140/files/Standards%20of%20Care%20V7%20-%202011%20WPATH%20(2)(1).pdf).

¹⁷ See Section IV, at 27 for a fuller discussion of why the procedure is not cosmetic.

¹⁸ Stan Monstrey, Gennaro Selvaggi & Peter Ceulemans, *Surgery: Male-to-Female Patient* in *PRINCIPLES OF TRANSGENDER MEDICINE AND SURGERY* 105, 110 (Randi Ettner, et al. eds., 2007) (listing the three categories of reassignment surgeries: genital

Clinicians note that “the acquisition of adequate female secondary sexual characteristics is a key part of a successful social gender role transition, upon which depends the good psychological functioning of the majority of transwomen.”¹⁹ It is only when the external sex characteristics of the body match the brain’s sexed expectations of the body that subjective gender dysphoria and general psychopathology progressively decreases.²⁰

II. Facial gender reassignment surgery is necessary for and appropriate to the treatment of gender dysphoria.

A. Facial reassignment surgery is performed to change the sex of a face.

1. The face plays a most important role in social functioning.

As J. Joris Hage, MD, notes:

In most human relationships, the face represents the most important expression between people. It reflects our personality and emotions and is intimately connected with both verbal and nonverbal communication. The head and face are commonly considered to be the location of the “self.” Because of this psychological and social significance, anything that appears abnormal in the face has a direct influence on one’s self-confidence. An individual with a noticeable deformity or incongruity of the face may be the object of visual and verbal aggression, leading to

surgery, breast surgery, and non-genital, non-breast surgeries including facial reassignment surgery).

¹⁹ Leighton John Seal et al., *Predictive Markers for Mammoplasty and a Comparison of Side Effect Profiles in Trans Women Taking Various Hormonal Regimens*, 97 J. CLIN. ENDOCRINOL METABOLISM 4422, 4423 (2012).

²⁰ Alessandra D. Fisher, *Cross-Sex Hormone Treatment and Psychobiological Changes in Transsexual Persons: Two-Year Follow-Up Data*, 101 J. OF CLINICAL ENDOCRINOLOGY AND METABOLISM 4260, 4268 (2016).

feelings of shame, impotence, anger, and even humiliation. An example of such an incongruity may be masculine features found in a female face....²¹

Faces are so important as a social tool that the brain has an area “exclusively dedicated to the identification of gender, identity, age, and race at a single glance.”²² Classifying faces as male or female is regarded as “one

²¹ J. Joris Hage et al., *Gender-Confirming Facial Surgery: Considerations on the Masculinity and Femininity of Faces*, 99 *PLASTIC AND RECONSTRUCTIVE SURGERY* 1799, 1799 (1997); Nick Esmonde et al., *The Role of Facial Gender Confirmation Surgery in Treatment of Gender Dysphoria*, 30 *J. CRANIOFACIAL SURGERY* 1387, 1387 (2019) (“[E]ven when dysphoria is less pronounced insofar as one’s view of self, facial appearance—as it related to ‘not passing’ and thus becoming a target for violence or aggression—may be distressing and can lead to the desire for facial gender confirmation surgery (FGCS) in order to feel less vulnerable.”); Sarah E. Hammond et al., *Feminization of Transgender Women with Thyroid Chondroplasty and Laryngoplasty*, 30 *J. CRANIOFACIAL SURGERY* 1409, 1410 (2019) (“Humans both perceive others and present themselves through largely visual and tactile communication.”); Masami K. Yamaguchi et al., *Judgment of Gender Through Facial Parts*, 24 *PERCEPTION* 563, 563 (1994) (“In social settings, the “face plays the most important role in transmitting visual information from one person to another.”).

²² Hailey M. Juszczak et al., *An Update in Facial Gender Confirming Surgery*, 27 *CURRENT OPINION IN OTOLARYNGOLOGY & HEAD AND NECK SURGERY* 243, 243 (2019), doi:10.1097/MOO.0000000000000549

of the most biologically important tasks of facial categorization.”²³ People can readily determine someone’s sex from their face alone,²⁴ even as infants.²⁵

While these classifications are highly accurate, most errors are made in the direction of judging female faces as male.”²⁶ That is, transgender women who have ambiguous faces or some male facial qualities are likely to be perceived by others as male. Moreover, the top part of the face is categorized first, so if there is a prominent brow ridge, for example, that will override the rest of the face, and the person will be classified as male.²⁷ Furthermore, other prominently masculine facial features “can

²³ Heather A. Wild et al., *Recognition and Sex Categorization of Adults’ and Children’s Faces: Examining Performance in the Absence of Sex-Stereotyped Cues*, 77 J. OF EXPERIMENTAL CHILD PSYCHOLOGY 269, 270 (2000).

²⁴ *Id.*; Marcelo Ruben Di Maggio et al., *Surgical Management of the Nose in Relation With the Fronto-Orbital Area to Change and Feminize the Eyes’ Expression*, 30 J. CRANIOFACIAL SURGERY 1376, 1376 (2019) (“Facial features serve an integral role in identifying an individual’s gender, with certain characteristics perceived as feminine or masculine.”); Heather A. Wild et al., *Recognition and Sex Categorization of Adults’ and Children’s Faces*, 77 J. EXPERIMENTAL CHILD PSYCH. 269, 271 (2000) (Morphing many faces together “clearly show[s] global structural differences between the male and female faces. These global differences consist of large-scale shape differences that are difficult to describe concisely using verbal labels, but which are easily associated with male versus female faces.”).

²⁵ Tamsin K. Saxton et al., *A Longitudinal Study of Adolescents’ Judgments of the Attractiveness of Facial Symmetry, Averageness and Sexual Dimorphism*, 9 J. OF EVOLUTIONARY PSYCHOLOGY, 1, 2 (2011).

²⁶ Vicki Bruce et al., *Sex Discrimination: How Do We Tell the Difference Between Male and Female Faces?*, 22 PERCEPTION 131, 132 (1993) (3/4 of the errors were misjudging female faces. “Overall accuracy for female faces was 93.8% compared with 98.2% with the male.”).

²⁷ Jean-Yves Baudouin & Glyn W. Humphreys, *Configural Information in Gender Categorisation*, 35 PERCEPTION 531, 539 (2006) (studying categorization by “aligning the top half of one face with the bottom half of another. The two faces had the same or different genders.”).

impede a successful social acceptance” as a woman, and there is little way to hide the whole face in social interactions.²⁸

The “gendering” of other people has important social functions, not just in reproduction, but in social interactions in general.²⁹ In fact, “[m]any individuals in the transgender community place just as much if not more importance on their transformation as effected by secondary sex characteristics, and rightly so” —something that is being reflected in clinical practice as well.³⁰ As one surgeon notes, “it is greatly distressing to be identified by others as a member of the opposite sex” in conflict to your own deeply held sense of self.³¹ Outside of being misgendered, there is also internal distress associated with experiencing one’s own body as being drastically incongruent.

²⁸ Hamidreza Natghian et al., *Management of the Midface in the Transgender Patient*, 30 J. CRANIOFACIAL SURGERY 1383, 1383 (2019) (“The face, and in particular the midface, is highly exposed and can hardly be covered by clothing or by a wig as can be done with the upper part of the skull or a scarf to cover the neck and the lower face.”).

²⁹ Yamaguchi, *supra* note 21, at 563.

³⁰ Hammond et al., *supra* note 21; Chrisovalantis Lakhiani & Michael T. Somenek, *Gender-related Facial Analysis*, 27 FACIAL PLASTIC SURGERY CLINICS OF N. AM. 171, 171 (2019) (“The increasing prevalence of gender affirmation surgery reveals a shift in therapeutic treatments for gender dysphoria from being focused on the genitalia as the location of bodily sex toward an understanding of sex as a product of social recognition.”).

³¹ Jeffrey H. Spiegel, *Facial Determinants of Female Gender and Feminizing Forehead Cranioplasty*, 121 LARYNGOSCOPE 250, 260 (2011); Alexander R. Facque et al., *Anatomical Basis and Surgical Techniques Employed in Facial Feminization and Masculinization*, 30 J. CRANIOFACIAL SURGERY 1406, 1406 (2019) (“In aligning one’s body with their identity, the influence of social recognition and acceptance should not be underestimated. As such; facial gender confirmation surgery has the potential for relieving gender dysphoria and facilitating social transition and recognition.”).

2. Male and female faces differ in specific, known, and measurable ways.

The sex of faces can be readily recognized because human faces are sexually dimorphic, that is, faces contain significant distinguishing sex characteristics that make male and female faces readily distinguishable.³² And “it is the skull itself that provides the architecture of facial sex difference.”³³ For example, the chin, nose and forehead are the primary characteristics physical anthropologists and forensic pathologists can use to determine the sex of a skull.³⁴ Males have broader and longer chins, deeper and narrower eyes due to brow ridge development.³⁵ The average

³² Jean Yves Baudouin & Mathieu Gallay, *Is Face Distinctiveness Gender-Based?*, 32 (No. 4) J. EXPERIMENTAL PSYCHOL. 789, 790 (2006) (“[T]he face population is not normally distributed around a central tendency but quite bimodal with two “central” tendencies, one for each gender.”); Rupert Dempf & Alexander W. Eckert, *Contouring the Forehead and Rhinoplasty in the Feminization of the Face in Male-to-Female Transsexuals*, 38 J. OF CRANIOMAXILLOFACIAL SURGERY 416, 417 (2010) (citations omitted); Hage et al., *Gender-confirming facial surgery*, *supra* note 21, at 1799; Andrew J.O. Whitehouse et al. *Prenatal Testosterone Exposure is Related to Sexually Dimorphic Facial Morphology in Adulthood*. 282:20151351 PROC. ROYAL SOC. B. (2015), doi.org/10.1098/rspb.2015.1351. *See also* Hervé Abdi et al., *More About the Difference Between Men and Women*, 24 PERCEPTION 539 (1995) (supposing that there are objectively quantifiable differences between faces of different sexes, such that a computer can recognize them).

³³ Mirco Raffaini et al., *Evolution of Full Facial Feminization Surgery: Creating the Gendered Face with an All-in-one Procedure*, 30 J. CRANIOFACIAL SURGERY 1419, 1419 (2019) (“Surgical discourse makes it clear that skulls are not neutral structures upon which sexually differentiated soft tissues are draped.”); Rachel Gray et al., *Osseous Transformation with Facial Feminization Surgery: Improved Anatomical Accuracy with Virtual Planning* 144 PLASTIC & RECONST. SURGERY 1159-1168, 1160 (2019) (“Osseous differences between the male and female face almost universally include the forehead, lateral supraorbital region, lateral jawline, and chin.”); Marcelo Di Maggio, *Forehead and Orbital Rim Remodeling*, 27 FACIAL PLASTIC SURGERY CLINICS OF N. AM. 207-220 (2019).

³⁴ Dempf & Eckert, *supra* note 32, at 417.

³⁵ Randy Thornhill et al., *Facial Sexual Dimorphism, Developmental Stability, and Susceptibility to Disease in Men and Women*, 27 EVOLUTION AND HUM. BEHAV. 131, 132 (2006).

male head has a more prominent nose, brow, chin, jaw and upper neck, and average females have somewhat more protrusive cheeks.³⁶

Due to testosterone, male and female faces sharply diverge at puberty when “boys’ cranial bones grow, producing heavier brow-ridges, and larger jaws, while girls’ faces grow less and retain small brows (leading to a perception of larger eyes), jaws, and noses.”³⁷ These male-typical facial changes correlate to the concentration of testosterone in the body.³⁸ But even before puberty, sex differences are evident in six-month-old infants as a result of prenatal testosterone exposure, and the differences increase during childhood.³⁹ “[A]dult facial masculinity may also be predicted well from face shape at ages 6-7.”⁴⁰

Differences between female and male faces are summarized as follows:⁴¹

Female face

Male face

³⁶ Vicki Bruce et al., *Sex Discrimination: How Do We Tell the Difference Between Male and Female Faces?*, 22 PERCEPTION 131, 145 (1993) (3/4 of the errors were misjudging female faces. “Overall accuracy for female faces was 93.8% compared with 98.2% with the male.”); Juszczak et al., *supra* note 22 at 244; Lakhiani & Somenek, *supra* note 30, at 172-75; David M. Whitehead & Loren S. Schechter, *Cheek Augmentation Techniques*, 27 FACIAL PLASTIC SURGERY CLINICS OF N. AM. 199-206 (2019).

³⁷ Lynda Boothroyd et al., *Facial Masculinity is Related to Perceived Age but not Perceived Health*, 26 EVOLUTION AND HUM. BEHAV. 417, 418 (2005) (citations omitted); Katrin Schaefer et al., *Visualizing Facial Shape Regression upon 2nd to 4th Digit Ratio and Testosterone*, 29 COLLEGIUM ANTHROPOLOGICUM 415, 415 (2005) (“Typical male traits develop under the influence of testosterone whereas female traits are formed under the absence of high testosterone.”).

³⁸ Whitehouse et al. *supra*, note 32.

³⁹ *Id.*

⁴⁰ Robert P. Burriss et al., *2D:4D and Sexually Dimorphic Facial Characteristics*, 36 ARCHIVES OF SEXUAL BEHAV. 377, 378 (2007) (“Some of these differences are apparent from an early age. Male nose width, for example, is significantly greater from about age eight. Growth spurts at puberty further increase sex differences, particularly at the mandible.”).

⁴¹ Table from Schall et al., *supra* note 1.

Heart-shaped or triangular; softer, rounded, oval with curving forms	Square and angulated with strong jaw and chin
Angle between forehead and nose is obtuse	Frontal bossing due to large frontal sinus and thick supra-orbital ridges; angle is acute
Eyebrows are arched with sit well above superior orbital rim	Eyebrows straighter and at level of the superior orbital rim
Noses are smaller and shorter with narrow bridges and narrow ala bases; upturning of tip for obtuse naso-labial angle	Noses opposite of female
Cheeks are prominent- further anterior and higher with some cheek hollowing underneath for accentuation	Cheeks are flat
Upper lips are fuller and shorter with good show of vermilion and Cupid's bow- allows more maxillary tooth show	Lips are thinner and longer
Chins are shorter, narrower, and more pointed	Chins are often long, square, and angulated
Mandible- obtuse gonial angle	Mandible has prominent angle with lipping of the bone due to masseter muscle attachments and is wider
Thyroid cartilage is less prominent; forms 120-degree angle at the notch	Thyroid cartilage very prominent with angle of 90 degrees at the notch

3. Surgery can successfully change the sex of facial features that hormones cannot.

Hormone therapy generally cannot sufficiently alter the face to alleviate the gender dysphoria caused by having male-typical facial traits. The physical changes from hormone therapy “are limited by the irreversible

in utero and pubertal development induced by testosterone, specifically ... bone and cartilage growth including a supraorbital ridge and prominent nasal and thyroid cartilage enlargement.”⁴² Hormone therapy improves skin quality and redistributes facial fat, but has no effect on the shape of the nasal bone and cartilage.⁴³ Thus, surgery is required.⁴⁴

Studies have strongly supported the significance of forehead modification in transgender patients.⁴⁵ The forehead is easily distinguishable between males and females, and “[m]any of the most prominent gender differ-

⁴² John Randolph, *Gender Affirming Hormone Therapy for Transgender Females*, 61 CLINICAL OBSTETRICS AND GYNECOLOGY 705, 713 (2018); Facque et al., *supra* note 31 (“Under the effects of masculinizing pubertal hormones, the supraorbital ridges become prominent, and the jaw widens.”); Natghian et al., *supra* note 28 (“The start of hormonal therapy after puberty does consequently not prevent the development of the masculine facial structures.”); Luis Capitán et al., *Facial Gender Confirmation Surgery: A Protocol for Diagnosis, Surgical Planning, and Postoperative Management*, 145 PLASTIC & RECONST. SURGERY 818e-828e, 820e (2020) (the growth of “the frontonasal-orbital complex, the nose, the malar region, the lower jaw, and the thyroid cartilage . . . under hormonal influence is not medically reversible, and thus these features are generally approached and modified using surgery.”); Kalle Conneryd Lundgren & Maarten J. Koudstaal, *Midfacial Bony Remodeling*, 27 FACIAL PLASTIC SURGERY CLINICS OF N. AM. 221-226, 221 (2019) (“Consequently, the start of hormonal treatment after the onset of puberty will not prevent the development of facial bony structures with a typical masculine appearance.”).

⁴³ Raúl J. Bellinga et al., *Technical and Clinical Considerations for Facial Feminization Surgery with Rhinoplasty and Related Procedures*, 19 JAMA FACIAL PLASTIC SURGERY 175-181 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5815130>.

⁴⁴ See, e.g., Angela Sturm & Scott R. Chaiet, *Chondrolaryngoplasty—Thyroid Cartilage Reduction*, 27 FACIAL PLASTIC SURGERY CLINICS N. AM. 267, 267 (2019) (“Chondrolaryngoplasty, or reduction in the thyroid cartilage, is the only treatment for those with gender dysphoria due to prominent Adam’s apple because the thyroid cartilage does not respond to gender-affirming hormone therapy such as soft tissue of the face.”).

⁴⁵ Jordan C. Deschamps-Braly, *Approach to Feminization Surgery and Facial Masculinization Surgery: Aesthetic Goals and Principles of Management*, 30 J. CRANIOFACIAL SURGERY 1352, 1354 (2019); Johannes Franz Hoenig, *Frontal Bone Remodeling for Gender Reassignment of the Male Forehead: A Gender-Reassignment Surgery*, 35 AESTHETIC PLASTIC SURGERY 1043, 1046 (2011) (citations omitted).

ences have been found to exist in the supraorbital and frontal cranial region of the facial skeleton.”⁴⁶ The forehead plays a significant role in whether a person is recognized as male or female.⁴⁷ Female foreheads generally have “less flatness, and more of a continuous mild curvature.”⁴⁸ Female foreheads are more vertical than male foreheads, which also have a more acute nasofrontal angle.⁴⁹ Surgery can reduce the protrusion of the male brow ridge above the eyes, correcting the concavity of the forehead, which “eliminates the masculine characteristic and gives a continuous female curvature of the forehead.”⁵⁰ Virtually all facial gender reassignment surgery patients require forehead contouring; forehead

⁴⁶ Matthew K. Lee et al., *CT measurement of the frontal sinus – gender differences and implications for frontal cranioplasty*, 38 J. OF CRANIO-MAXILLOFACIAL SURGERY 494, 499 (2010).

⁴⁷ Deschamps-Braly, *supra* note 45, at 1354 (“Correction of the forehead may be the most important thing one can do for a transgender patient. It is the most important gender marker in a face.”); see Spiegel, *Facial Determinants*, *supra* note 31, at 3 (“Studies documenting the differences between male and female eyes and eyebrows have shown that a man’s eyebrows are heavier, straighter, and closer to the eyes. In contrast, women’s eyebrows are more arched, rising to a peak at the lateral limbus.”); Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e.

⁴⁸ Dempf & Eckert, *supra* note 32, at 416 (“The male forehead has extensive supraorbital bossing, and above this, there is often a flat area before the convex curvature of the upper forehead begins. In the female, the degree of supraorbital bossing is considerably less, frequently non-existent, and above this, there is usually less flatness and more of a continuous mild curvature.”); Lakhiani & Somenek, *supra* note 30, at 173 (noting that a feminine forehead tends to be “less flat, with a generally continuous mild curvature that continues to the vertex”); Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18, at 111.

⁴⁹ Lee, *supra* note 46, at 499; Juszczak et al., *supra* note 22 at 245.

⁵⁰ *Id.*; Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18, at 111; Bradley S. Eisemann, et al., *Technical Pearls in Frontal and Periorbital Bone Contouring in Gender-Affirmation Surgery*, 146 PLASTIC & RECONST. SURGERY 326e, 3293 (2020) (“Changes made to the forehead and periorbital region can have dramatic effects in gender-affirmation surgery. The described technique of frontal and periorbital bone contouring allows for a safe and consistent surgical outcome in properly selected patients.”).

and orbital rim remodeling is the “foundation” of facial gender reassignment surgery.⁵¹

Eyebrows are similarly important cues in identifying gender.⁵² Measuring the gap separating the eyebrows is one of the “better discriminators of facial sex.”⁵³ In contrast with male faces, females tend to have thinner eyebrows that are higher above the eyes.⁵⁴ Additionally, the vertical distances between the eyelids and the eyebrows⁵⁵ and between the lid and upper eyelid crease⁵⁶ are greater in females than in males. A browlift is a common way to raise the eyebrows and the hairline—females also have higher hairlines—and “significantly feminizes this area.”⁵⁷ Forehead reconstruction and simultaneous hair transplant can feminize the hairline

⁵¹ Bauback Safa et al., *Current Concepts in Feminizing Gender Surgery* 143 PLASTIC & RECONSTRUCT. SURGERY 1081e, 1083e (2019) (“The forehead contour differs greatly between women and men and is treated in 95 percent of patients.”); Di Maggio, *supra* note 33 (“Without a doubt, the foundation of the feminization and the facial features remodeling is the forehead and orbital rim remodeling together with the remodeling of the frontonasal angle that gives continuity to the rhinoplasty. The orbital rim remodeling surgery to change the expression of the eyes is key to obtain the best result possible.”).

⁵² Di Maggio et al., *supra* note 24 at 1378 (“The male eyebrows are heavier, straighter, and closer to the eyes. In contrast, a woman’s eyebrows are more arched.”); Yamaguchi, *supra* note 21, at 574.

⁵³ Bruce et al., *supra* note 36, at 141-142.

⁵⁴ Baudouin & Gallay, *Is Face Distinctiveness Gender-Based?*, *supra* note 32, at 790.

⁵⁵ Jean Yves Baudouin & Guy Tiberghien, *Gender is a Dimension of Face Recognition*, 28 J. EXPERIMENTAL PSYCHOL. 362, 363 (2002).

⁵⁶ Lakhiani & Somenek, *supra* note 30, at 173 (“The male upper eyelid crease is generally positioned lower, with a minimum of 8 mm above the lid margin, compared with a maximum of 12 mm for women.”).

⁵⁷ Douglas Ousterhout, FACIAL FEMINIZATION SURGERY: A GUIDE FOR THE TRANSGENDERED WOMAN at 11, 15 & 22 (2009); Deschamps-Braly, *supra* note 45, 1353 (“Altering the hairline is of significant importance in feminizing the face. Female hairlines fall between 5.5 and 5.8 cm above the brows in females and significantly higher in males”).

pattern, an important feature of gender identification in the upper third of the face.⁵⁸

Likewise, rhinoplasty is another common feminizing procedure. Female noses are smaller and have a less angular nasal tip than male noses.⁵⁹ Male noses “appear more deeply set and the cheek bones less prominent.”⁶⁰ A smaller and lower nose with a greater nasal tip projection can help create a female countenance in transgender women.⁶¹ And changing the shape of the nose “can have significant effects on the apparent masculinity of the face.”⁶² “The nose is a prominent feature on the face, and

⁵⁸ Luis Capitán et al., *Facial Feminization Surgery: Simultaneous Hair Transplant during Forehead Reconstruction*, 139 *PLASTIC AND RECONSTRUCTIVE SURGERY* 573-584 (2017); Luis Capitán et al., *The Upper Third in Facial Gender Confirmation Surgery: Forehead and Hairline*, 30 *J. CRANIOFACIAL SURGERY* 1393, 1394 (2019) (“In terms of gender, the male hairline tends to have an M-shaped pattern with recessions at the temples. The hairline of women usually has a rounded shape . . . and, proportionally, the hairline implantation is higher in the center than with men.”); Anthony Bared & Jeffrey S. Epstein, *Hair Transplantation Techniques for the Transgender Patient*, 27 *Facial Plastic Surgery Clinics of N. Am.* 227-232, 232 (2019) (“Hairline patterns and facial hair distribution can be gender-identifying traits. Women tend to have a lower and more rounded hairline than men as well as having more arched brows, whereas men have a prevalence of facial hair.”); David W. Chou, et al., *Initial Facial Feminization Surgery Experience in a Multicenter Integrated Health Care System*, *OTOLARYNGOLOGY-HEAD AND NECK SURGERY* 4 (2020), <https://doi.org/10.1177/0194599820924635> (reporting Kaiser Permanente patients most commonly undergo surgery to address the upper third of the face).

⁵⁹ J. Joris Hage, et al., *Rhinoplasty as Gender Confirming Surgery in Male Transsexuals: Basic Considerations and Clinical Experience*, 39 *ANN. PLAST. SURG.* 266, 266 (1997); Deschamps-Braly, *supra* note 45, at 1356 (“[T]he nose is generally larger in males than females.”); Di Maggio et al., *supra* note 24, at 1377 (“[T]he male nose is usually larger than the female nose because it has a greater component of bone and cartilage. Female noses tend to be narrower, the tip is often sharper, and the nostrils may be smaller.”); Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18, at 111; Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e; Safa et al., *supra* note 51, at 1084e.

⁶⁰ Tony Roberts & Vicki Bruce, *Feature Saliency in Judging the Sex and Familiarity of Faces*, 17 *PERCEPTION* 475, 477 (1988) (citations omitted).

⁶¹ *Id.* at 270.

⁶² Bruce et al., *Sex discrimination*, *supra* note 36, at 150.

its refinement can significantly improve gender recognition.”⁶³ The feminizing effects of rhinoplasty are often more pronounced when accompanied by other procedures such as brow ridge reduction and correcting the jaw and chin.⁶⁴

Furthermore, females tend to have heart-shaped or triangular faces.⁶⁵ Cheek implants or autologous fat grafting can help to achieve that overall female shape and are “paramount in certain cases.”⁶⁶

The size and placement of the mouth can signify gender as well. Females tend to have fuller lips and “a shorter distance between the subnasale and the vermillion border” of the upper lip.⁶⁷ And whereas females tend to show their upper teeth when their mouths are slightly open, males “have a large relative amount of lower tooth show when their mouths are slightly open.”⁶⁸

Males and females also have marked differences in the structures of the chin, which is “a significant marker of gender.”⁶⁹ Females tend to have more “pointed, narrow and vertically shorter,” chins while male chins

⁶³ Bellinga et al., *Technical and Clinical Considerations*, *supra* note 43.

⁶⁴ Hage et al., *Rhinoplasty as Gender Confirming Surgery*, *supra* note 59, at 270; see Natghian et al., *supra* note 28, at 1383 (“[T]he relations between specific parts of the patients [sic] skeletal face will determine whether the face is perceived as feminine or masculine.”).

⁶⁵ Keith Altman, *Facial Feminization Surgery: Current State of the Art*, 41 INT’L J. OF ORAL AND MAXILLOFACIAL SURGERY 885, 885 (2012).

⁶⁶ *Id.* at 890; Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e; Juszczak et al., *supra* note 22 at 247.

⁶⁷ Facque et al., *supra* note 31, at 1407.

⁶⁸ Jordan Deschamps-Braly, *Feminization of the Chin*, 27 FACIAL PLASTIC SURGERY CLINICS N. AM. 243, 249 (2019) (concluding that this can be addressed through a sliding genioplasty procedure, which reduces the height of the bone of the chin and allows for a smaller show of the lower teeth).

⁶⁹ Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18 at 113; Bruce, *Sex discrimination*, *supra* note 36, at 150; Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e; Safa et al., *supra* note 51, at 1084e.

are wider and vertically higher.⁷⁰ Males tend to have more prominent chins,⁷¹ with females having more convex chin profiles.⁷² A chin implant can feminize the face.⁷³ The aim of feminizing genioplasty is to “reduce the chin height and width by cutting the anterior portion of the mandible ... and then removing/repositioning segments in order to give the chin a shorter, rounder appearance.”⁷⁴

In addition, the angle of a jaw is sexually dimorphic with females having a more angled jaw and males having a squared off, flat jaw.⁷⁵ Surgery to reduce this angle will make the face appear more feminine as jaw development and brow ridge development are two factors that disproportionately allow for classification of faces as male or female.⁷⁶

⁷⁰ Deschamps-Braly, *supra* note 45, at 1356 (“The male chin is more square and elongated than the female chin. The chin is approximately 20% shorter in females than in natal males.”); Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18, at 113; Rafaini et al., *supra* note 33, at 1421 (“A pointed chin is recognized as feminine, whereas a square chin is considered masculine.”).

⁷¹ Sridhar Premkumar, *TEXTBOOK OF CRANIOFACIAL GROWTH* 142 (2011).

⁷² *Id.*

⁷³ Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18, at 113.

⁷⁴ Schall et al., *supra* note 1.

⁷⁵ Burriss, *supra* note 40 at 379; Alfred G. Becking et al., *Transgender Feminization of the Facial Skeleton*, 34 *CLINICS IN PLASTIC SURGERY* 557, 559 (2007); Altman, *supra* note 65, at 891; Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e; Shane D. Morrison & Thomas Satterwhite, *Lower Jaw Recontouring in Facial Gender-Affirming Surgery*, 27 *FACIAL PLASTIC SURGERY CLINICS OF N. AM.* 233-242 (2019); Safa et al., *supra* note 51, at 1084e.

⁷⁶ Thornhill et al., *Facial sexual dimorphism*, *supra* note 35, at 135.

Finally, a prominent Adam's apple is "an extremely masculine characteristic"⁷⁷ that is "easily identified" as such.⁷⁸ Both functionally and visually, an Adam's apple is unaffected by hormone therapy.⁷⁹ A chondrolaryngoplasty (tracheal shave) is a safe and effective procedure to eliminate this sex-specific characteristic that otherwise makes transgender women appear male.⁸⁰

B. Peer-reviewed literature demonstrates that facial reassignment successfully alleviates gender dysphoria and improves social functioning.

Facial reassignment is appropriate with regard to standards of good clinical practice and generally recognized as effective by the relevant scientific community, evidence-based medicine, and professional standards of care.⁸¹ There is a significant body of research documenting the safety,⁸²

⁷⁷ Altman, *supra* note 65, at 886.

⁷⁸ Hammond et al., *supra* note 21, at 1409.; Capitán et al., *Facial Gender Confirmation Surgery*, *supra* note 42, at 820e ("The larynx structure generally has a greater volume and is larger (greater in diameter and more prominent) in men.").

⁷⁹ *Id.* at 1410 ("While androgen use can lower the voice in female-to-male transgender patients, estrogens have no significant effect on the physical properties of the vocal folds or the laryngeal framework, and thus more extensive interventions must be performed."); Sturm & Chaiet, *supra* note 44 ("Chondrolaryngoplasty, or reduction in the thyroid cartilage, is the only treatment for those with gender dysphoria due to pomus Adamus because the thyroid cartilage does not respond to gender-affirming hormone therapy such as soft tissue of the face.").

⁸⁰ Altman, *supra* note 65, at 893; Hammond et al., *supra* note 21; Jeffrey H. Spiegel & Gerardo Rodriguez, *Chondrolaryngoplasty Under General Anesthesia Using a Flexible Fiberoptic Laryngoscope and Laryngeal Mask Airway* 134 ARCHIVES OTOLARYNGOLOGY HEAD AND NECK SURGERY 704 (2008); Safa et al., *supra* note 51, at 1084e.

⁸¹ Altman, *supra* note 65, at 893; Alfred G. Becking et al., *Facial Corrections in Male to Female Transsexuals: A Preliminary Report on 16 Patients*, 54 J. OF ORAL MAXILLOFACIAL SURGERY 413-8 (1996).

⁸² Chou et al., *supra* note 58 at 4 (reporting on safety and low complication rate in Kaiser Permanente patients); Nikita Gupta, Jacqueline Wulu & Jeffrey H. Spiegel, *Safety of Combined Facial Plastic Procedures Affecting Multiple Planes in a Single Setting in Facial Feminization for Transgender Patients*, 43 AESTHETIC PLASTIC SURGERY 993 (2019)

efficacy and medical necessity of facial reassignment surgery. One study found that “facial feminization is a key element in the treatment of gender dysphoria and that it can be more important from the patient’s psychological point of view,” than genital reassignment.⁸³

In a prospective study of 66 consecutive patients, researchers concluded that the “study supports the efficacy of facial feminization surgery in improving quality of life for transgender women; enacting objective cephalometric changes; and achieving high satisfaction, feminine gender appearance, and good overall aesthetics with minimal complications.”⁸⁴

Given the critical role of faces in social functioning, there is growing recognition that facial reassignment surgery is an essential and effective treatment for gender dysphoria in transgender women. In 2019, Di Maggio et al. observed:

Genital surgery can be an important part of gender reassignment, but it is not a major factor in a transgender person having difficulty obtaining social acceptance as a member of the opposite sex Facial surgery plays an increasingly important role in the gender reassignment process, particularly in male-to-female transgender [women] with a strong masculine appearance who may benefit from [facial surgery].⁸⁵

(Boston Medical Center surgeons reporting that it is safe to perform multiple facial procedures in multiple planes in a single setting).

⁸³ Luis Capitán et al., *Facial Feminization Surgery: The Forehead. Surgical Techniques and Analysis of Results*, 134 *PLASTIC AND RECONSTRUCTIVE SURGERY* 609-619 (2014); Ara A. Salibian & Rachel Bluebond-Langner, *Lip Lift*, 27 *FACIAL PLASTIC SURGERY CLINICS N. AM.* 261, 263 (2019) (noting that facial surgeries “are as effective in treating gender dysphoria in certain cases [as breast surgeries and genital surgeries]”).

⁸⁴ Morrison et al., *Prospective Quality-of-Life Outcomes after Facial Feminization Surgery: An International Multicenter Study*, 145 *PLASTIC AND RECONSTRUCTIVE SURGERY* 1499, 1505 (2020).

⁸⁵ Di Maggio et al., *supra* note 24, at 1377; see also Kevin Chen et al., *Facial Recognition*

In fact, “[t]he increasing prevalence of gender affirmation surgery reveals a shift in therapeutic treatments for gender dysphoria from being focused on the genitalia as the location of bodily sex toward an understanding of sex as a product of social recognition.”⁸⁶ Consistent with this understanding of both the internal and societal challenges of treating gender dysphoria, one group of researchers recently reported that for their patients, “if the mirror reflects a masculine face, then any genital surgery will be inadequate, or even potentiate dysphoria.”⁸⁷ Without facial surgery, their patients frequently state that they “do not feel safe to transition either socially or emotionally.”⁸⁸

For transgender women, facial surgery is a necessary intervention to complete medical transition and afford the individual a body that is female.⁸⁹ Feminizing the face “has a significant impact in determining the gender of the patient.”⁹⁰ Surgery results in the loss of masculine features, and gender dysphoria is reduced.⁹¹ The results are stable in long-term follow-ups and desired shape is achieved immediately after surgery.⁹² Studies have shown results that preoperative facial surgery

Neural Networks Confirm Success of Facial Feminization Surgery, 145 *PLASTIC & RECONSTR. SURGERY* 203-209 (2020) (“In these daily interactions the face is the main visible feature determining gender and frequently, despite years of hormonal therapy and expert application of makeup, hair, or wigs, patients are often still misidentified as male.”).

⁸⁶ Lakhiani & Somenek, *supra* note 30, at 171.

⁸⁷ Esmonde et al., *supra* note 21, at 1389.

⁸⁸ *Id.*

⁸⁹ *Id.* at 1391 (“Facial gender confirmation surgery is an essential treatment for patients with gender dysphoria related to their facial appearance.”).

⁹⁰ Spiegel, *Facial Determinants*, *supra* note 31, at 250.

⁹¹ Mirco Raffaini et al., *Full Facial Feminization Surgery: Patient Satisfaction Assessment Based on 180 Procedures Involving 33 Consecutive Patients*, 137 *PLAST RECONSTR SURGERY* 438-48 (2016); Shane D. Morrison et al., *Facial Feminization: Systematic Review of the Literature*, 137 *PLASTIC AND RECONSTRUCTIVE SURG.* 1759-70 (2016).

⁹² Hoenig, *supra* note 45, at 1045.

transgender patients, even those who are on hormone therapy for an extended time and who use hair and makeup to feminize their faces, are only correctly gendered about half the time; whereas after surgery, patients are correctly gendered as female 94-98% of the time.⁹³ Feminizing the forehead results in the likelihood that the patient will be identified as a woman.⁹⁴ Feminizing the face is more important for social recognition as female than genital reassignment surgery.⁹⁵

Improvement in quality of life is seen following surgical facial reassignment, and it should be considered an integral part of the treatment for gender dysphoria.⁹⁶ Surgery decreases body dissatisfaction and experienced dysphoria in social interactions.⁹⁷ Successful facial reassignment “change[s] the lives of troubled individuals in a way that provides patients immeasurable relief and happiness.”⁹⁸ Patients experience signifi-

⁹³ Chen et al., *supra* note 85 (finding that four artificial intelligence networks capable of facial recognition and gender identification misgendered preoperative patients 47% of the time, but correctly identified postoperative patients’ gender 98% of the time); Mark Fisher et al., *supra* note 2, at (finding that in a large online survey that “that preoperative [facial surgery] transgender patients who are on hormone therapy for an extended time and use hair and makeup to feminize their faces are only correctly gendered by the public about half of the time. Whereas, after facial feminization, patients are correctly gendered as female 94% of the time.”).

⁹⁴ Spiegel, *Facial Determinants*, *supra* note 31, at 257.

⁹⁵ Hammond et al., *supra* note 21 (noting that transgender individuals recognize they “will only be able to truly transition in the public sphere if they are able to interact in every-day life in their chosen societal role” and reporting that “many transgender patients are satisfied with these more recognizable facial transitions and do not go on to seek bottom surgery”); Mohammad Ghasem Shams et al., *Case Report: Feminizing the Male Face*, 9 *EPLASTY* 8, 8-9 (2009).

⁹⁶ See Tiffany A. Ainsworth & Jeffrey H. Spiegel, *Quality of Life of Individuals with and without Facial Feminization Surgery or Gender Reassignment Surgery*, 19 *QUALITY OF LIFE RESEARCH* 1019,1024 (2010) (finding that the mental health-related quality of life for transsexual women who have had feminizing facial reconstruction is significantly higher than for transsexual women who have not had feminizing facial reconstruction).

⁹⁷ Becking et al., *Facial Corrections Patients*, *supra* note 81.

⁹⁸ Jeffrey H. Spiegel, *Challenges in Care of the Transgender Patient Seeking Facial Feminization Surgery*, 16 *FACIAL PLASTIC SURGERY CLINICS OF N. AM.* 233, 233

cant improvements in lifestyle, social relationships, self-esteem, body image, employment status, and sexual adjustment.⁹⁹ Other studies report that patient satisfaction, including increased happiness and satisfaction with life, is high following these procedures.¹⁰⁰ Facial surgery is successful in reducing mental health issues to typical population levels.¹⁰¹

While facial reassignment is undertaken primarily to help alleviate the debilitating cognitive dissonance and discomfort of gender dysphoria, there are also effects in terms of reducing negative encounters with others. Misgendering, staring and confusion by others trigger gender dysphoria and threaten the well-being and safety of transgender women. People who are visibly transgender—generally due to their secondary sex characteristics—experience more discrimination than non-visibly

(2008).

⁹⁹ Shams, *Case Report*, *supra* note 95, at 8-9. *See also* Hoenig, *supra* note 45, at 1043; Josef Isung et al., Letter to the Editor, *Craniofacial Reconstructive Surgery Improves Appearance Congruence in Male-to-Female Transsexual Patients*, 46 ARCHIVES SEXUAL BEHAVIOR 1573, 1575 (2017) (citing a 2017 study on 10 participants which found that for half of the patients, “already by the 6-month follow-up, surgery had made their life a radical turn for the better.”).

¹⁰⁰ Altman, *supra* note 65, at 894; Lakhiani & Somenek, *supra* note 30, at 171 (“[P]atient satisfaction levels following feminization of the male face are generally very high.”); Morrison et al., *Facial Feminization*, *supra* note 91; Raffaini et al., *Full Facial Feminization Surgery*, *supra* note 91, at 1422; Simone La Padula et al., *One-Step Facial Feminization Surgery: The Importance of a Custom-Made Preoperative Planning and Patient Satisfaction Assessment*, 72 J. OF PLASTIC, RECONSTRUCTIVE & AESTHETIC SURGERY 1694, 1698 (2019), doi.org/10.1016/j.bjps.2019.06.014.

¹⁰¹ *See* Annelou L.C. de Vries et al., *Comparing Adult and Adolescent Transsexuals: An MMPI-2 and MMPI-A Study*, 186 PSYCHIATRY RESEARCH 414, 416 (2011) (finding the majority of adult trans people scored “in the clinical range” on two or more clinical scales of the MMPI-2, a widely used mental health assessment questionnaire, and 35% were in the clinical range for four or more scales); Ainsworth & Spiegel, *Quality of Life*, *supra* note 96, at 1021 (finding trans women who had not undergone facial surgery performed significantly worse on a measure of mental health than non-transgender women); Max Mandelbaum et al., *A Novel Application of Virtual Surgical Planning to Facial Feminization Surgery*, 30 J. CRANIOFACIAL SURGERY 1347, 1347 (“Facial feminization surgery (FFS) provides significant improvements in transgender women’s physical, mental, and psychosocial quality of life that may approach that of the general female population.”).

transgender people.¹⁰² People respond with a more negative assessment of transgender women with masculine facial features as compared to more typical female features.¹⁰³ The more frequently a person is seen as transgender by others, “the more they are subject to major and day-to-day discriminatory treatment.”¹⁰⁴ Experiencing transgender-related discrimination, verbal or physical harassment, which is more likely when people are visibly transgender, specifically increases suicide risk.¹⁰⁵ In this context, “facial feminization can be a life-saving procedure, protecting the patient from assault, bullying and alleviating gender dysphoria”¹⁰⁶ In addition, being visibly transgender results in a greater likelihood of attempted drug/alcohol abuse and smoking.¹⁰⁷ Facial reassignment thus creates health gains beyond alleviating gender dysphoria and attendant depression and anxiety.

¹⁰² Lisa R. Miller & Eric A. Grollman, *The Social Costs of Gender Nonconformity for Transgender Adults: Implications for Discrimination and Health*, 30 SOC. FORUM 809 (2015); e.g., Sturm & Chaiet, *supra* note 44 (“Pomus Adams can not only be a large contributor to gender dysphoria but may also put that patient at risk for physical harm.”).

¹⁰³ Kelly R. Gerhardstein & Veanne N. Anderson, *There’s More Than Meets the Eye: Facial Appearance and Evaluations of Transsexual People*, 62 SEX ROLES 361, 370 (2010).

¹⁰⁴ Miller, *supra* note 102, at 826.

¹⁰⁵ Kristen Clements-Nolle et al., *Attempted Suicide Among Transgender Persons: The Influence of Gender-Based Discrimination and Victimization*, 51 J. OF HOMOSEXUALITY 53, 59 (2006).

¹⁰⁶ Melody Scheefer Van Boerum et al., *Chest and Facial Surgery for the Transgender Patient*, 8 TRANSLATIONAL ANDROLOGY & UROLOGY 219, 223 (2019).

¹⁰⁷ Miller, *supra* note 102, at 826.

III. Facial reassignment surgery is provided in accordance with generally accepted standards of medical care in the community.

A. Medical opinions of professional societies and standards of care hold facial gender reassignment surgery in transgender women to be appropriate medical treatment.

Internationally recognized medical associations and accepted standards of care acknowledge the medical necessity of facial reassignment. The World Professional Association for Transgender Health is recognized by the American Medical Association (“AMA”) and others as “the leading international, interdisciplinary professional organization devoted to the understanding and treatment of gender identity disorders.”¹⁰⁸ WPATH publishes the *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People*,¹⁰⁹ which the AMA and others recognize as the “internationally accepted Standards of Care . . . recognized within the medical community to be the standard of care for treating people with” gender dysphoria.¹¹⁰

The WPATH *Standards of Care* note that facial reassignment surgeries “in an individual with severe gender dysphoria can be considered medically necessary, depending on the unique clinical situation of a given patient’s condition and life situation.”¹¹¹

WPATH also released a statement on medically necessary treatment for trans people that specifically listed facial reassignment procedures as

¹⁰⁸ AMA House of Delegates’ Resolution 122, *supra* note 15, at 1, ¶¶ 15-17 (April 18, 2008).

¹⁰⁹ WPATH, *Standards of Care*, *supra* note 16.

¹¹⁰ AMA House of Delegates’ Resolution 122, *supra* note 15, at 1, ¶¶ 16-20; *see* Madeline B. Deutsch & Jamie L. Feldman, *Updated Recommendations from the World Professional Association for Transgender Health Standards of Care*, 87 AM. FAM. PHYSICIAN 89 (2013). Further, the United States government has in its regulatory guidance repeatedly recognized WPATH to be a leader in setting standards for transgender healthcare. *See* 81 Fed. Reg. 31,435 n.263 (HHS Section 557 regulation) & 81 Fed. Reg. 39,136 n. 166 (Department of Labor regulation).

¹¹¹ WPATH *Standards of Care*, *supra* note 16, at 64.

medically necessary surgeries.¹¹² WPATH notes that, “[n]on-genital surgical procedures are routinely performed ... notably, ... facial feminization surgery,” and that “[t]hese surgical interventions are often of greater practical significance in the patient’s daily life than reconstruction of the genitals.”¹¹³ WPATH also specifically recommends, based on the *Standards of Care*, that it should be covered by insurance plans.¹¹⁴

The Endocrine Society—the world’s oldest, largest, and most active organization devoted to research on hormones and the clinical practice of endocrinology—has published clinical guidelines for treatment of gender dysphoric people, which provide detailed guidance for treatment consistent with the WPATH *Standards of Care*.¹¹⁵ The guidelines note that masculinization of the face is one of the things puberty suppression treatment in transgender adolescents is designed to prevent,¹¹⁶ and notes the increased use of facial surgeries.¹¹⁷

B. Other insurers and external reviewers find this care to be medically necessary.

The fact that a categorical ban on facial reassignment surgery is not in alignment with prevailing medical opinion is also reflected in that private insurers routinely cover facial reassignment procedures and regard them

¹¹² WPATH, *Position Statement on Medical Necessity of Treatment, Sex Reassignment, and Insurance Coverage in the U.S.A.* (Dec. 21, 2016), https://s3.amazonaws.com/amo_hub_content/Association140/files/WPATH-Position-on-Medical-Necessity-12-21-2016.pdf.

¹¹³ *Id.* at 3 (quoting Monstrey et al., *Surgery: Male-to-Female Patient*, *supra* note 18).

¹¹⁴ WPATH, *Transgender Medical Benefits* (2018), https://www.wpath.org/media/cms/Documents/Public%20Policies/2018/6_June/Transgender%20Medical%20Benefits.pdf.

¹¹⁵ Wylie C. Hembree et al., *Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, 102(11) J. CLINICAL ENDOCRINOLOGY & METABOLISM 1-35 (2017).

¹¹⁶ *Id.* at 13.

¹¹⁷ *Id.* at 26.

as medically necessary.¹¹⁸ Government health plans such as Medicaid and Medicare also cover facial reassignment surgery.¹¹⁹ External reviewers routinely overturn denials of facial gender reassignment. For example, California’s Department of Managed Care’s Independent Medical Review program overturned seven out of eight denials in 2020 alone.¹²⁰

C. Sufficient data exists to cover this treatment.

Because of historic insurance exclusions for treatments of gender dysphoria, patients were unable to access care due to a lack of providers and an inability to afford care. For decades, surgeries were performed in private practice outside of academic research institutions. They are known to be effective, but there is a relative dearth of published research on these procedures as compared to how widespread they are performed in clinical practice. While transgender individuals could certainly benefit from more research, deferring action until more studies are conducted cannot be used to justify the denial of transgender-related care. Sufficient data exists to demonstrate the benefits of hormonal and surgical care for

¹¹⁸ See, e.g., TLDEF Trans Health Project, Health Insurance Medical Policies - Facial Reconstruction, <https://transhealthproject.org/resources/health-insurance-medical-policies/views/facial-reconstruction> (collecting gender dysphoria clinical policies with explicit coverage for facial surgeries).

¹¹⁹ See e.g., Connecticut Medical Assistance Program, Gender Affirmation Surgery (Mar. 27, 2019), https://www.huskyhealthct.org/providers/provider_postings/policies_procedures/Gender_Affirmation_Surgery.pdf; Washington Admin. Code 182-531-1675 (2016); NYCRR § 505.2(l)(4-5); *Cruz v. Zucker*, 195 F. Supp. 3d 554, 571 (S.D.N.Y. 2016), *on reconsideration*, 218 F. Supp. 3d 246 (S.D.N.Y. 2016), *and appeal withdrawn*, (Dec. 30, 2016) (finding that a categorical ban on facial reassignment violates the federal Medicaid Act’s Availability Provision). Medicare and the Oregon Health Plan have also covered facial gender reassignment surgeries (information on file with TLDEF). Cf. Isung et al., *supra* note 99, at 1573 (noting that as early as April 2015, the Swedish National Board of Health and Welfare’s national guidelines for care for patients with gender dysphoria “concluded that FFS could be deployed as part of the gender confirming health care, within the public health system”).

¹²⁰ California Department of Managed Care, Independent Medical Review Search, <https://wps.dmhc.ca.gov/imr/default.aspx> (e.g., overturning MN20-33069, MN20-32799, MN20-32708, MN20-32691, MN20-32360, MN19-32294, MN19-32241; upholding MN20-32808 on the basis that the surgery was to counteract the effects of aging).

transgender patients,¹²¹ and surgery—including facial reassignment—is the standard of care in clinical practice.¹²² While some proprietary, non-peer reviewed surveys have called into question the efficacy of facial reassignment surgery,¹²³ such reports are not evidence-based and cannot form the basis of a non-discriminatory reason for denying coverage. As one court noted, “Even accepting [the defendant’s expert’s] conclusion that studies provide ‘very low’ quality evidence, that does not change the fact that the larger medical community considers these treatments to be acceptable.”¹²⁴

¹²¹ See, e.g., Louis Gooren, *Care of Transsexual Person*, 364 NEW ENGLAND J. OF MEDICINE, 1251, 1256 (2011) (recommending sex reassignment even in the face of research limitations and questions about long-term risks).

¹²² Norman P. Spack, *Management of Transgenderism*, 309 JAMA: J. AMERICAN MEDICAL ASSOCIATION 478, 483 (2013); see Facque et al., *supra* note 31, at 1408 (“[B]ecause facial gender confirming procedures are designed to alleviate gender dysphoria, they should be considered reconstructive and, therefore, medically necessary.”).

¹²³ For example, see the 2014 Hayes Directory Report, *Ancillary Procedures and Services for the Treatment of Gender Dysphoria*. At a cost of \$7,000, this report is not available to be critically evaluated by medical scientists and clinicians. It is not possible to evaluate bias, financial interests or academic credentials of the actual authors as they are not known.

¹²⁴ *Flack v. Wisconsin Dep’t of Health Servs.*, 395 F. Supp. 3d 1001, 1013–14 (W.D. Wis. 2019) (noting that “whatever the evidentiary value these private [Hayes] analyses may have, it pales in comparison to that of the peer reviewed studies they purport to criticize, and, more importantly, to the consensus of medical professionals as to the efficacy and safety of gender-confirming surgery” and “[Hayes’s] ‘opinions’ are entirely unhelpful to the issue of fact here: whether gender-confirming surgery and related hormones are now a generally accepted form of medical treatment for gender dysphoria.”).

IV. A cosmetic exclusion is inapplicable because facial reassignment is not designed to improve appearance, but rather to change the sex of the face.

Exclusions for facial reassignment surgery rest on the incorrect assumption that the surgery is “cosmetic.” In reality, this surgery is not undertaken to “improve appearance,” but rather to change the sex of an individual’s face from male to female.

Covering facial reassignment surgery for transgender women is consistent with providing other treatments for gender dysphoria as well as continuing to exclude all cosmetic procedures. These procedures cannot be viewed outside of the context in which they are provided: namely, treating gender dysphoria. Unlike cosmetic procedures performed for no medical reason, transgender patients typically must provide the surgeon with a letter from a mental health provider documenting their gender dysphoria.¹²⁵

Covering this surgery for gender dysphoria does not mean that cisgender members can seek coverage for cosmetic facial surgery. Although the surgeries performed may use some of the same surgical techniques in cisgender and transgender people, the purposes are fundamentally different. Cisgender people seeking cosmetic facial surgeries are not seeking sex reassignment or treatment for any medical condition at all. A cisgender woman is already recognized as female and the surgery would not be changing her sex in any way.¹²⁶ People seeking cosmetic surgeries do not have a diagnosis for which facial surgery is the standard treatment. A brow bone reduction, for example, is not a recognized treatment for depression or anxiety. In contrast, when a transgender woman seeks surgery, the “transgender patient usually has a long history of distress caused by gender dysphoria.”¹²⁷

¹²⁵ Troy A. Pittman & James M. Economides, *Preparing for Facial Feminization Surgery Timing*, 27 FACIAL PLASTIC SURGERY CLINICS N. AM. 191, 197 (2019).

¹²⁶ Even if a cisgender woman had a more masculine face, she would lack the constellation of other physical characteristics, such as height, habitus, and voice, that—in conjunction with a masculine face—would cause her to be consistently perceived as male.

¹²⁷ Christopher J. Salgado & Lydia A. Fein, *Letter to the Editor: Breast augmentation in*

The appropriate comparison is not to a cisgender woman having aesthetic surgery, but rather to a cisgender man undergoing facial gender reassignment surgery. Surgeons often plan facial gender reassignment surgeries by using virtual modeling on a female skull,¹²⁸ something that would be inappropriate for a cisgender man undergoing aesthetic surgery. Just as a cisgender man would not undergo genital reassignment surgery to “improve his appearance,” a cisgender man would not improve his appearance by undergoing a surgery that resulted in him looking like a woman.

A. Medical authorities agree facial reassignment is not cosmetic.

Researchers conclude that “data support that facial feminization surgery may be considered medically necessary for many patients. ... [That] “is not merely cosmetic and that it clearly targets gender dysphoria to achieve improved quality of life.”¹²⁹ Facial reassignment surgery has the “sole objective of converting a masculine face to a more feminine one.”¹³⁰ It is a group of surgical procedures “the aim of which is to change the features of a male face to that of a female face.”¹³¹ This surgery is “part of the sex reassignment process. ... [I]t has the purpose to alter typically male facial features to make them similar in terms of shape and size to

transgender women and the lack of adherence amongst plastic surgeons to professional standards of care, J. OF PLASTIC, RECONSTRUCTIVE & AESTHETIC SURGERY, 1471-72 (2015).

¹²⁸ Han Hoang et al., *Simplifying Facial Feminization Surgery Using Virtual Modeling on the Female Skull*, 8 PLASTIC AND RECONSTRUCTIVE SURGERY - GLOBAL OPEN e2618 (2020).

¹²⁹ Morrison et al., *supra*, note 84, at 1508.

¹³⁰ Altman, *supra* note 65, at 893.

¹³¹ Altman, *supra* note 65, at 885; Jens Urs Berli & Myriam Loyo, *Gender-Confirming Rhinoplasty*, 27 FACIAL PLASTIC SURGERY CLINICS N. AM. 251, 251 (2019) (“Facial gender confirmation surgery (FGCS) encompasses a wide variety of surgical procedures, with the common goal of either feminizing or masculinizing the face.”); Dempf & Eckert, *supra* note 32, at 416 (noting the procedures are carried out “to change the shape of a face to the characteristics of the desired sex.”).

typical female facial features.”¹³² It is not undertaken to improve appearance, but rather “to alter the perceived gender of an individual’s face.”¹³³

Even if there were an incidental effect of improving appearance, that does not bar coverage because the primary purpose is to alter the sex of the face to treat gender dysphoria, not improve appearance.

A patient with gender dysphoria does not seek facial reassignment in order to look beautiful, but rather to look like herself. That is, simply to look female—what she would have looked like had she not gone through male puberty and watched her face masculinize.¹³⁴ This goal is distinct from the beautification goals of cosmetic surgery and the metric for a successful facial reassignment surgery is likewise different.¹³⁵ The fact that some of the surgeries used to treat gender dysphoria are commonly used as aesthetic procedures does not negate their importance in treating gender dysphoria.¹³⁶

Surgical specialists in the field reflect this same understanding in their distinct approaches to cosmetic and gender-affirming procedures. For example, in contrast to purely cosmetic lip surgeries, the surgical intervention in gender-affirming lip lifts “primarily focus on shortening the nasal

¹³² La Padula *supra* note 100 at 1695.

¹³³ Spiegel, *Challenges in care, supra* note 98, at 233.

¹³⁴ See, e.g., Berli & Loyo, *supra* note 131, at 252 (2019) (recommending that for trans-identified patients seeking gender-confirming rhinoplasty, “the conversation around goals starts with the current anatomy and potentially involves photographs of female family members . . .”).

¹³⁵ *Id.* at 253 (“Going unrecognized in society as being the opposite gender assigned at birth is probably the most important outcome parameter of FGCS.”).

¹³⁶ Di Maggio et al., *supra* note 24, at 1379 (“The main goal of rhinoplasty in FFS is to change masculine nasal features to feminine ones by performing dorsal reduction, tip refinement, and narrowing the nasal bones . . .”); Schall et al., *supra* note 1 (“Although rhinoplasty may be a common aesthetic procedure, it is also one of the most important procedures of [facial gender confirmation surgery].”).

base-to-vermilion border distance” rather than lip augmentation “because this has been found to be the significant difference between male and female upper lip anthropometric proportions.”¹³⁷

Finally, WPATH explains that “medical procedures attendant to sex reassignment are not ‘cosmetic’ or ‘elective’ or for the mere convenience of the patient. These reconstruction procedures are not optional in any meaningful sense, but are understood to be medically necessary for the treatment of the diagnosed condition.”¹³⁸ The AMA has also stated that sex reassignment procedures are not cosmetic.¹³⁹

B. Legal authorities conclude that facial reassignment is medically necessary, not cosmetic.

Legal fact finders consistently conclude that facial reassignment is medically necessary, not cosmetic. In the context of rejecting the idea that a transgender woman who had undergone facial reassignment surgery had a propensity for cosmetic surgery, the U.S. Tax Court noted that “there is substantial evidence that such surgery [facial reassignment] may have served the same therapeutic purposes of (genital) sex reassignment surgery and hormone therapy; namely, effecting a female appearance in a genetic male.”¹⁴⁰ This medical necessity has been reflected in other legal contexts as well with a jury awarding damages for facial reassignment surgery that was excluded under insurance.¹⁴¹ The Connecticut Commission

¹³⁷ Salibian & Bluebond-Langner, *supra* note 83, at 265.

¹³⁸ WPATH, *Position Statement*, *supra* note 112, at 3.

¹³⁹ See AMA House of Delegates’ Resolution 122, *supra* note 15, at 1, ¶¶ 22-28 (“Health experts in [gender dysphoria], including WPATH, have rejected the myth that such treatments are ‘cosmetic’ or ‘experimental’ and have recognized that these treatments can provide safe and effective treatment for a serious health condition.”).

¹⁴⁰ *O’Donnabhain v. C.I.R.*, 134 T.C. 34, 61 (2010) (holding that genital reassignment surgery is not cosmetic, but a tax-deductible treatment for a disease).

¹⁴¹ Stenographic Transcript of Second Day of Jury Trial Held Before U.S. District Judge William M. Conley at 144-145, *Boyd v. Wisconsin*, No. 17-CV-264-WMC (D. Wisc. Jun. 7, 2019), ECF No. 261, <http://files.eqcf.org/cases/317-cv-00264-261> (awarding \$780,500 in damages to two plaintiffs, including for reimbursement of facial reassignment surgery).

on Human Rights and Opportunities found that insurance plans with clinical policy excluding coverage for facial reassignment surgeries is unlawful discrimination,¹⁴² and an employer and self-funded plan settled for \$345,000 in damages where a clinical policy excluded coverage for facial reassignment surgery, and the insurer paid an additional \$60,000 in damages.¹⁴³

V. Conclusion

Facial gender reassignment surgery goes far beyond any incidental improvement in appearance and affects something far more fundamental: how the world sees a person's sex.

Peer-reviewed medical literature, medical opinions of professional societies, evidence-based professional standards of care, and the opinions of health care professionals involved in the specialty of transgender medicine all concur that facial reassignment surgery is safe, effective, and medically necessary for treating gender dysphoria.

¹⁴² State of Connecticut Commission on Human Rights and Opportunities, *Declaratory Ruling on Petition Regarding Health Insurers' Categorization of Certain Gender-Confirming Procedures as Cosmetic* (Apr. 17, 2020), available at <https://www.glad.org/cases/challenging-insurance-exclusions-for-gender-affirming-medical-care> (“Dr. Randi Ettner, Ph.D. flatly opined in an affidavit submitted to the Commission that ‘[n]o treatment for gender dysphoria can be deemed cosmetic.’ Ettner Aff., ¶ 7. This is because procedures altering the appearance of transgender patients for treatment of gender dysphoria are not for the purpose of ‘enhancing’ cosmetic beauty—they are medically indicated for the purpose of bringing a transgender patient’s appearance in accordance with their gender identity to eliminate the stress caused by incongruence of the same. *Id.*, at ¶ 16 (the goal is ‘to modify ... characteristics from [one sex to another] in order to allow a person to live and function in their affirmed gender, thereby reducing or eliminating their gender dysphoria.’).”).

¹⁴³ National Center for Lesbian Rights, *Parties Settle Landmark Lawsuit by Transgender Employee Who Was Unlawfully Denied Medically Necessary Care* (Mar. 3, 2020), <http://www.nclrights.org/press-room/press-release/parties-settle-landmark-lawsuit-by-transgender-employee-who-was-unlawfully-denied-medically-necessary-care>; *Ketcham v. Regence BlueCross BlueShield of Oregon*, No. 19CV31838 (Or. Cir. Ct. filed July 18, 2019); Email to TLDEF from NCLR (Sept. 2, 2020).