

SURGERY

Age Is Just a Number: WPATH-Affiliated Surgeons' Experiences and Attitudes Toward Vaginoplasty in Transgender Females Under 18 Years of Age in the United States



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ABSTRACT

Background: A rising number of female-affirmed transgender adolescents are being treated with gonadotropin-releasing hormone analogues and subsequently cross-sex hormones at early or mid-puberty, with vaginoplasty as the presumed final step in their physical transition. But, despite the minimum age of 18 years defining eligibility to undergo this irreversible procedure, anecdotal reports have shown that vaginoplasties are being performed on minors by surgeons in the United States, thereby contravening the World Professional Association for Transgender Health (WPATH) standards of care (SOC).

Aim: To explore surgeons' attitudes toward ethical guidelines in the SOC; any professional experiences of performing vaginoplasty on transgender minors; views of surgical risks, benefits, and harm reduction measures; and perceptions of future challenges and concerns in this area of surgical practice.

Methods: A qualitative semistructured interview approach was used to collect data from 13 male and 7 female surgeons who perform transgender vaginoplasty in the United States.

Outcomes: Professional experiences and attitudes toward vaginoplasty in transgender minors were analyzed using the constant comparative method applied to 20 individual interview transcripts.

Results: While there was close agreement concerning surgical techniques, proper patient selection, and predictive elements of postoperative success, attitudes toward the SOC and the reliance on the guidelines varied. The sole practitioner model is gradually giving way to a more holistic team approach, with patient responsibility dispersed among different professionals. Different approaches to surgical training, professional standards, and fellowship programs were suggested. Several participants expressed a need for centralized data collection, patient tracking, and increased involvement of the WPATH as a sponsor of studies in this emergent population.

Clinical Implications: Drawing on surgeons' attitudes and experiences is essential for the development of standards and practices. A more precise and transparent view of this surgical procedure will be essential in contributing to the updated version 8 of the WPATH SOC.

Strengths and Limitations: The abundant data elicited from the interviews address several meaningful research questions, most importantly patient selection criteria, surgical methods, and issues critical to the future of the profession. Nevertheless, the limited sample might not be representative of the surgical cadre at large, particularly when exploring experiences and attitudes toward vaginoplasty in minors. A larger participant pool representing WPATH-affiliated surgeons outside the United States would improve the generalizability of the study.

Conclusion: Taken together, the study and its findings make a significant contribution to the planned revision of the WPATH SOC. **Milrod C, Karasic DH. Age Is Just a Number: WPATH-Affiliated Surgeons' Experiences and Attitudes Toward Vaginoplasty in Transgender Females Under 18 Years of Age in the United States. J Sex Med 2017;14:624–634.**

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INTRODUCTION

During the past 5 years, treatment of gender dysphoric adolescents presenting for medical interventions in the United States has received increased attention and visibility in the clinical literature and the mainstream media.^{1–5} Supported by parents and referred by psychiatrists, psychologists, and other mental health professionals, transgender youths are seeking gender-affirmative treatment in private practice settings, public health centers, and hospitals with specialized services dedicated to transgender health care.^{6–8} Major American insurance exchanges and health maintenance organization networks also are beginning to cover medical care designed to alleviate gender dysphoria in teens, ranging from fully reversible interventions such as puberty-suppressing gonadotropin-releasing hormone analogues and partly reversible gonadal steroid treatment to irreversible procedures such as bilateral mastectomy with chest reconstruction for male-affirmed late teens and genital surgeries such as orchiectomy and/or vulvovaginoplasty in female-affirmed older adolescents.⁹ Medical providers of transgender care generally adhere to the most recent (version 7) World Professional Association for Transgender Health (WPATH) Standards of Care (SOC), in which eligibility and readiness criteria for irreversible interventions can be applied when the adolescent has reached the legal age of majority in a given country.¹⁰ The document specifies that the age criterion should not be seen as an indication for “active intervention,” only as an age threshold, with the understanding that the legal age of majority varies from nation to nation. The current SOC provide some flexibility in the minimum age requirement for chest reconstruction in male-affirmed adolescents, although it could be argued that this procedure is practically irreversible. Conversely, female-affirmed teenagers must defer orchiectomy and/or vaginoplasty until 18 years of age to stay compliant with the SOC and the legal age of majority in the United States. This position also is supported by the Endocrine Society, a worldwide organization dedicated to the education and practice advancement of endocrinology.¹¹ The society has issued recommendations concerning the treatment of trans youth, in which it is suggested that genital surgery be deferred until the individual has reached 18 years of age. The Endocrine Society does acknowledge that 16-year-olds are legal adults in many countries and are mature enough to make medical decisions of some cognitive complexity; nevertheless, because data are not available on outcome studies concerning genital surgery in minors, the shared recommendation by the two organizations still stands.

In the Netherlands, where adolescents from 16 years of age are legally competent to make treatment choices independent of parental consent,¹² the policy of Dutch clinics treating transgender teens is that genital surgery should not be performed before 18 years of age. A review of the available literature concerning the Dutch protocol shows that although clinicians agree that emotional maturity represents a better criterion than minimum age, there is acknowledgment that objective criteria do not

exist in assessing readiness for genital surgery in adolescents.¹³ In addition, although puberty suppressants are available to gender dysphoric adolescents at 12 years of age and cross-sex hormones are permitted at the minimum age of 16 years,^{14–16} a recommended candidate for genital surgery is at least 18 years old and has been living in the affirmed gender for a minimum of 2 years after initiating hormone treatment. Dutch outcome studies of late adolescents and young adults who have undergone irreversible procedures 1 to 4 years before follow-up have reported psychologically normative functioning and a high satisfaction rate with no regrets by transsexuals after surgery.^{17–19} Moreover, anecdotal reports and at least one news media release have reported that vaginoplasties in patients younger than 18 years have been performed by surgeons in the United States, who thereby contravene or sidestep the SOC.^{20,21} Contrary to the concise criteria guiding decisions for postadolescent surgical treatment [p. 54], there are no guidelines in the WPATH SOC that support the surgeon in the decision to perform vaginoplasty on transgender women younger than 18 years. The surgeon must rely on evaluations by other professionals, careful patient selection, and the personal conviction that proceeding with surgery is the right decision, with the added legal burden of obtaining consent from parents in lieu of the minor and assuming principal responsibility for the physical risk to the young patient who might not always be compliant with or fully understand post-operative care. The surgeons who perform the procedure on transgender minors have, without exception, refrained from publishing any peer-reviewed outcome data or technical articles on this small but increasingly important population. In addition, although only a few teaching programs offer endocrinology fellowships that include transgender health care,²² no American educational institutions currently provide fellowships or standardized training in genital surgery for female-affirmed transgender adolescents. These factors have contributed to a dearth of specific medical information, a lack of shared surgical expertise, and inadequate guidance that would otherwise be widely available to all practitioners of transgender medicine and to the general public. To go beyond anecdotal evidence and explore the collective experiential knowledge of surgeons who specialize in performing vaginoplasty as part of gender-confirming surgery (GCS), the authors report the findings of their qualitative research study investigating WPATH-affiliated surgeons' views, experiences, and attitudes toward performing vaginoplasty on transgender minors in the United States.

AIMS

The aim of the study was to explore any professional experiences of performing vaginoplasty on transgender minors in the United States; views of surgical risks, benefits, harm reduction measures, beliefs, and attitudes related to the ethical guidelines on adolescents in the SOC; and perceptions of future challenges and concerns in this area of surgical specialty. The proximate goals of the study were to elucidate experiences and attitudes

toward the growing surgical practice of vaginoplasty in transgender minors and to provide foundational knowledge in an under-researched area, with the long-term objective of using the study findings in the future development of criteria for irreversible surgical procedures in the eighth version of the WPATH SOC.

METHODS

Because of the anticipated small number of potential participants active in a highly specialized surgical field, a qualitative study format was preferred. A modified analytic induction approach was chosen because of the specifically targeted research questions.²³ Purposive sampling was initiated; a search under the *Medicine: Surgery* and *Medicine: Gynecology/Urology* tabs inside the optional provider directory located on the WPATH website²⁴ yielded the names of 21 affiliated plastic surgeons and 20 gynecology or urology specialists practicing in the United States. Additional names of member surgeons whose names were not in the directory were found after performing multiple Google searches using key words pertaining to vaginoplasty or GCS. After verifying that the procedure was offered by telephoning each surgical practice and by viewing proprietary websites when available, 22 surgeons nationwide were identified as providers of vaginoplasty to the transgender female patient population. An invitation e-mail was sent to each surgeon, followed by telephone calls to the corresponding surgical practice, in which potential participants were informed in detail about the study objectives and its parameters. Twenty surgeons chose to participate, and two declined. A semistructured interview sheet consisting of 30 items related to the study goals and supplemented by additional prompt questions, when applicable, were used to elicit responses in the following main areas:

1. Demographic information and professional GCS experience of participant
2. Any concerns regarding performing vaginoplasty in minors
3. Negotiating consent or assent and risk management
4. Training, professionalism, and the WPATH SOC

All interviews were conducted by the first author, a licensed psychotherapist, during a 45-day period by telephone, with exception of one face-to-face interview. Average interviewing time was 25 minutes. All interviews were audio-recorded with the participant providing verbal consent at the beginning of each recording. Interviews were transcribed by the first author, de-identified, and checked multiple times against the master recording files to ensure accuracy. Transcripts were saved in rich text format (.rtf) files and processed using HyperRESEARCH qualitative data analysis software (Researchware Inc, Randolph, MA, USA). Analysis was implemented using line-by-line coding of the transcribed material and by performing the constant comparison procedure to identify repeated patterns in the available data. Codes were refined into categories that were used to structure the analysis further into major thematic areas

according to standard grounded theory.²⁵ Coding checks were performed by the 2 authors to ensure intercoder reliability.²⁶ Data gathering procedures were reviewed and approved to ensure their consistency with the ethical principles required by the institutional review board of the second author's affiliated institution.

RESULTS

Demographic and general participant data are presented in Table 1. The vast majority of participants operated at in-patient hospitals; however, one surgeon reported performing the procedure at an out-patient surgery center, with multiple visitations at the patient's home or hotel after surgery. The preferred method of vaginoplasty was a one-stage penile inversion, most often augmented by a full-thickness scrotal skin graft. Nine surgeons had never performed vaginoplasty on a transgender female minor, and the remaining 11 participants reported 1 to 20 cases per surgeon. Of the 11 surgeons who had performed vaginoplasty on a transgender female minor, 10 were in private practice. Reported ages of minors undergoing surgery ranged from 15 to "a day before 18" years (surgeon 7). Most participants had noticed a definite increase in the number of minors requesting information about the procedure on their own or being referred for vaginoplasty by their mental health providers.

Table 1. Basic participant demographics (N = 20)

Participants	n
Sex	
Men	13
Women	7
Surgical specialty or board certification	
General plastic surgery	13
Urology	4
OBG	2
Plastic surgery + urology (double board certification)	1
Primary practice setting	
Private practice	16
University hospital or teaching institution	4
Insurance network contracted provider	
Yes	14
No	6
Years in practice	
Minimum–maximum	4–43
Average	19
Years performing GCS	
Minimum–maximum	< 1–26
Average	10
Performed vaginoplasty on transgender minor	
Yes	11
No	9

GCS = gender-confirming surgery; OBG = obstetrics and gynecology.

Surgeon 16 quantified a shift in the general age group of patients: “When I first started my practice, I would estimate that 85% of patients were older than 25. Now, I would say that only 40% of my patients are older than 25 in the last nine years.” In addition, although there was no unanimous recall of the youngest patient ever reported in the media to undergo the procedure, a few participants believed that they were responsible for having operated on “the youngest,” with surgeon 16 stating that “... the patient was a 15-year-old who was just on the cusp of turning 16.”

Anatomic and Physiologic Issues

There was little concern over the younger adolescent and her ability to physically withstand the invasive procedure compared with a middle-age or elderly patient; however, almost all surgeons remarked on the penoscrotal hypoplasia or limited penile shaft size that would ensue after the use of puberty-suppressing gonadotropin-releasing hormone analogues, sometimes for as long as 3 years. Two surgeons who reported operating on minors commented, “... they are coming in after being put on blockers, so they have 11-year-old genitalia” (surgeon 9) and “... you are really doing vaginoplasty on a micropenis” (surgeon 16). Most participants emphasized that the surgical techniques were the same for all patients no matter the age; of those who had performed the procedure on several minors, the use of flank skin grafts most commonly resolved the problem of inadequate tissue availability. In other reported measures, surgeon 2 implanted a scrotal tissue expander that required periodic infusion during 2 months, and surgeon 14 used donor tissue matrix (LifeCell, Branchburg, NJ, USA), deeming it “nicely successful” and thereby avoiding patient exposure to external flank scarring. The alternative procedure of using sigmoid- or ileum-derived grafts to create the neovagina was seen as a last resort by a few participants who stated diversion colitis, excessive secretion, persistent odors, and potential leakage of stool into the peritoneum as some of the concomitant morbidities.

Psychological and Contextual Concerns

An overwhelming majority of surgeons cited psychological maturity as the main criterion for adolescent patient selection, stating “Age is arbitrary. The true measures of how well a patient will do are based on maturity, discipline and support” (surgeon 11). Most participants emphasized that mental maturity was related to the ability to understand the stressors of undergoing surgery and expectations of postoperative self-care, particularly the commitment to a consistent dilatation schedule to maintain patency of the neovagina:

The biggest concern is, will they be mature enough to be able to take care of themselves after surgery. Not just having the surgery done. Will they do what they need to do after surgery maintain the vaginal depth involved? In actuality, I don't think it is age dependent, it is the maturity of the

patient. An 18-year-old goes off to college and leaves the parents. They leave that protective environment and everything becomes less important to them in terms of the dilatation and care. Some of my biggest struggles have not been with the 16-year-old group because they are still at the parents' house—it is the 18-year-olds who disappear and go to college within a few months after their surgery. Those are the patients who are most likely to lapse in their aftercare. (Surgeon 9)

The confluence of undergoing vaginoplasty and leaving home to become a college student in the same year was seen by many as problematic:

Oftentimes, a child in the United States comes in after or during their senior year in high school; they want surgery over the summer and they want to go off to a dormitory in September, in their first year of college, which is a disaster. And that is a more important situation than just the age of the patient. What is going on socially with the patient is more important than the age. (Surgeon 16)

I have found that it is very difficult when the patients have to transition once they are in college. ... Plus with their busy schedules and their busy lifestyles, it is very difficult for them to adhere to their dilation schedule. So the reason why I decided to operate on people younger than 18, is that I would prefer that they have their gender reassignment surgery done while they are still at home and their parents can help them adhere to their schedule until a significant period of time has passed so they will not compromise their results. I base it on very strong family support, very strong letters from their psychologist and their behavioral health therapist and that is really how I make the decision. You also need to take into account the maturity of the individual and whether they are at a point where they are mature enough to understand the seriousness of the surgery and the seriousness of adhering to all of the post-op instructions so that they maximize their results. (Surgeon 15)

Some surgeons viewed timing the procedure before college attendance as a harm reduction measure:

Younger patients who have the support of their families, support of their parents, and can have the operation while they are still at home, as opposed to being alone at school or at work, anecdotally tend to do much better than someone who is alone and doesn't have appropriate support. (Surgeon 5)

There could be benefits that could outweigh the risks when you look at the demographics of women who are in their late teens wanting to have GCS prior to going to college, or prior to entering into very sensitive social roles. (Surgeon 17)

Participants also pointed to the importance of a safe and affirmative environment in which to recuperate (ie, being cared for by supportive parents at home who monitor the recovery process):

The added issue with the under 18 patient is parental involvement, and I personally would want to have the parents on board. Particularly if the child is still living at home with the parents. The place people go back to after surgery is critically important for the result. And that's not just for GCS—if someone is going back to a hostile place and the place is not supportive of the surgery, it is often likely that the person has a less than optimal result. (Surgeon 18)

Opinions were sometimes divided as to the adolescent undergoing the procedure for mainly social or sexual purposes:

The benefit is not because they want to have sex, but because they can fully socially transition with their peers before they go off to college—assuming they want to go to college. (Surgeon 14)

I personally know of two young women who are trying to transition. They are seeing mental health providers and endocrinologists. They are 16 and there is a real struggle there because there is a sense of urgency on their part and they are being held back. I get that, they need to go through some steps. But I know that they do not want to do a full transition later in their life; they want to do this so that they can be intimate in college. (Surgeon 17)

In addition, a few participants urged caution, suggesting that some adolescents engage in gender exploration as part of a developmental phase and as part of the current zeitgeist:

I think it goes along the lines of a young person's mind still being in the developmental stage. Things may happen and they may reorient their thinking, not just whether they are trans or not, but they may reorient their thinking about which surgery will serve their transgender needs. It is not a binary or tertiary model where they are just gay, straight, bisexual, or trans; there are a whole host of colors in-between. Many trans patients do not want GCS—it could be that at 15 they do, and at 25 they do not. (Surgeon 18)

Depending on how old they are, there are a lot of classes that adolescents, even preadolescents in elementary schools, are getting these days. And they are trying to figure out if they are doing it because it is a new norm, versus what they really want. I have seen some of my patients' children go through phases of in and out, of thinking transgender. So that would be my concern—is it because it is popular now? (Surgeon 19)

Consent and Risk Management

While participants had a clear understanding of the legal constraints in obtaining informed consent specifically from the adolescent, there were a few different approaches to securing consent from the family unit. Parents or legal guardians were invariably signators; however, Surgeon 2 also added the requirement of the young patient writing an essay about the reasons for wanting to undergo the procedure and “describe what her feelings are in her identity as a person.” Surgeon 16 explicitly required the parents to become active participants in the post-operative dilatation process, or else the patient would not be deemed “a good candidate for surgery.” Other participants requested multiple or longer office visits when going over the various written consent forms, ranging from 5 to 40 pages, and always in the presence of parents or legal guardians. The parents' marital status was often a concern, because most surgeons were aware of divorce creating a change in guardianship or custody of the minor. Comparatively few participants addressed the issue of postsurgical infertility in the interviews; among those who reported having discussions with the patient and her family, there was the recognition that the topic had been explored beforehand with other practitioners or “not often something that is at the forefront of people” (Surgeon 4).

All participants adhered strictly to the SOC by requiring separate evaluation letters from two mental health professionals clearing the minor for surgery. Many emphasized that a recommendation from an unfamiliar psychotherapist was not acceptable; in addition, a third letter from an independent psychiatrist or the patient's pediatric endocrinologist was occasionally required to bolster the surgeon's confidence that the minor had been thoroughly vetted. The professional quality of each letter also was very important and should demonstrate the writer's qualifications as an expert in transgender issues. Surgeon 12 clarified:

We ask for two letters. One of them has to be from someone who has an established relationship with the patient. I don't remember exactly what the wording is, but they can't just go to one session and say, “Hey, I'm transgender, I want surgery.” We do read the letters and we also do confirm that the letters are real. You can imagine (laughs). We call the therapist's office and make sure that our patient is a patient of theirs. We just get confirmation that the letters are real and that it's not something they just typed up on their own, you know. The letter has a certain verbiage and anybody who is experienced with treating gender issues should know the language of the final letter of recommendation. Not just, “there were three monthly sessions.” No!

Nearly all participants reported an overwhelming reliance on mental health practitioners to assess the minor's psychological readiness for surgery. Statements including “completely” (Surgeon 9) or “extremely” (Surgeon 10) were used to emphasize

trust in the diagnostic expertise of mental health providers. Surgeon 3 concurred:

I rely on them entirely. I need to make sure that the patients have realistic expectations, that they are not ... I need to judge their maturity level and that they can handle pretty significant stress of any surgical procedure. But I don't pretend to be a psychologist or have any expertise in the diagnosis of gender dysphoria, that's a decision that needs experts.

However, a few pointed out that they were sometimes just as attuned to potential concerns as mental health professionals and would assume some responsibility for evaluating the patient's psychological condition:

I scrutinize the letters that the mental health providers forward to me. If they are negative, I rely a lot on them because that has a lot of value. But since they are almost never negative, I may rely a lot less on them! Then I rely on my own experience. I cover everything that I believe should have been covered in the letter, and then I go through that list of capacity, development, all those issues in my check-off list. I do this because any other way is a disservice to the patient; I'm responsible for all that. (Surgeon 20)

Despite the legal impossibility to obtain informed consent from the underage patient, the vast majority of participants were not concerned with malpractice lawsuits from parents or even from the patients as adults in the future. Engaging in best practices, maintaining open communication with the patient and her parents, and above all providing good results were seen as protective measures against any legal action. Nevertheless, opinions were evenly split as to the surgeon's assumption of physical risk to the adolescent patient. Some asserted that this was uniquely the surgeon's domain:

It should be the surgeon, not the hormone prescriber. There is a lot of misinformation that the hormone prescribers give, in my opinion. They have no business talking about surgical issues, unless they have training. We could train the hormone providers, but too often they have never set foot in an operating room, and say things from a surgical standpoint that in my opinion simply is not true. And I don't think that the hormone providers understand that when there is a micropenis, it's a different surgery. When you all you have is a hammer, everything looks like a nail! (Surgeon 16)

Others advocated for a dispersion of responsibility:

I think it should be everybody. And I think it should be me, the endocrinologist, the mental health provider. It has to be multidisciplinary to make sure they are sexually mature in terms of development, and that from an endocrine

standpoint they are able to be on the hormones successfully and manage them appropriately. One of the concerns for me would be if they haven't been on the hormones long enough or they haven't had adequate endocrine care—how will that change the tissue postoperatively? I know it's a concern for top surgery and it would also be for bottom surgery. It has to be both. (Surgeon 17)

Training, Professionalism, and the WPATH SOC

When asked about the lack of published data on surgery in minors, most participants asserted that GCS in all age groups had been a very small part of surgical medicine until very recently and that data on large volumes of procedures were not yet available. Some also cited the perceived "taboo" or outright stigma in performing the surgery and therefore a certain reluctance to share results or specific techniques. One surgeon pointed to the closure of US-based academic gender services programs in the 1970s, resulting in fewer publications, no tracking data, and privatization of the procedure. But while, none of the participants reported currently tracking patients, a multidisciplinary team approach with elaborate data collection was unanimously favored by those who practiced in academic settings. A vision of close collaboration with non-surgical professionals also emerged among the private practitioners, particularly when there were added concerns of operating on pediatric patients:

My thought is that with patients like this, there should be a group formed. It should have regularly scheduled meetings. The meetings should include a surgeon, mental health professionals, and endocrinologist and/or interested parties and they should all sit at the same table to specifically assess the patient's case. So someone comes into the TG clinic and they are age 11. By the time they are 14 or 15, they may have had multiple discussions about this, they've been tracked for three or four years, there is a history there and the question becomes much clearer than someone just showing up at your office with two letters. In younger patients, it's much more important to be tracked for a few years and to not just get a snapshot of what they are at any given point in time on the temporal graph. (Surgeon 18)

A few participants described attempts to contribute their surgical expertise to the creation of post-residency programs or accredited GCS fellowships in various academic settings. For those in private practice, the complexity in shaping a transgender surgical excellence center appeared daunting and the difficulties and frustrations in coordinating private practice with teaching responsibilities were echoed by several solo practitioners. Anger and resentment at the perceived lack of established training centers in teaching hospitals sometimes spilled over in complaints that indicated a polarization of long-term practitioners against newcomers to the field who were seen as motivated by profit, often at the expense of the transgender population:

I believe that anyone who is performing vulvoplasty should have a fellowship training that is at least one year. It is going to be a rough period figuring that out, but I think we will get there eventually. I have seen horrific unethical practices by surgeons who lie about their experience and horrific results surgically as a result of that. We are using transgender people as guinea pigs and the medical profession allows this to happen. WPATH has the ability to have some teeth and regulate this more. But we don't. And while there is a concern that there are not enough surgeons and there is a 41% suicide attempt rate thrown around a lot, I don't feel that there is any emergency regarding the provision of substandard care. There have been no major changes in surgery since the 1970s or 1980s. And there has been plenty of time to establish a fellowship. And now all of a sudden because it's in the media, and really, the biggest reason for why everyone is doing it now, is the money is flowing. Because now insurance is paying. And now all these institutions have to have a program yesterday. And they are not doing it correctly, in my opinion. Seeing a week's worth of surgery—maybe for a mastectomy, or maybe for an orchiectomy, or some of these other surgeries that are closely related, but this surgery is very advanced. The complications have severe consequences on patients' lives and you can't learn it in a week. And that is what's happening; someone is going to see someone with a reputable name; they learn for a week, and they start doing them. And that is completely unethical! (Surgeon 14)

The term *Wild West* also was used by a few highly experienced surgeons who were alarmed at the absence of surgical standards and the ease of entering the subspecialty without any documented training. To remedy the potential influx of “a bunch of solo practitioners, basically cowboys or cowgirls who kind of build their little house, advertise, and suck people in” (surgeon 13), several participants called on the WPATH to assume a larger role in demanding more stringent professional requirements and contribute toward sponsoring fellowships and surgical trainings across the country. However, despite the desire for the WPATH to create mechanisms for data tracking and providing greater oversight, a plurality of participants perceived the SOC as purposely “vague” and more as “inherently flexible guidelines” when the question of lowering or keeping the minimum age requirement was brought to the forefront. In fact, approximately one third of participants agreed that the SOC were appropriate in maintaining 18 years as the minimum age criterion for vaginoplasty; the remaining surgeons favored a case-by-case approach or endorsed a shift toward accepting patients younger than 18, although none were certain when any such changes would officially occur. Surgeon 17, a urologist, encapsulated the major points of concern:

I believe in time they will probably lower it. But I don't know if it should be a number or a developmental stage.

Physiologically, it would make more sense if it were a multi-disciplinary guideline in terms of sexual maturity and emotional maturity. The problem is that it is up to interpretation, and that's where the dangers lie. But it's needed. Just because someone has reached the age of 18 doesn't mean that they are a better candidate than someone who is 16. That's the complexity and the difficulty in having a stringent age number guideline. I think it will change in time. My experience of these women is that no one just wakes up and says, “oh yeah, I think I'm a woman” at 17. This is a lifelong realization and a process of transition that's gradual. And I think that they need to consider care for the younger female patient. Mostly just because of the social implications, her happiness and her mental health—and let's not forget about the intimacy and the sexual health. To me, it would make sense to lower it and assess each patient individually. I don't know if it can be a number. To me, there might be a minimum age but I don't know what that should be. I will see a 16- or 17-year-old that I will agree to do surgery on, and then there could be another one I won't agree to, based on sexual and physical maturity.

DISCUSSION

The present study of 20 US-based, WPATH-affiliated surgeons provides novel information on how surgeons interpret the current SOC and thus shape their subjective criteria when deciding to perform vaginoplasty on female transgender minors and their overall attitudes toward best surgical practices in transgender medicine. The vast majority of surgeons agreed on a variety of methodologic and treatment issues, including patient selection and surgical techniques. In particular, plastic surgeons were biased toward penile inversion augmented by scrotal grafts, sometimes adding flank grafts, tissue expanders, or donor matrix tissue,^{27–29} and decisively rejecting intestinal vaginoplasty that would require no such additional measures and eliminate the need for lifelong dilatation. However, although diversion colitis, excess mucus, or malodor were cited by the American surgeons as negative sequelae, a meta-review of 21 studies using data on cisgender women with vaginal agenesis and transgender women reported no occurrence of diversion colitis; in addition, odor occurrence in the ileal neovagina was not observed and transient excessive discharge decreased to acceptable levels within 6 months in sigmoid-derived and ileal vaginoplasty.³⁰ Bowel vaginoplasty in transgender women is performed to a greater extent in Europe, where genitourinary surgery maintains a presence in public health-funded transgender care and acceptable patient satisfaction rates have been documented on a relatively consistent basis, most recently in a sample of postadolescent transgender women.^{31,32} The authors surmise that as rates of GCS in adolescent minors treated with gonadal steroids begin to increase, colon vaginoplasty in the

United States could become a more commonly available alternative to penile inversion, particularly as more urologic surgeons obtain training in the procedure and additional outcome studies are published in the future.

Among nearly all surgeons, the term *maturity* rather than specific chronological age defined the desired mental readiness criterion for undergoing vaginoplasty and participating in crucial postsurgical dilatation. Oberman³³ remarked that “maturity operates as a code word, invoked to permit minors access to treatments that society deems desirable, and to limit their access to treatments that carry the possibility of long-term negative consequences” [p. 127]. If the dedication to consistent dilatation represented a positive marker of mental maturity to the participants, the most significant psychological detractor was not being underage; rather, it was the looming problem of turning 18 and leaving home for college, becoming distracted by new experiences, and losing parental supervision of the long-term aftercare necessary for a final successful outcome. In fact, the penultimate senior high school year was considered the most ideal to undergo surgery, largely seen as a measure of harm reduction by the surgeons who had performed vaginoplasty on minors. Decreasing harm as a justification for transgender adolescent treatment has been previously acknowledged among different practitioners, with the vast majority endorsing earlier medical intervention to prevent psychological suffering and potentially more invasive treatments in later adulthood.^{1,34,35} Moreover, the American College of Obstetricians and Gynecologists issued a position paper noting that cisgender female teenagers seeking corrective plastic surgery procedures in the United States were motivated by a desire to “fit in” rather than stand out.³⁶ This is in sharp contrast to a recent Dutch qualitative study of gender dysphoric adolescents who unexpectedly found it difficult to define an appropriate minimum age concerning the initiation of gonadotropin-releasing hormone analogues.¹⁶ The surgeons in the present sample might be pursuing a conventional harm-decreasing strategy in balancing the putative suffering of the adolescent with the necessary elements of maturity and universally developmental milestones to secure a good surgical outcome.

Participants were almost in lockstep reliance on mental health professionals to provide two separate, detailed patient recommendation letters for surgery in accordance with the WPATH SOC. The surgeons had a clear understanding that the burden of differentiating between gender-variant children who grow up to request gender transition and those who retain their assigned gender identity falls first and foremost on behavioral clinicians, although a few participants were willing to share the ultimate responsibility for assessing the minor’s mental readiness. Milrod³⁵ described “a genuine expression of fear among clinicians in making the wrong diagnosis, based on the fact that young people often experiment with gender role behavior as a consequence of normative identity development, and perhaps more so when the adolescent is gender variant” [p. 341]. Any

such trepidation was not present among the participants who mostly denied concerns about lawsuits or fears of postsurgical regret among their adolescent patients. It appears that the preference for a team approach and dispersion of responsibility among several professionals were expressed partly as added safeguards before preoperative consultations, among them the discussion of fertility preservation. From an ethics perspective this presents a dilemma, because surgical castration is often the last link in a chain of transitioning related medical interventions. Even if the surgeon deems the teenager to be mature and expressing a definite intent to undergo the procedure, there simply might not be sufficient recognition of its finality. Recommendations in this area are to create a fertility preservation team in which the surgeon’s and hormone prescriber’s roles overlap when communicating facts, and that obtaining assent from the minor should be viewed as a continuing process rather than a singular event.³⁷⁻³⁹

Two areas of considerable divergence, if not contention, were training and professionalism in the field. Long-time private practitioners pitted their expertise against more newly practicing surgeons who allegedly operate without sufficient training and are motivated by insurance payments plus a rapidly increasing patient flow. Hafferty and Light⁴⁰ normalized these professional skirmishes as “turf battles,” indicative of an emerging area of medicine in which the “exclusive right” to perform certain procedures gradually erodes as provider organizations and hospitals begin to establish their own centers dedicated to comprehensive care for a specific population. Insurance companies also have begun to create their own standards, presumably to control costs, and have become the new gatekeepers, particularly vis-à-vis lower- and middle-income patients who benefit from procedures performed by surgeons employed in public and non-profit health care settings.⁴¹ In addition, plastic surgery residents from more than 20 accredited plastic surgery programs across North America recently expressed a critical need for more education related to transgender surgery⁴²; whether nascent fellowships and residency programs will devote a portion of their instruction to vaginoplasty in minors will probably depend on any changes to the minimum age requirement in future versions of the WPATH SOC.

Participants espoused conflicting opinions of the WPATH. On one hand, there were complaints that the organization lacked interest in promoting surgical standards or deeper engagement in sponsoring educational activities or fellowships; on the other, there was often a neutral stance toward the current age requirement and favoring the SOC as sufficiently vague, thereby not interfering with the surgeon’s selection of the appropriate surgical candidate. Paradoxical attitudes to the WPATH and its standards are not unique to this particular group of affiliated members; a study including 36 psychologists, psychiatrists, and endocrinologists in 10 countries showed that the WPATH SOC were considered “too liberal and too conservative.”⁴³ The WPATH has recently taken

action in a number of educational areas, primarily in its Global Education Initiative, to provide certification of mental health professionals and to offer surgical courses encompassing didactic sessions and cadaver laboratories.²⁴ As the field matures, it is certain that the WPATH will play a more prominent role in contributing to, if not setting, the surgical standards, particularly for genital surgeries in adolescents. The current absence of directives does not appear to stop vaginoplasties in female-affirmed minors; in fact, the rate of such procedures will likely continue to increase as surgeons refine their techniques and expand their patient population in tandem with earlier social transition and gonadal treatment of gender dysphoric adolescents in the United States.

LIMITATIONS

There are several limitations to the study. Despite attempts to include every surgeon performing transgender vaginoplasty in the United States, it was not always possible to locate surgeons who were not listed in the WPATH directory or on proprietary websites. The limited sample might not be representative of the surgical cadre at large, particularly when exploring experiences and attitudes toward vaginoplasty in minors. A larger participant pool representing WPATH-affiliated surgeons outside the United States would improve the generalizability of the study. An international surgeon study also would address the cultural differences between the United States and other regions, in which adolescent life transitions such as college attendance might be negotiated differently and potentially influence the results. The authors also are aware of age, gender, and generational cohort of participants potentially influencing the responses; for this study, however, these variables were not the focus and therefore are not presented in the results. Another consideration is the collegial relationship between the study authors and some of the participants; the surgeons might not have been entirely forthcoming in their responses because of impression management or concerns of losing anonymity in a professional community limited to a few hundred members. Future studies dealing with genital surgery in minors would benefit from the added participation of gender professionals from other disciplines in a more inclusive approach.

CONCLUSIONS

The available research literature contains no data on vaginoplasty in transgender minors. The findings of this study represent the experiences and attitudes of surgeons who until now have declined open discussion and disclosure of results that could further advance surgical treatment in transgender adolescents. The abundant data elicited from the interviews address several meaningful research questions, most importantly patient selection criteria, surgical methods, and issues critical to the future of the profession. Taken together, the study and its

findings make a significant contribution to the planned revision of the WPATH SOC.

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