

Affirming Care Systematic Review Results

1. Anderson, J., Stoner, A. M., Jackson, A., Januchowski, R., & Myles, D. (2018). Standardized patient modules in medical school with the lesbian, gay, bisexual & transgender patient in mind. *Osteopathic Family Physician*, 10(3), 16-20.

Objective: This study was designed with the intent to serve as an exploratory pilot and first step toward integrating Lesbian, Gay, Bisexual, and Transgender (LGBT) clinical education into the curriculum of Osteopathic and southeastern medical schools.

Methods: Using a quasi-experimental study, second year Osteopathic medical students were studied for their clinical knowledge of LGBT health, attitudes toward LGBT patients, and use of sensitive language while obtaining sexual history from Standardized Patients (SPs) before and after exposure to a didactic module.

Results: We found attitudes of LGBT health to be unaffected by the intervention ($P=0.63$) while clinical knowledge improved ($P=0.11$). Sensitive language used by students during sexual history gathering was similar between groups with no correlation with student LGBT health/knowledge scores. The results support previous literature suggesting a change in medical school curriculum can increase student awareness of LGBT health needs. Attitude scores toward LGBT patients of the studied students were slightly lower than those of six other osteopathic schools, and within the constraints of this study it appears a single didactic module was insufficient in changing attitude scores.

Conclusion: With research being limited on this topic, our study provides guidance and methods for implementing LGBT care training into Osteopathic medical education. We hope our baseline data in conjunction with other studies will provoke further research into the most effective means for implementation. Further research should include multi-modal didactics including small group sessions, lectures, and clinical exposure to LGBT individual(s), as has been suggested and implemented in few other studies.

<https://ofpjournal.com/index.php/ofp/article/view/568>

2. Arora, M., Walker, K., Duvivier, R. J., & Wynne, K. (2018). The effect of an educational session on attitudes toward delivery of transgender healthcare by medical students and general practitioners in the Hunter region. *Clinical Endocrinology, Conference, Endocrine Society of Australia Annual Scientific Meeting 2017*. Australia. 2089 (Supplement 2011) (pp 2042-2043).

The transgender community reports discrimination and lack of knowledge from their health-providers; both are identified as barriers to effective healthcare.¹⁻⁸ However, health professionals receive little formal training in transgender health.⁹⁻¹⁴ A multidisciplinary team, including members of the transgender community, delivered a single education session to (a) year 3 medical students (MS) and (b) General Practitioners (GPs). Participants completed a questionnaire before and after the lecture about their capacity to deliver transgender healthcare^{15,16} A total of 81 MS and 50 GPs completed the pre-lecture survey; 79 MS and 43 GPs completed the post-lecture survey. Participants' confidence to assist with adult transition care significantly improved after the session for both MS and GPs (see Figure). After the session more participants felt they were able to assist an adolescent requesting transition (MS 14%-35%; GPs 10%-57%; $P < .001$); and provide support for a gender-questioning child (MS 15%-29%; GPs 14%-63%; $P < .001$). The understanding of

appropriate preventative cancer screening improved in MS (49%-74%) and GPs (87%-96%). A third of MS (33%) and half of GPs (49%) considered gender identity to be constant after adolescence and to have an underlying biological basis; this remained similar after education (MS 35%, $P = .17$; GPs 55%, $P = .67$). The positive safety/risk profile of hormonal and surgical treatment was found to be the most persuasive evidence for providing care. Following the intervention significantly more MS (49%-75%; $P = .002$) and GPs (77%-84%; $P = .04$) agreed that hormonal and surgical treatment should be offered to the transgender community. A single educational session changed the attitudes of MS and GPs toward the delivery of transgender health. Access to competent healthcare improves the psychological and physical health of people with gender dysphoria.^{1,17,18} Transgender health training should be available to all health-providers^{7,15,16}.

3. Braun, H. M., Garcia-Grossman, I. R., Quinones-Rivera, A., & Deutsch, M. B. (2017). Outcome and Impact Evaluation of a Transgender Health Course for Health Profession Students. *LGBT Health*, 4(1), 55-61. doi:10.1089/lgbt.2016.0119

Abstract

PURPOSE:

Being transgender is associated with numerous health disparities, and transgender individuals face mistreatment and discrimination in healthcare settings. At the same time, healthcare professionals report inadequate preparation to care for transgender people, and patients often have to teach their own medical providers about transgender care. Our study aimed to evaluate the impact of an elective course for health profession students in transgender health that was implemented to address these gaps in provider knowledge.

METHODS:

Students participated in a 10-session, lunch-hour elective course during the spring of 2015. To evaluate impact, course participants completed pre-, immediately post-, and 3-month postcourse questionnaires, including a previously validated nine-item transphobia scale, to determine the course's effect on knowledge, attitudes, and beliefs about transgender health.

RESULTS:

Forty-six students completed the pre- and immediately postelective questionnaire (74% response rate). Compared with pre-elective surveys, immediately postelective scores demonstrated increased knowledge in most domains and reduced transphobia. Specific knowledge domains with improvements included terminology, best practices for collecting gender identity, awareness of the DSM-V gender dysphoria diagnosis, medications used for gender affirmation, and relevant federal policies. A previously validated transphobia scale was found to have good reliability in the current sample.

CONCLUSION:

This elective course led to positive short-term changes in measures of multiple knowledge domains and reduced measures of transphobia among health profession students. Further study is needed to assess the long-term impact. Our methods and findings, including the demonstration of reliability of a previously validated nine-item transphobia scale, serve as formative data for the future development of theory-based transgender medicine curricula and measures.

<https://www.ncbi.nlm.nih.gov/pubmed/28075699>

4. Buhalog, B., Peebles, J. K., Mansh, M., Kim, E. A., Knott, P. D., Hoffman, W., . . . Arron, S. T. (2019). Trainee Exposure and Education for Minimally Invasive Gender-Affirming Procedures. *Dermatologic Clinics*. doi:10.1016/j.det.2019.10.009

Minimally invasive gender-affirming procedures (MIGAPs), which aim to align gender identity and expression for transgender and gender-nonbinary patients in a way that is safe, effective, and semipermanent or reversible, are gaining in popularity. This article assesses the current amount of trainee exposure in clinic and didactic sessions in core procedural specialties nationwide via survey study of program directors. Low exposure of residents and fellows to MIGAPs was observed overall and a lack of procedure-specific education. In an effort to provide excellent patient care, promote cultural humility, and improve patients' quality of life, further education regarding these procedures is necessary.

<https://pubmed.ncbi.nlm.nih.gov/32115138/>

5. Cherabie, J., Nilsen, K., & Houssayni, S. (2018). Transgender Health Medical Education Intervention and its Effects on Beliefs, Attitudes, Comfort, and Knowledge. *Kans J Med*, 11(4), 106-109.

Abstract

INTRODUCTION:

Transgender health disparities have been well documented in the literature in recent years, as have the lack of transgender health issues in medical education programs across the country.

METHODS:

A prospective study was conducted with an hour-long didactic lecture on transgender health being given to faculty, medical students, and residents at the University of Kansas School of Medicine-Wichita. The didactic lecture included educational information and presentations by transgender persons. A pre-intervention and two post-intervention survey was given to assess attitudes, comfort level, knowledge, and beliefs regarding the treatment of transgendered persons and associated health concerns. A second post-intervention survey was given at 90 days. The question of what attendees planned to do differently as a result of the intervention was asked.

RESULTS:

The intervention provided a significant positive increase in attitudes, comfort levels, and knowledge with respect to transgender health issues between the pre- and post-intervention surveys, however, did not provide a significant positive increase in beliefs on transgender health issues. There was no significant change in attitude, comfort levels, knowledge, or beliefs from the post-survey after 90 days. Four categories of what attendees planned to do differently as a result of the intervention also were identified.

CONCLUSIONS:

A didactic lecture on transgender health issues can positively change attitudes, comfort levels, and knowledge on transgender health issues significantly with the changes sustaining after 90 days. Beliefs tend to be much harder to change.

<https://www.ncbi.nlm.nih.gov/pubmed/30937150>

- Eriksson, S. E., & Safer, J. D. (2016). Evidence-Based Curricular Content Improves Student Knowledge and Changes Attitudes Towards Transgender Medicine. *Endocr Pract*, 22(7), 837-841. doi:10.4158/EP151141.OR

OBJECTIVE:

Previous studies have demonstrated that the addition of transgender medicine content to a medical school curriculum increased students' comfort and willingness to treat transgender patients. We aimed to demonstrate that (1) evidence-based curricular content would improve knowledge of and change attitudes towards transgender medicine, and (2) students would consider cross-sex hormone therapy a legitimate treatment option for transgender patients.

METHODS:

Curricular content with a focus on the biologic evidence for the durability of gender identity was added to the first-year medical program at Boston University School of Medicine. Immediately before and after exposure to the content, students were presented with an assessment of their knowledge of the etiology of gender identity.

RESULTS:

Immediately following exposure to the content, a significant number of students changed their answer regarding the etiology of gender identity so that the number of correct responses increased from 63% (n = 56) to 93% (n = 121) (P<.001). For transgender treatment, the number of correct responses increased from 20% (n = 56) before exposure to the content to 50% (n = 121) following exposure (P<.001).

CONCLUSION:

The addition of transgender medicine content to a medical school curriculum with a focus on the biologic evidence for a durable gender identity is an effective means of educating students about the etiology of gender identity and the appropriateness of cross-sex hormone therapy as a treatment for transgender patients.

<https://www.ncbi.nlm.nih.gov/pubmed/27042742>

- Grosz, A. M., Gutierrez, D., Lui, A. A., Chang, J. J., Cole-Kelly, K., & Ng, H. (2017). A Student-Led Introduction to Lesbian, Gay, Bisexual, and Transgender Health for First-Year Medical Students. *Fam Med*, 49(1), 52-56.

BACKGROUND AND OBJECTIVES:

Lesbian, gay, bisexual, and transgender (LGBT) individuals face significant health disparities. This is in part because many physicians are not sensitive to, and/or are underprepared to address, LGBT-specific concerns. To help meet this need, we, a group of second- and fourth-year medical students with faculty oversight, organized a session on LGBT health for first-year medical students.

METHODS:

The three second-year and one fourth-year student authors designed a mandatory session for the 167 first-years at Case Western Reserve University School of Medicine in Cleveland, OH. The 2-hour session consisted of a student-delivered presentation, a patient panel, and a small-group session. Students' LGBT health knowledge and confidence in providing care were assessed

anonymously before and after the session, and individuals' pre- and post-session assessments were paired using student-generated identifiers.

RESULTS:

A total of 73 complete, matched pre-/post-session assessments were received. Students' familiarity with LGBT terminology and demographics increased significantly after the session. Students' perceived preparedness and comfort in providing LGBT-specific care significantly improved in most areas as well. Students strongly praised the session, in particular the patient panel.

CONCLUSION:

A student-led educational session on LGBT health can effectively improve first-year medical students' LGBT knowledge and confidence to provide care.

<https://www.ncbi.nlm.nih.gov/pubmed/28166581>

8. Holthouser, A., Sawning, S., Leslie, K. F., Jones, V. F., Steinbock, S., Noonan, E. J., . . . Davis, J. (2017). eQuality: a process model to develop an integrated, comprehensive medical education curriculum for LGBT, gender nonconforming, and DSD health. *Medical Science Educator*, 27(2), 371-383.

Patients who are lesbian, gay, bisexual, transgender (LGBT), gender nonconforming (GNC), or born with differences of sex development (DSD) face significant health disparities. Many of these disparities originate from discrimination and systemic biases that decrease access to care and from inadequate provider knowledge that contributes to unmet medical needs. Provider training to deliver equitable care for these populations is thus critical, but such training is deficient at most medical institutions. The authors developed an integrated educational model, eQuality, that sought to drive educational and system innovation by teaching and assessing the acquisition of attitudes, knowledge, and skills needed to provide competent care for LGBT/GNC/DSD individuals. This paper outlines the process of its implementation for other programs to model. With input from an LGBT/GNC community advisory panel, eQuality incorporated new teaching sessions and revised existing content in 50.5 h of required curriculum. This curriculum involved 23 teaching faculty and included direct student-LGBT/GNC/DSD patient interactions for 320 students. The program was piloted in the first and second years of medical school and is being expanded into medical school years 3 and 4 with clinical assessments to ensure that curriculum translates into improved patient care. eQuality demonstrates that promoting healthcare equity for LGBT/GNC/DSD populations through medical education is feasible. Forthcoming baseline data will also enable future longitudinal comparisons as eQuality cultivates exceptional insight into the evolution of LGBT/GNC/DSD health knowledge and awareness among both students and faculty.

https://www.researchgate.net/publication/316023562_eQuality_a_Process_Model_to_Develop_an_Integrated_Comprehensive_Medical_Education_Curriculum_for_LGBT_Gender_Nonconforming_and_DSD_Health

9. Kelley, L., Chou, C. L., Dibble, S. L., & Robertson, P. A. (2008). A critical intervention in lesbian, gay, bisexual, and transgender health: knowledge and attitude outcomes among second-year medical students. *Teach Learn Med*, 20(3), 248-253. doi:10.1080/10401330802199567

BACKGROUND: Lesbian, gay, bisexual, and transgender (LGBT) persons represent an underserved population susceptible to health care disparities. **DESCRIPTION:** In February 2004, we implemented an LGBT health curriculum for students at the University of California at San Francisco. Confidential matched questionnaires elicited students' knowledge, attitudes, and beliefs about LGBT health issues before and after the intervention. **EVALUATION:** The surveyed population (52% response rate) was demographically similar to the entire class. There was statistically significant change in the responses to 4 of 16 questionnaire items ($p < .001$; largest absolute change was 0.57 on a 5-point scale). Students demonstrated increased knowledge about access to health care and LGBT relationships, increased willingness to treat patients with gender identity issues, and enhanced awareness that sexual identity and practices are clinically relevant. **CONCLUSIONS:** Our simple curricular intervention led to significant short-term changes in a small number of survey items assessing students' knowledge and beliefs about LGBT persons.

<https://www.ncbi.nlm.nih.gov/pubmed/18615300>

10. Marshall, A., Pickle, S., & Lawlis, S. (2017). Transgender medicine curriculum: Integration into an organ system–Based preclinical program. *MedEdPORTAL: the journal of teaching and learning resources*, 13.

Introduction: There is a recognized and articulated need for health professionals to understand the definitions, health disparities, and medical management of transgender patients. This recognition comes organically from students requesting more information, and top-down from governing bodies such as the AAMC or the Liaison Committee on Medical Education. Surveys of North American medical schools indicate that training in transgender medicine (specifically, the process of transition) is infrequent and inadequate. One problem underlying this trend may be the lack of resources to help conceptualize and roll out a transgender medicine curriculum. **Methods:** Here, we report the integration of training in transgender medicine into the organ system–based course Endocrine-Reproduction. This transgender curriculum includes coverage of basic science, clinical management, ethics, and clinical skills. The curriculum leverages an already existing, health care disparity–focused curriculum but adds (1) a didactic component for dissemination and discussion of basic science principles applied to transgender patients and (2) a mock initial encounter between a physician and patient with gender dysphoria. **Results:** Following the first-time implementation of the transgender curriculum, students were surveyed, with a large majority reporting feeling more prepared to care for transgender patients. **Discussion:** We conclude that including a multidisciplinary transgender medicine curriculum in medical school advances the goal of creating safe, effective physicians by providing fundamental knowledge about an underserved population of patients, as well as exemplified application of that knowledge.

<https://www.mededportal.org/publication/10536/>

11. Mayfield, J., De May, H., Tillery, K., Winer, J., Ball, E., Rogers, J., . . . Crandall, C. (2016). Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Healthcare in Undergraduate Medical Education: Assessment and Focused Intervention for Medical Students Transitioning to the Wards.

Abstract

Needs and Objectives The lesbian, gay, bisexual, transgender, and queer (LGBTQ) community is a diverse group that, despite recent progress, continues to face health disparities. With 3.4% of US adults identifying as LGBTQ, healthcare providers have a duty to recognize their unique needs [1]. Negative outcomes are as diverse as the community, ranging from young gay men being twice as likely to be hypertensive as their straight peers [2] to lesbian women receiving very rare or no cervical cancer screening [3]. The 2011 Institute of Medicine report on LGBTQ health identified lack of provider knowledge as one of the foremost barriers to ameliorating these disparities [4]. Furthermore, provider ignorance of LGBTQ health issues has shown to result in a negative patient experience, possibly delaying care seeking behavior [4, 5, 6]. Previous studies have shown that enhancing LGBTQ medical education has positively shaped medical students knowledge, attitudes and clinical skills [7, 8]. However, like most other medical schools, the University of New Mexico School of Medicine (UNMSOM) has had difficulty creating and integrating curricula around LGBTQ health, with only three hours of dedicated time versus the national median of five [9]. The assessment and intervention described below were important aspects of our continued efforts to improve sexual and gender minority health at UNMSOM. Though it is known that LGBTQ topics should be integrated into medical school curricula, we had limited data regarding the baseline knowledge and receptiveness of our institution's third-year medical students transitioning into the clinical clerkships. To begin to fill this gap, we developed a novel assessment tool and lecture which are mapped to the LGBTQ competencies released by the AAMC in 2014 [10]. Our goals in the session were: (1) to better understand medical students' attitudes and knowledge of terminology, basic diagnosis and management, screening and prevention, sexual history taking, and counseling; and (2) to provide students with a foundational knowledge of sexual orientation and gender identity before they entered the clerkship year.

Setting and Participants The session took place in a 1-hour block during Transitions, which is a 4-week course at UNMSOM designed to 'transition' rising third year medical students into clinical medicine. There were 79 total participants. 43 identified as female, 35 as male, and 1 declined to identify. Most were 21-25 (n=38) or 26-30 (n=35) years of age; 4 participants were 31-40 and 2 were 40+.

Description of Program/Intervention Our intervention was twofold, involving (1) an attitude/knowledge survey and (2) a focused mini lecture. In addition to demographic fields, the survey component contained a set of 14 vignette-style knowledge questions written to correspond to high-priority AAMC competencies [10]. We also included 15 attitudinal questions, 13 of which were previously administered to the same class during their first year in medical school. Following the survey, we provided the students a handout containing a series of clinical vignettes similar to questions presented in the survey. Facilitators then discussed these vignettes using the Socratic method. Following each vignette, we gave a short didactic lesson. Topics addressed included common terms and definitions (difference between sexuality, gender, and gender expression), LGBTQ health issues (depression and preventive health), and how to open a conversation with your patients about sexuality and gender.

Evaluation Two primary outcome measures were identified for the session. The first, and most important for our ongoing efforts, is the knowledge assessment. The average score was 60.8% which, when broken down by competency mappings, will help us target our curricular interventions. For example, when presented with a vignette depicting a patient with multiple identities, i.e. transgender man who has sex with men, only 30% were able to correctly identify sexual orientation. The second, a comparison of attitudinal questions administered during year 1, will yield insight into the effects of medical

education on students' perception of LGBTQ people. Discussion Our data suggest that a primary barrier to medical students' understanding of the identities and medical concerns of LGBTQ people is learners' comprehension of sexual orientation and gender identity and the terminology that describes these entities. Mastery of these concepts is crucial to understand how sexual orientation and gender identity affect healthcare delivery. Based on the results of this assessment, we have redirected our efforts to better integrate this information in the preclinical years so that students are better prepared to learn more advanced topics e.g., how LGBTQ status affects prevention, diagnosis, and management.'

<https://digitalrepository.unm.edu/ume-research-papers/1/>

12. Park, J. A., & Safer, J. D. (2018). Clinical exposure to transgender medicine improves students' preparedness above levels seen with cultural competency training and didactic teaching alone: Crucial addition to the Boston University model for teaching transgender health care. *Endocrine Reviews*, Conference, 100th Annual Meeting of the Endocrine Society, ENDO 2018. United States. 2039 (2012 Supplement 2011) (no pagination).

Abstract

Purpose: Transgender individuals are medically underserved in the United States and face many documented disparities in care due to providers' lack of education, training, and comfort. We have previously demonstrated that specific transgender medicine content in a medical school curriculum increases students' willingness to treat transgender patients. However, we have also identified that those same students are less comfortable with transgender care relative to care for lesbian, gay, and bisexual patients. We aimed to demonstrate that clinical exposure to care for transgender patients would help close this gap. **Methods:** At Boston University School of Medicine, we piloted a transgender medicine elective where students rotate on services that provide clinical care for transgender individuals. Pre- and postsurveys were administered to students who participated in the elective. **Results:** After completing the elective, students who reported "high" comfort increased from 45% (9/20) to 80% (16/20) ($p=0.04$), and students who reported "high" knowledge regarding management of transgender patients increased from 0% (0/20) to 85% (17/20) ($p<0.001$). **Conclusion:** Although integrating evidence-based, transgender-specific content into medical curricula improves student knowledge and comfort with transgender medical care, gaps remain. Clinical exposure to transgender medicine during clinical years can contribute to closing that gap and improving access to care for transgender individuals.

<https://www.ncbi.nlm.nih.gov/pubmed/29344576>

13. Safer, J. D., & Pearce, E. N. (2013). A simple curriculum content change increased medical student comfort with transgender medicine. *Endocr Pract*, 19(4), 633-637.
doi:10.4158/EP13014.OR

Abstract

OBJECTIVE:

A barrier to safe therapy for transgender patients is lack of access to care. Because transgender medicine is rarely taught in medical curricula, few physicians are comfortable with the treatment of transgender conditions. Our objective was to demonstrate that a simple content

change in a medical school curriculum would increase students' willingness to care for transgender patients.

METHODS:

Curriculum content was added to the endocrinology unit of the Boston University second-year pathophysiology course regarding rigidity of gender identity, treatment regimens, and monitoring requirements. All medical students received an online, anonymous questionnaire 1 month prior to and 1 month after receiving the transgender teaching. The questionnaire asked about predicted comfort using hormones to treat transgender individuals. Shifts in the views of the second-year students were compared with views of students not exposed to the curriculum change.

RESULTS:

Prior to the unit, 38% of students self-reported anticipated discomfort with caring for transgender patients. In addition, 5% of students reported that the treatment was not a part of conventional medicine. Students in the second-year class were no different than other students. Subsequent to the teaching unit, the second-year students reported a 67% drop in discomfort with providing transgender care ($P < .001$), and no second-year students reported the opinion that treatment was not a part of conventional medicine.

CONCLUSION:

A simple change in the content of the second-year medical school curriculum significantly increased students' self-reported willingness to care for transgender patients.

<https://www.ncbi.nlm.nih.gov/pubmed/23425656>

14. Sawning, S., Steinbock, S., Croley, R., Combs, R., Shaw, A., & Ganzel, T. (2017). A first step in addressing medical education Curriculum gaps in lesbian-, gay-, bisexual-, and transgender-related content: The University of Louisville Lesbian, Gay, Bisexual, and Transgender Health Certificate Program. *Educ Health (Abingdon)*, 30(2), 108-114. doi:10.4103/efh.EfH_78_16

Abstract

BACKGROUND:

Individuals who are lesbian, gay, bisexual, transgender (LGBT), gender nonconforming, and/or born with differences of sex development have specific health needs and significant health disparities exacerbated by a lack of training among health professionals. The University of Louisville LGBT Health Certificate Program used an interdisciplinary approach to increase training, potentially enabling future physicians to provide quality healthcare to LGBT patients.

METHODS:

A pretest-post-test design was used to investigate medical students' ($n = 39$) attitude and knowledge outcomes after program participation. Attitudinal items with Likert-type responses were analyzed using the Wilcoxon signed-rank test. Baseline frequency and percentage of correct responses were tabulated for knowledge questions. At both pre- and post-test, the 11 knowledge items were summed to establish a total knowledge score, creating two total scores. The paired sample t-test was used to evaluate the pre- and post-change, and Cohen's D was used to assess effect size. All P values were two-tailed. Statistical significance was set by convention at $P < 0.05$.

RESULTS:

Students correctly answered 69% or less of the knowledge questions at baseline. Total correct knowledge scores significantly increased post intervention with the effect size being large (Cohen's $D = 0.90$, $P < 0.001$). Attitudes significantly increased post intervention on two items ($P = 0.019$ and $P = 0.037$). Some attitude items decreased post intervention: students felt it is more challenging to conduct a patient history with a LGB patient (pre-mean agreement = 2.44; post-mean agreement = 2.97, $P = 0.018$).

CONCLUSIONS:

Medical educators can play a critical role in decreasing LGBT healthcare disparities. The University of Louisville LGBT Health Certificate Program played an important first step in increasing medical students' knowledge and improving certain attitudes about LGBT patients.

<https://www.ncbi.nlm.nih.gov/pubmed/28928340>

15. Sequeira, G. M., Chakraborti, C., & Panunti, B. A. (2012). Integrating Lesbian, Gay, Bisexual, and Transgender (LGBT) Content Into Undergraduate Medical School Curricula: A Qualitative Study. *Ochsner J*, 12(4), 379-382.

Background

The lesbian, gay, bisexual, and transgender (LGBT) community is a diverse, underserved, and often stigmatized group that faces many barriers to accessing quality healthcare. Not only are few practicing physicians knowledgeable about and sensitive to the needs of LGBT patients, but medical school curricula include limited LGBT-related content. Our goals were to use LGBT-related educational sessions to gauge undergraduate medical students' interest and their perceptions of relevance and to eventually incorporate this topic into the curriculum.

Methods

We provided 4 educational sessions to preclinical medical students at the Tulane University School of Medicine: 3 optional, 1-hour didactic sessions and 1 standardized patient encounter. Following sessions 1-3, students completed electronic feedback forms; we then analyzed their responses thematically.

Results

The thematic analysis of student responses identified key themes: a current lack of exposure to LGBT content, agreement that LGBT material is applicable to students' work as future physicians, and the relevance of including such information in the medical school curriculum.

Conclusion

The study validated the underlying assumption that LGBT educational sessions are meaningful to and valued by medical students.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3527869/>

16. Solotke, M., Sitkin, N. A., Schwartz, M. L., & Encandela, J. A. (2019). Twelve tips for incorporating and teaching sexual and gender minority health in medical school curricula. *Medical teacher*, 41(2), 141-146.

The World Health Organization has identified many barriers to improving the health of lesbian, gay, bisexual, and transgender (LGBT) patients, including challenges to incorporating and teaching about healthcare for such patients, which we call "sexual and gender minority" (SGM) health content. These challenges include structural and logistical barriers to incorporating SGM

health content into undergraduate medical curricula, as well as lack of support in identifying high-quality pedagogical methods for teaching this material. Here, we provide twelve tips for incorporating and teaching SGM health curricular content in undergraduate medical education, including resources and strategies to support individual educators. Based on our success in developing and implementing this content, we believe that our approach can be effectively used by individual educators aiming to incorporate SGM health curricular material into their teaching, and to support individuals or groups championing the inclusion of a SGM health topical sequence in medical curricula.

<https://www.ncbi.nlm.nih.gov/pubmed/29179617>

17. Streed, C. G., & Davis, J. A. (2018). Improving clinical education and training on sexual and gender minority health. *Current Sexual Health Reports*, 10(4), 273-280.

Purpose of Review

Sexual and gender minority (SGM) populations, including lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals, continue to experience significant health and healthcare disparities. One mechanism proposed to address these disparities is improving the education of healthcare professionals. This narrative review summarizes recent trends specifically in medical education related to LGBTQ/SGM populations and highlights examples of curricular innovations.

Recent Findings

Efforts are described in all levels of medical education. The predominant contributions to literature include documenting the current state of education and patient care, including further defining gaps. There are many reports of educational efforts in various institutions, with reports of outcomes mostly in the domain of activity acceptability and learner self-efficacy.

Interventions have been developed by both faculty and learners with broad acceptability and perceived value.

Summary

Existing publications continue to point out needed research in LGBTQ/SGM medical education. We also identify areas for additional innovation efforts.

<https://link.springer.com/article/10.1007/s11930-018-0185-y>

18. Stryker, S. D., Pallerla, H., & Pickle, S. (2019). Considerations on medical training for gender-affirming care: motivations and perspectives. *International Journal of Transgenderism*, 21(1), 79-88. doi:10.1080/15532739.2019.1689880

Background: Many transgender individuals lack access to needed medical care, partially due to a lack of providers with experience in gender-affirming healthcare.

Aims: The purpose of this study was to identify professional motivators for medical providers seeking out training in gender-affirming care and to define which training experiences were most beneficial to their career development. By identifying experienced providers' recommendations on which training modalities are most relevant to their practice, we aim to suggest future directions for medical education initiatives to effectively expand the transgender care workforce.

Methods: A voluntary cross-sectional electronic survey was distributed through professional listservs and publicly-available referral lists to interdisciplinary providers who self-identified as having experience in providing care to transgender individuals.

Results: One hundred and fifty-three (n = 153) physicians, physician assistants, or advance-practice nurses responded to the survey. The majority (96.7%) were located in the United

States, representing 37 states. The two most common motivators for seeking out training in gender-affirming care were filling a need in the community (73.0%) and/or having met a transgender-identified person in a clinical setting who requested care (63.8%). While many providers gained skills independently (57.3%), the two most commonly-available training opportunities were professional conferences (57.3%) and mentorship (41.3%). Respondents were most likely to recommend that others in their field be trained via structured clinical experience (e.g., a rotation or longitudinal exposure during training), rather than additional didactic training.

Discussion: This study identifies key high-yield training methodologies which could improve access to quality gender-affirming healthcare. Through integration of structured clinical experiences during training, direct clinical mentorship, and professional development at conferences on gender-affirming care, the workforce of welcoming and prepared healthcare providers for transgender patients will increase. This will lead to a tremendous improvement on access to gender-affirming care in our communities.

<https://www.tandfonline.com/doi/abs/10.1080/15532739.2019.1689880?journalCode=wijt21>

19. Thomas, D. D., & Safer, J. D. (2015). A Simple Intervention Raised Resident-Physician Willingness to Assist Transgender Patients Seeking Hormone Therapy. *Endocr Pract*, 21(10), 1134-1142. doi:10.4158/EP15777.OR

OBJECTIVE:

Lack of physician knowledge about transgender medicine is a barrier to care. An intervention with medical students changed attitudes about providing transgender medical care, but it is unknown whether at the level of postgraduate education an intervention could have a similar effect. We conducted such an intervention with resident-physicians.

METHODS:

An intervention on transgender medicine covering the durability of gender identity and hormonal treatment regimens was added to the curriculum for residents. An anonymous survey assessed the residents' knowledge and willingness to assist with hormonal therapy before and after the lecture.

RESULTS:

The percent of residents who agreed that they felt sufficiently knowledgeable to assist with hormonal therapy for a female-to-male patient increased significantly, from 5% before to 76% following the lecture ($\chi(2)$, 24.7; degrees of freedom, 1; $P < .001$). The percent of residents who reported that they felt sufficiently knowledgeable to assist with hormonal therapy for a male-to-female patient increased significantly, from 5% before to 71% following the lecture ($\chi(2)$, 24.0; degrees of freedom, 1; $P < .001$). The intervention increased resident knowledge about hormonal therapy for hypogonadal men ($\chi(2)$, 11.4; degrees of freedom, 1; $P < .001$) and women ($\chi(2)$, 9.4; degrees of freedom, 1; $P = .002$). The intervention made more residents agree that gender identity has a biologic basis that remains constant ($P < .001$) and that hormonal and surgical therapies should be offered ($P = .047$).

CONCLUSION:

The lecture significantly increased residents' knowledge and willingness to assist with hormonal therapy for transgender patients.

<https://www.ncbi.nlm.nih.gov/pubmed/26151424>

20. Thompson, H. M., Coleman, J. A., & Kent, P. M. (2018). LGBT Medical Education: First-Year Medical Students' Self-Assessed Knowledge and Comfort with Transgender and LGB Populations. *Medical Science Educator*, 28(4), 693-697. doi:10.1007/s40670-018-0614-6

Background

Medical education lags with respect to care for lesbian, gay, bisexual, and transgender populations, all of which experience disparities around access to care and health outcomes.

Objective

(1) To evaluate M1 students' perceived preparedness to care for transgender patients compared to LGB populations, (2) to identify knowledge and skills gaps, and (3) to recommend curricular developments.

Methods

An online survey was administered to M1 students ($N = 137$) and assessed knowledge of and comfort levels with special populations. Responses were compared regarding transgender and nonbinary populations to those regarding LGB ones. Analyses consisted of t tests of response means and natural language processing of a free-text field querying for knowledge and skills needed to work with these subpopulations.

Results

With a 100% response rate, students expressed significantly lower levels of knowledge and comfort regarding transgender and nonbinary populations compared to LGB ones. Natural language processing of the sentiment of the free-text field revealed greater magnitude for transgender populations (83.7 vs. 62.1) and equal average sentiment scores (0.2). Content also revealed a greater emphasis on direct interaction with trans and nonbinary persons in order to develop gender-affirming language and skills whereas LGB content focused on acquiring knowledge of LGB health issues.

Conclusions

M1 students feel less knowledgeable about and comfort with transgender persons compared to LGB ones; they want more exposure to and interaction with trans-patient experiences in order to develop gender-affirming language and clinical practices that address the range of healthcare needs.

<https://link.springer.com/article/10.1007/s40670-018-0614-6>

21. Ufomata, E., Eckstrand, K. L., Hasley, P., Jeong, K., Rubio, D., & Spagnoletti, C. (2018). Comprehensive internal medicine residency curriculum on primary care of patients who identify as LGBT. *LGBT health*, 5(6), 375-380.

PURPOSE:

Graduate medical education curricula that provide training on LGBT healthcare are limited. The purpose of this study was to create and evaluate an LGBT curriculum for internal medicine (IM) residents.

METHODS:

The implicit association test (IAT) measuring implicit bias toward gay individuals was administered as part of a needs assessment. The curriculum was developed by a multidisciplinary team, with objectives derived from the Association of American Medical Colleges' curricular recommendations and the Fenway Guide to Lesbian, Gay, Bisexual, and

Transgender Health. Surveys assessed residents' perceptions of the importance of primary care for LGBT patients, and their knowledge of and confidence in providing primary care to LGBT patients. Faculty also rated the usability of the curricular materials.

RESULTS:

The IAT showed a slight preference for straight people compared with gay people, with an average "D score" of 0.27 ± 0.42 . The importance of receiving education about the primary care of LGB patients was rated as high across the pre- to postsurveys. Knowledge improved with participation in the curriculum (average overall score: 42% pre- vs. 66% postsurvey, $p < 0.0001$). Participants' confidence in their ability to provide information to LGBT patients about resources for community engagement and to implement gender-neutral practices in their clinics increased significantly ($p < 0.05$).

CONCLUSION:

This curriculum pilot demonstrated an improvement in IM residents' knowledge of and confidence in providing care to LGBT patients. Our results suggest that curricular materials can be developed by experts in LGBT health and utilized effectively by nonexpert faculty to increase residents' knowledge and confidence regarding LGBT healthcare.

<https://www.ncbi.nlm.nih.gov/pubmed/30141734>

22. Underman, K., Giffort, D., Hyderi, A., & Hirshfield, L. E. (2016). Transgender Health: A Standardized Patient Case for Advanced Clerkship Students. *MedEdPORTAL*, 12, 10518. doi:10.15766/mep_2374-8265.10518

Introduction: Transgender patients experience poor health outcomes and often avoid seeking medical care because of negative encounters with providers. Despite growing awareness of the health disparities transgender patients face, there is very little curricular time in medical schools to improve medical students' knowledge and skills for caring for transgender patients. This standardized patient (SP) case was developed for use in a communication challenges workshop for advanced clerkship students in order to address working with transgender patients. **Methods:** This formative SP encounter takes place in a classroom as part of a half-day workshop on communication challenges with patients. We developed the case to focus specifically on skills related to obtaining patients' preferred names and pronouns, as well as taking an appropriate patient history. Materials for SP recruitment, SP training, and case implementation are included within this publication. **Results:** In preliminary uses of the case, 80% of students ($N = 64$) agreed or strongly agreed that it had increased their skills for working with transgender patients. Observational data from the debrief discussions also revealed that medical students perceived gaps in their medical training regarding LGBT health and expressed interest in their program incorporating more information on transgender health. **Discussion:** This case adds to a growing number of curricular interventions to address medical students' knowledge and skills with regard to lesbian, gay, bisexual, and transgender (LGBT) patients and, as a result, aims to address health disparities in LGBT patient populations.

<https://www.mededportal.org/publication/10518/>

23. Vance, S. R., Jr., Lasofsky, B., Ozer, E., & Buckelew, S. M. (2018). Teaching paediatric transgender care. *Clin Teach*, 15(3), 214-220. doi:10.1111/tct.12780

BACKGROUND:

We aimed to evaluate the effect of online modules - as stand-alone training - on paediatric transgender-related self-perceived knowledge, objective knowledge, and clinical self-efficacy of learners. We previously evaluated the online modules as part of a larger curriculum that included observation in a paediatric transgender clinic, and assessed change in self-perceived knowledge.

METHODS:

Paediatric interns, psychiatry interns, fourth-year medical students and nurse practitioner students were administered assessments before and after the completion of six online modules focused on medical and psychosocial considerations for transgender youth. The assessments queried learner demographics and transgender clinical exposure. Nine items tested transgender-related objective knowledge. Twenty-four items asked learners to rate self-perceived transgender-specific knowledge (1, not at all knowledgeable; 5, completely knowledgeable). Thirteen self-efficacy items asked learners to rate confidence in their ability to evaluate and counsel these youth (0, not at all confident; 10, completely confident). Overall and subscores were calculated for each domain. Wilcoxon signed-rank tests were used to compare the pre- and post-module scores.

RESULTS:

Thirty-six learners were eligible to join the study and 86% (n = 31) participated. Among the participants, 90% (n = 28) completed both assessments. The median number of transgender patients seen before the curriculum was one, and 10% had past experience in a transgender clinic. Comparing pre- and post-module scores, the overall objective knowledge scores increased from 22 to 56% (p < 0.001), self-perceived knowledge scores increased from 1.8 to 3.8 (p < 0.001) and self-efficacy scores increased from 3.5 to 7.0 (p < 0.001). [What is] the effect of online modules on paediatric transgender-related self-perceived knowledge [?] DISCUSSION: This study suggests that e-learning was an effective stand-alone intervention to enhance transgender-related knowledge and self-efficacy in interdisciplinary learners.

<https://www.ncbi.nlm.nih.gov/pubmed/29573566>