MedEdPORTAL®
The Journal of Teaching and Learning Resources

Original Publication

Incorporating LGBT Health in an Undergraduate Medical Education Curriculum Through the Construct of Social Determinants of Health

M. Brett Cooper, MD*, Mariam Chacko, MD, Jennifer Christner, MD
*Corresponding author: cooper.113@wright.edu

Citation: Cooper MB, Chacko M, Christner J. Incorporating LGBT health in an undergraduate medical education curriculum through the construct of social determinants of health. *MedEdPORTAL*. 2018;14:10781. https://doi.org/10.15766/mep_2374-8265.10781

Abstract

Introduction: The AAMC has provided a resource to medical schools for implementing curricular change in lesbian, gay, bisexual, and transgender (LGBT) health education. However, studies have identified that many health professionals who do not feel comfortable in their ability to provide quality care for LGBT patients do not perform complete sexual histories routinely and/or harbor bias towards these patients or their sexual practices. This situation underscores the continued need for further education on this topic. **Methods:** Based on a needs assessment survey of medical students and faculty, we developed a 1-hour didactic lecture to provide instruction on how social determinants of health impact the care of LGBT patients. Students were not required to have any prerequisite knowledge for the session. A content expert in LGBT health taught the lecture using Microsoft PowerPoint in a traditional medical school lecture hall. **Results:** The lecture was given to 180 third-year medical students. A total of 63 students (35%) responded to the retrospective pre- and postlecture survey. After the didactic lecture, students reported a statistically significant change in their knowledge of the lecture objectives. **Discussion:** The didactic lecture was able to increase students' knowledge of how social determinants impact the health of LGBT patients. The lecture can be incorporated into a longitudinal curriculum on LGBT health. Additional work and research are needed on increasing comfort in faculty teaching.

Keywords

Social Determinants of Health, Health Disparities, LGBT, Lecture, Sexual Minorities

Appendices

A. Student SDH Presentation .pptx
B. Student Pre-Post Survey .pdf

All appendices are peer reviewed as integral parts of the Original Publication.

Educational Objectives

By the end of this activity, learners will be able to:

1. Describe the unique health risks and challenges often encountered by lesbian, gay, bisexual, and transgender (LGBT) and gender-diverse patients.
2. Explain how stages of physical and identity development across the life span affect LGBT and gender-diverse patients.
3. Describe historical, political, institutional, and sociocultural factors that may underlie health care disparities experienced by LGBT and gender-diverse patients.
4. Identify at least two community resources that provide support to LGBT and gender-diverse patients.
5. Describe how homophobia, transphobia, heterosexism, and sexism affect health care inequalities, costs, and outcomes.

Introduction

Undergraduate medical education in the United States has historically been lacking in lesbian, gay, bisexual, and transgender (LGBT) content. Previous studies have placed the estimate of lesbian, gay, and bisexual Americans at 3.5% and transgender Americans at 0.3% of the population, with anywhere from 8% to 11% of Americans reporting same-sex behavior or attraction.[1] In a survey of medical school deans published in *JAMA* in 2011, the median number of hours of LGBT education across all 4 years of undergraduate medical education was 5.[2] There were 14 schools with no LGBT curricula in the preclinical

years, and 33% had no clinical LGBT content. Of note, only 24% reported the quality of their LGBT education as good or very good. In a 2016 *Academic Medicine* article, Eckstrand, Potter, Bayer, and Englander[3] discussed utilizing the existing Physician Competency Reference Set to give context to the Association of American Medical Colleges' professional competencies to improve health care for people who are or may be LGBT or gender nonconforming. Eckstrand and colleagues identified one gap in physician performance by stating,

> Many health professions students and practicing physicians who do not feel comfortable in their ability to provide quality care for LGBT patients . . . do not perform complete sexual histories routinely . . . and/or harbor implicit bias toward LGBT patients or certain sexual practices.[3]

Providing appropriate care to these patients requires comfort and skill in eliciting their sexual histories and is one area for improvement so that future generations of physicians can fill this gap. Eckstrand and colleagues also noted the need to develop milestones for LGBT health that can be matched to complementary assessments.

In the international literature, a 2013 study done in South Africa evaluated LGBT education at the University of Cape Town.[4] In the province surrounding the university, 16% of patients delayed or did not seek care for fear of homophobia. Faculty at the university were surveyed to assess which LGBT health topics they were teaching. Of 127 respondents from 31 divisions at the medical school, only 10 were teaching LGBT health topics. The most common topics taught were definitions of sexual orientation, barriers to care, and transgender transition. In addition, there was no structured approach to teaching LGBT health at the medical school. Only one respondent included LGBT health topics in an Objective Structured Clinical Examination. The study's author suggested maximizing ways to measure knowledge, attitudes, and skills on LGBT health topics.

A 2002 study conducted in Australia showed that 30% of health care students felt uncomfortable treating lesbians and 27% treating gay males.[5] The study also mentioned that if medical history taking is heteronormative, then one misses opportunities for prevention or care in LGBT patients.

In light of the above data, we conducted an anonymous needs assessment survey at our institution to assess student and faculty comfort with providing health care to LGBT patients. MS1-MS4 students were asked to indicate comfort with topics relating to LGBT health and to identify topics for which they would like additional instruction. Faculty were surveyed regarding their comfort in teaching medical students the knowledge and skills for the same topic areas. Medical students reported that the top three topics for which they were uncomfortable providing care were transgender health, pregnancy options for LGBT patients, and handling family dynamics with LGBT patients. Faculty reported that the top three topics they were uncomfortable teaching to medical students were sexual/gender minority community resources, transgender health, and pregnancy options for LGBT patients.

We chose medical students for this intervention in order to prepare them for residency training and independent practice. Due to the increased visibility of LGBT people in society, today's medical students are more informed about LGBT health topics than previous generations. Many medical students today are well versed in terminology and may have friends and/or family who identify as LGBT. However, this does not imply clinical proficiency in the topic area. A 2017 study done at a medical school in Canada reported that although only 31% of respondents witnessed anti-LGBT discrimination during their training, the source of the discrimination in 88% of cases was other medical students.[6] This finding suggests that there is still work to do to ensure that students are able to practice empathic care not only with their patients but also with their peers. Given the large gaps in the literature on medical student comfort with this population, our rationale was to try to identify and fill some of those gaps at our institution. This included going beyond

basic recognition of LGBT status to be able to identify political, cultural, and socioeconomic factors that may influence health outcomes in this population.

Our teaching session represents a unique contribution to the literature by going beyond what is traditionally taught on LGBT health. While typical didactic lectures on LGBT health in medical school curricula focus on introducing students to basic terminology, transgender health, and/or disparities faced by this population,[7,8] our didactic lecture represents a novel approach. We chose to teach these principles utilizing the construct of social determinants of health, thereby allowing students to understand how political, social, cultural, and medical practice factors have led to the disparities that are taught in typical lectures.

While this curriculum could be scaled up to the resident/fellow level, the variety of programs and associated milestones would require significant customization beyond the scope of this project. In addition, the lecture is intended to be broad in its application so that the students have a solid foundation before beginning the specialization of residency training.

Methods

Based on the results of a needs assessment survey offered to all medical students at our institution, we developed a 1-hour didactic lecture on social determinants of health from an LGBT perspective. The first author piloted this lecture on two separate occasions with a group of pediatric endocrine trainees/faculty and a group of adolescent medicine trainees/faculty prior to its introduction into the medical student curriculum.

The curricular context for our novel teaching session was that it was one in a series of lectures for third-year medical students in a new course entitled Determinants, Disparities, and Social Health of Populations. This course was intended to introduce the concept of social determinants of health, as well as to show how they impact the patients that the students will serve. We developed our lecture (Appendix A) to address how being a member of a sexual/gender minority impacts patients' health and well-being, as well as how sexual/gender minority status intersects with other social determinants of health. To participate in the lecture, students were not required to have any advance knowledge on the topic. Relevant terms were defined throughout the lecture. Because our lecture was one in a series, students had been introduced to the concept of social determinants of health in a previous lecture.

Our didactic lecture discussed not only how sexual/gender minority status (being LGBT) affects health care outcomes for patients but also how other social determinants of health, such as race, socioeconomic status, and gender, intersect with this minority status to potentially compound the outcomes of sexual/gender minority status alone. For example, men who have sex with men (MSM) have a higher risk of HIV acquisition than their heterosexual counterparts, but African American MSM have an even higher risk than white or Latino MSM.

The first author implemented and delivered this 1-hour didactic lecture in a traditional medical school lecture-hall classroom with approximately 180 students in attendance. The lecture was created with Microsoft PowerPoint and was projected onto a white screen at the front of the lecture hall using a standard electronic projector. The lecture was intended to be interactive. The audience was current third-year medical students near the end of their third year of medical school. The facilitator for the session should be a content expert in LGBT health disparities, as well as familiar with the concept of social determinants of health. Only one facilitator is needed per session, but having more than one could enhance the experience for students. The lecture is ideally given in a large room with audiovisual equipment and a class size of at least 50 students to allow for robust audience participation.

After the lecture, students were asked to fill out a retrospective pre- and postlecture survey evaluation (Appendix B) regarding their ability to complete each of the lecture objectives. This was done via an

anonymous survey posted to the students' online Blackboard course page. The survey was developed to evaluate the knowledge-based objectives of the didactic lecture. We chose the retrospective pre/post evaluation survey method for convenience and to minimize response shift bias. The students were asked to rank their ability to do each of the lecture objectives on a 10-point rating scale (1 = *low,* 10 = *high*). In addition, students were asked to provide qualitative feedback on the lecture. An image of the evaluation was shown at the end of the lecture, and students were instructed how to complete the survey.

Results

Of 180 third-year medical students in attendance, 63 responded to the retrospective pre/post survey following the lecture (35% response rate). Pre- and postlecture values were analyzed via a paired *t* test using SPSS. The results of the survey are described in the Table. Students reported a statistically significant change in the mean rating of their knowledge after delivery of the lecture.

Table. Mean Student Ratings With 95% CIs for Lecture Objectives ($N = 63$)[a]

	Prelecture		Postlecture		
Objective	***M***	**95% CI**	***M***	**95% CI**	***p***
1. Describe the unique health risks and challenges often encountered by LGBT and gender-diverse patients.	5.8	5.4-6.2	8.1	7.8-8.4	<.01
2. Explain how stages of physical and identity development across the life span affect LGBT and gender-diverse patients.	5.1	4.6-5.6	7.7	7.3-8.1	<.01
3. Describe historical, political, institutional, and sociocultural factors that may underlie health care disparities experienced by LGBT and gender-diverse patients.	5.0	4.5-5.5	7.9	7.5-8.3	<.01
4. Identify at least two community resources that provide support to LGBT and gender-diverse patients.	3.7	3.1-4.3	8.1	7.5-8.7	.041
5. Describe how homophobia, transphobia, heterosexism, and sexism affect health care inequalities, costs, and outcomes.	5.5	5.1-5.9	8.2	7.9-8.5	<.01

Abbreviations: CI, confidence interval; LGBT, lesbian, gay, bisexual, and transgender.
[a]Rated on a 10-point scale (1 = *low,* 10 = *high*).

Overall, students indicated that they enjoyed the lecture, stating, "I appreciate this perspective, given my previous unfamiliarity with the issues facing this particular population," and "I really enjoyed this lecture. It was such a genuine and thought-provoking account of different issues related to LGBT health." One student commented,

> This lecture would have been strengthened with more political history involving LGBTQ+ community. It puts into perspective how many of the things contributing to disparities faced by this specific population are more systemic and structural than we are able to appreciate at first glance.

This last comment suggests a future emphasis for the lecture on how sociopolitical factors have engendered many of the health disparities that the LGBT population continues to face today.

Discussion

This publication reflects a novel approach to teaching LGBT health within the context of an undergraduate medical education curriculum. Previous curricula have focused on teaching specific LGBT health topics; this didactic lecture helps introduce students to how various social determinants of health can impact the lives of LGBT patients. Due to its generalizability, the lecture can easily be adapted by other institutions to complement their existing curricula. The lecture can also be adapted by residency/fellow training programs to provide additional education for their trainees.

One of the challenges faced in implementing this curriculum was finding time within the existing course framework to adequately address the topic. LGBT health education is currently dispersed through various parts of the undergraduate medical curriculum at our institution, and adding additional content was challenging. LGBT health content also has to compete with other new information in medical education. To reinforce the didactic lecture, we designed a case study for students to discuss within a small-group framework. Although the students were able to learn new information from the lecture, ideally they would apply this knowledge through the case study. This would allow for richer discussion than could be done in

the context of a large lecture hall. However, due to shortening of the time allotted for the session, the case study had to be cut. The lesson learned from our experience is that curricular change happens slowly and one should not be discouraged when content must be cut.

Another limitation of our curriculum was that given the space and time allotted for this lecture, we were only able to focus on LGBT individuals as a whole, with an increased emphasis on MSM and trans individuals as a group. We were not able to adequately address all subpopulations within the LGBT umbrella, such as sexual minority women, those who identify as bisexual, and those with nonbinary gender identities, or delineate unique differences between those with a trans masculine identity versus those with a trans feminine identity. This is important, as these populations are often invisible in the research literature and society due to increased stigma surrounding them. Their unique disparities warrant further exploration and should be the subject of further development in this curriculum.

While one of the strengths of our evaluation lies in its retrospective pre/post design, [9] our evaluation instrument also has limitations that impact our ability to judge the true success of this intervention. First, the evaluation measures only students' perceived abilities to perform the objectives, rather than their actual performance. This may have led participants to overestimate their abilities. Second, the response rate of 35% may have impacted the generalizability of our results. It is possible that the students who chose to respond to the survey were those who were interested in the topic and therefore more apt to respond. These students may have had higher baseline abilities, which could have led to less of a detectable difference in attitudes from the intervention.

Information gathered from the needs assessment, as well as feedback on the existing lecture, will be used in the future to develop a longitudinal curriculum on LGBT health for students that spans the length of undergraduate medical training. Previous research has demonstrated that increased exposure to LGBT patients is associated with higher knowledge scores, as well as higher desire and willingness to provide care to LGBT patients, among medical students.[10] This curriculum could also be adapted for graduate medical education. The concept of social determinants of health is not often integrated into most traditional residency and fellowship programs, despite these issues affecting millions of patients across multiple specialties.

For this topic area to be successfully taught to medical students, institutions require faculty who are competent and comfortable with teaching the material. Although not the focus of this educational session, our needs assessment revealed that faculty development and training on LGBT health are areas for further study and improvement in order to make delivery of this content successful.

M. Brett Cooper, MD: Clinical Fellow, Department of Pediatrics, Section of Adolescent and Sports Medicine, Baylor College of Medicine

Mariam Chacko, MD: Professor, Department of Pediatrics, Section of Adolescent and Sports Medicine, Baylor College of Medicine

Jennifer Christner, MD: Dean, School of Medicine, Baylor College of Medicine

Acknowledgments
The first author would like to acknowledge Rachel Wolfe, PhD, and David Paul, MD, for their contribution to the development of this project and Connie Wiemann, PhD, for her contribution to data analysis and interpretation.

Disclosures
None to report.

Funding/Support
None to report.

Ethical Approval

The Institutional Review Board for Human Subject Research for Baylor College of Medicine and Affiliated Hospitals approved this study.

References

1. Gates GJ. How many people are lesbian, gay, bisexual, and transgender? Williams Institute website. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People-LGBT-Apr-2011.pdf. Published April 2011.
2. Obedin-Maliver J, Goldsmith ES, Stewart L, et al. Lesbian, gay, bisexual, and transgender–related content in undergraduate medical education. *JAMA*. 2011;306(9):971-977. https://doi.org/10.1001/jama.2011.1255
3. Eckstrand KL, Potter J, Bayer CR, Englander R. Giving context to the Physician Competency Reference Set: adapting to the needs of diverse populations. *Acad Med*. 2016;91(7):930-935. https://doi.org/10.1097/ACM.0000000000001088
4. Müller A. Teaching lesbian, gay, bisexual and transgender health in a South African health sciences faculty: addressing the gap. *BMC Med Educ.* 2013;13:174. https://doi.org/10.1186/1472-6920-13-174
5. Jones MK, Pynor RA, Sullivan G, Weerakoon P. A study of attitudes toward sexuality issues among health care students in Australia. *J Lesbian Stud*. 2002;6(3-4):73-86. https://doi.org/10.1300/J155v06n03_07
6. Nama N, MacPherson P, Sampson M, McMillan HJ. Medical students' perception of lesbian, gay, bisexual, and transgender (LGBT) discrimination in their learning environment and their self-reported comfort level for caring for LGBT patients: a survey study. *Med Educ Online*. 2017;22(1):1368850. https://doi.org/10.1080/10872981.2017.1368850
7. Mehringer J, Bacon E, Cizek S, Kanters A, Fennimore T. Preparing future physicians to care for LGBT patients: a medical school curriculum. *MedEdPORTAL*. 2013;9:9342. https://doi.org/10.15766/mep_2374-8265.9342
8. Gallego J, Knudsen J. LGBTQI* defined: an introduction to understanding and caring for the queer community.*MedEdPORTAL*. 2015;11:10189. https://doi.org/10.15766/mep_2374-8265.10189
9. Rockwell SK, Kohn H. Post-then-pre evaluation. *J Extension*. 1989;27(2).
10. Sanchez NF, Rabatin J, Sanchez JP, Hubbard S, Kalet A. Medical students' ability to care for lesbian, gay, bisexual, and transgendered patients. *Fam Med.* 2006;38(1):21-27.

Received: July 3, 2018 | **Accepted:** October 29, 2018 | **Published:** December 7, 2018