

Transgender-Related Education in Plastic Surgery and Urology Residency Programs

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ABSTRACT

Background With increasing public awareness of and greater coverage for gender-confirming surgery by insurers, more transgender patients are likely to seek surgical transition. The degree to which plastic surgery and urology trainees are prepared to treat transgender patients is unknown.

Objective We assessed the number of hours dedicated to transgender-oriented education in plastic surgery and urology residencies, and the impact of program director (PD) attitudes on provision of such training.

Methods PDs of all Accreditation Council for Graduate Medical Education–accredited plastic surgery (91) and urology (128) programs were invited to participate. Surveys were completed between November 2015 and March 2016; responses were collected and analyzed.

Results In total, 154 PDs (70%) responded, and 145 (66%) completed the survey, reporting a yearly median of 1 didactic hour and 2 clinical hours of transgender content. Eighteen percent (13 of 71) of plastic surgery and 42% (31 of 74) of urology programs offered no didactic education, and 34% (24 of 71) and 30% (22 of 74) provided no clinical exposure, respectively. PDs of programs located in the southern United States were more likely to rate transgender education as unimportant or neutral (23 of 37 [62%] versus 39 of 105 [37%]; $P = .017$). PDs who rated transgender education as important provided more hours of didactic content (median, 1 versus 0.75 hours; $P = .001$) and clinical content (median, 5 versus 0 hours; $P < .001$).

Conclusions A substantial proportion of plastic surgery and urology residencies provide no education on transgender health topics, and those that do, provide variable content. PD attitudes toward transgender-specific education appear to influence provision of training.

Introduction

Medical education has recognized the importance of training physicians in the care of lesbian, gay, bisexual, and transgender (LGBT) patients.^{1–4} This broad categorization of sexual minority patients fails to distinguish between sexual identity and orientation, and overlooks the unique health needs of transgender individuals. As more insurance providers and health care systems offer coverage for gender transition, demand for physicians who are sensitive to transgender patient needs is likely to increase. A lack of individuals with relevant training may prolong already lengthy wait times for patients seeking transgender-specific surgical care in the United States.^{5–7}

No studies to date have evaluated the degree to which surgical residents are educated in the care of the transgender patient.^{5,8–11} This study aims to describe the level of transgender-oriented education

currently provided in surgical training programs, a surrogate for the surgical community's preparedness to treat patients seeking gender transition.

Methods

Study Design

An electronic hypothesis-generating survey was created with encryption, and was compliant with the Health Information Portability and Accountability Act. Program directors (PDs) of all Accreditation Council for Graduate Medical Education (ACGME)–accredited plastic surgery (91) and urology (128) training programs were invited to participate. PDs had the option of designating an alternate provider to complete the survey. Questionnaires were administered following completion of an informed consent form (provided as online supplemental material). Initial electronic invitations to participate in the study as well as subsequent reminders for participation were made at 2-week intervals via e-mail or telephone. Data were collected between November 2015 and March 2016.

Questionnaire Design

Multiple databases (MEDLINE, PubMed, and Google Scholar) were queried for publications reporting

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on LGBT medical education, using search terms “transgender,” “transsexual,” “lesbian, gay, bisexual, and/or transgender,” “gender-confirming surgery,” “medical curriculum,” “resident,” “surgery,” “plastic surgery,” and “urology.” Two independent reviewers examined the identified publications to guide development of the survey. Survey design was based on a previously developed instrument of LGBT medical education.³ The authors, along with additional input from 2 plastic surgery PDs, 1 urology PD, and a nationally renowned mental health provider specializing in gender dysphoria, assisted in developing the survey. The survey was then piloted with 10 PDs in plastic surgery, urology, and gynecology, resulting in minimal modifications to the language of some questions to produce the final instrument (provided as online supplemental material).

Outcomes

The primary outcome was the average annual number of hours spent on transgender-related didactic education or direct clinical care. Secondary outcomes included aspects of transgender care (psychiatric, medical, and/or surgical) and gender-confirming covered surgery (such as facial surgery, chest [top] surgery, genital [bottom], surgical castration, and/or management of gender-confirming surgery-related complications); the perceived importance of transgender-specific education; and the program considerations for initiating transgender educational content.

Data Coding and Preparation

Questionnaire results were independently coded by 2 investigators using the metrics for Internet surveys proposed by the American Association for Public Opinion Research.¹² A total of 10% of the data were checked for errors, with none identified. In cases of obvious keying errors (2 respondents who endorsed 1000 or more hours of clinical exposure, and 1 respondent who endorsed 250 hours of didactic exposure), data were excluded as outliers. A 4-category Likert scale was used to assess PD attitudes regarding the importance of transgender-specific education (0, not important; 1, neutral; 2, somewhat important; and 3, very important). Responses to open-ended questions were reviewed and affinity diagramming used to sort content into themes.

Institutional Review Board exemption was granted prior to participant enrollment.

Statistical Analysis

Statistical analysis was performed on completed questionnaires (n = 145). Median didactic and clinical

What was known and gap

The number of transgender patients seeking surgical care is projected to increase, yet little is known about how residents are prepared to care for this population.

What is new

A survey of program directors of plastic surgery and urology programs assessed didactic and clinical time devoted to caring for transgender patients.

Limitations

Survey study with the potential for recall and response bias.

Bottom line

Education on this topic was limited in most programs, with some not spending any time on this topic. Program director attitudes appear to affect provision of training.

hours were compared between specialties using Wilcoxon rank sum test, and mean Likert scores were compared using Student's *t* test. Comparisons of responses to categorical questions were completed using univariate χ^2 .

Results

Of ACGME-accredited plastic surgery (91) and urology (128) programs, 70% (154 of 219) responded, and 66% (145 of 219) completed the questionnaire (provided as online supplemental material).

Didactic Education and Clinical Exposure

The median time spent on transgender didactic content was 1 hour annually (range, 0–15 hours), with a median of 2 hours in plastic surgery programs (range, 0–15) and 1 hour in urology programs (range, 0–10; $P < .001$). The median reported annual hours dedicated to transgender clinical care was 2 hours (range, 0–60 hours). The TABLE describes a listing of the specific types of gender-confirming operations residents are exposed to between specialties.

Program Director Attitudes

The majority of PDs reported that transgender-specific education is important to resident training (80 of 142; 95% confidence interval [CI] 48.1–64.6; mean Likert = 1.62 ± 1). PDs of programs that delivered no direct care for transgender patients were less likely to perceive transgender-focused content as important compared with programs that offered any clinical exposure per year (12 of 44 [27%] versus 66 of 96 [69%], $P < .001$). Similarly, PDs who perceived transgender content as important were more likely to include didactic education (66 of 98 [67%] versus 13 of 43 [30%], $P = .003$; FIGURE 1). In analysis by region, PDs from the southern United States were more likely to rate training in transgender issues as less important (23 of 37 [62%] versus 39 of 105 [37%], $P = .017$; FIGURE 2).

TABLE

Exposure to Transgender Topics in Plastic Surgery and Urology Residencies

	Total, n (%)	Plastic Surgery, n (%)	Urology, n (%)	P Value
Total respondents	145 (100)	71 (49.0)	74 (51.0)	
Transgender-specific topics covered in didactic and clinical curricula				
<i>Psychiatric</i>				< .001
Yes	37 (26)	30 (43)	7 (10)	
No	104 (74)	40 (57)	64 (90)	
Don't know ^a	4	1	3	
<i>Medical (ie, hormone therapy)</i>				.45
Yes	40 (28)	22 (31)	18 (25)	
No	101 (72)	48 (69)	53 (75)	
Don't know ^a	4	1	3	
<i>Surgical</i>				.042
Yes	98 (70)	55 (79)	43 (61)	
No	43 (31)	15 (21)	28 (39)	
Don't know ^a	4	1	3	
<i>Types of surgical exposure</i>				
Facial surgery	33 (23)	33 (47)	0 (0)	< .001
Chest surgery	52 (6)	52 (73)	0 (0)	< .001
Genital surgery	73 (50)	40 (56)	33 (45)	.16
Surgical castration	42 (29)	9 (13)	33 (45)	< .001
Management of surgical complications	51 (35)	22 (31)	28 (38)	.39

^a "Don't know" responses were excluded from statistical analysis.

In addition, PDs who endorsed the importance of transgender-specific education were more likely to offer existing curricular content (FIGURE 3). See the online supplemental material for the proportion of programs already offering transgender-focused content, and those considering adding curricula in the next 5 years.

A review of open-ended questions yielded the following themes: (1) some PDs will not take action until national or international organizations mandate a curriculum; (2) transgender-specific surgical education is thought to be not suited for smaller programs; (3) local politics and payer coverage influence demand and ability to provide transgender-specific surgeries; (4) fellowship is the most appropriate setting for gender-confirming surgery training; and (5) a number of institutions are adopting multidisciplinary transgender care initiatives.

Discussion

Our results demonstrate that trainees in plastic surgery and urology are generally provided minimal transgender-related educational and clinical content, with a significant proportion of residents in both specialties receiving no transgender education.

In a study of undergraduate medical education, only 5 hours were dedicated to LGBT patient care during the 4 years of medical school.³ Similarly, a study of emergency medicine residencies revealed that

only 45 minutes were devoted to LGBT content annually.⁹ Importantly, our study demonstrated a PD's attitude toward transgender patient care was a predictor of resident exposure to transgender-focused education. This may introduce institutional biases into a trainee's education.

Cultural competency training prepares physicians to care for patients from diverse backgrounds, including all gender expressions and identities. Among the 6 ACGME competencies, education in transgender health aligns with: patient care, wherein residents must be able to provide compassionate, appropriate, and effective care; medical knowledge, requiring residents to demonstrate knowledge regarding their patients' conditions; interpersonal and communication skills, for effective information exchange with patients and other professionals; and importantly, professionalism, which requires that residents demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Although prioritized by the ACGME, cultural competency requirements vary greatly across specialties, with no defined competency requirements among plastic surgery and urology specialties, especially related to transgender patient care.¹³ Within the milestones for plastic surgery and urology, there is a similar absence of focused content on gender-confirming procedures,

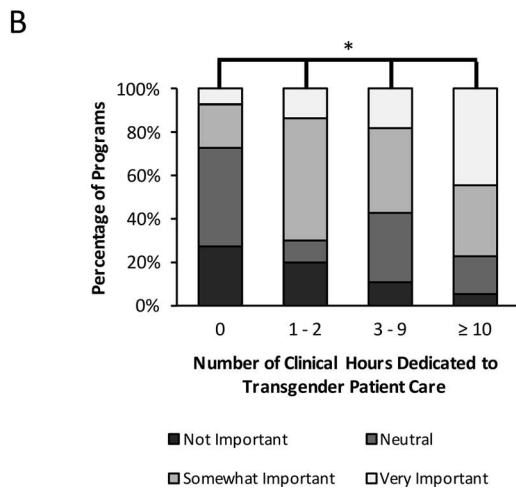
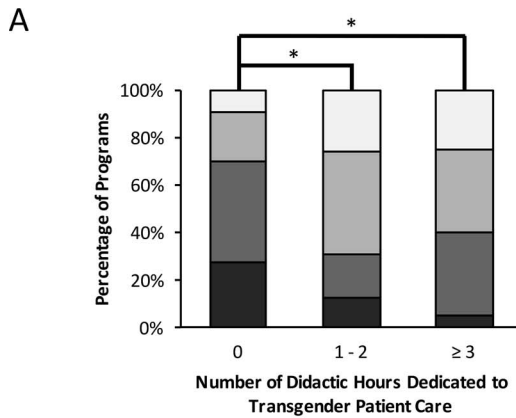


FIGURE 1
Importance of Education in Transgender Patient Care
 Note: (A) Hours of didactic exposure compared with program director (PD) attitudes toward transgender-specific education. (B) Hours of clinical exposure compared with PD attitudes toward transgender-specific education. * $P < .05$.

which highlights the importance of expanding resident education in transgender populations.

Previous studies have demonstrated a positive correlation between exposure to LGBT patients and more favorable attitudes toward treating this patient population.^{3,14,15} For example, in 2011, the Institute of Medicine report to the National Institutes of Health advocated for greater research efforts in LGBT populations. Likewise, the surgical community should attempt to uniformly support efforts to understand transgender patients' surgical needs and outcomes.¹⁶

Approximately 70% of plastic surgery residents¹⁷ and 77% of urology residents¹⁸ endorse the necessity of specialty training opportunities in gender-confirming surgery. However, our findings showed that only 24% and 11% of plastic surgery and urology programs, respectively, offer structured curricular content. This suggests an unmet demand for training in transgender care among surgical trainees.

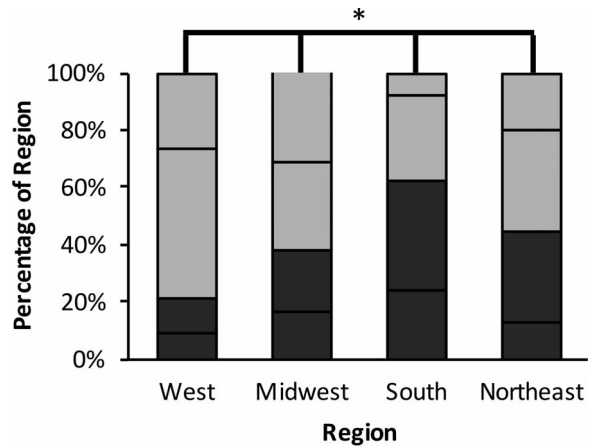


FIGURE 2
Program Director Attitudes Toward Transgender-Specific Education by Geographic Region
 Note: * $P < .05$.

Although residents' direct exposure to transgender patient care may depend on program location and practice type, there is currently no standardization of national didactic content, which would provide an opportunity to bolster resident knowledge in this underrepresented population.

This study has several limitations. First, use of didactic and clinical exposure hours may underestimate the total relevant curricular hours. In the absence of an instrument that can assess all forms of education at an institution, curricular hours have been used as a proxy in various studies.^{3,9} Similarly, the number of

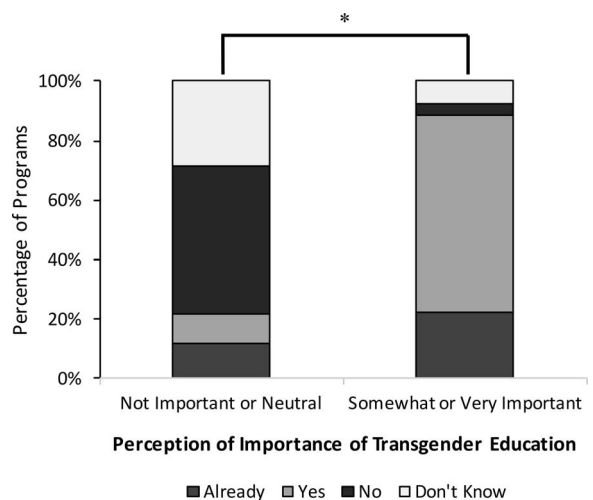


FIGURE 3
Plans to Add Transgender Curricular Content in the Next 5 Years: Comparison by Program Director Attitudes
 Note: * $P < .05$.

curricular hours does not detect the effectiveness of educational content on transgender patient care. Further studies investigating the efficacy of various forms of curriculum will be needed. It is possible that respondents may not have interpreted the questions in the instrument as intended, and all survey-based studies may be subject to inaccurate recall and response bias.

Conclusion

Plastic surgery and urology programs offer a median of 1 hour of didactic training and 2 hours of clinical exposure per year on transgender patient care, with a substantial proportion providing no exposure at all. A program director's attitude toward transgender topics impacts the quantity of resident education provided.

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