Purpose:
Significant health disparities exist for lesbian, gay, bisexual, and transgender (LGBT) people. Training to address systemic disparities in LGBT health care is absent or underdeveloped at most medical schools. eQuality at the University of Louisville mapped first- and second-year undergraduate medical education curriculum to the AAMC’s LGBT health competencies. The purpose of this study was to assess students’ knowledge and attitudes pre/post intervention to understand whether the eQuality intervention better prepares students to treat LGBT patients.

Approach/Methods:
We developed the eQuality intervention with input from an LGBT community advisory panel and incorporated 49 hours of new or modified content into required curriculum. Twenty-three teaching faculty contributed to the curriculum, which included direct student-LGBT patient interactions. We completed a cross-sectional evaluation of eQuality with comprehensive LGBT-health knowledge (55-item) and attitude (67-item) assessments designed from published surveys. Pre/post assessments were administered to all students in fall 2015/spring 2016. First/second-year cohorts (MS1/MS2, N=318) received eQuality and served as an intervention group while third/fourth-year cohorts (MS3/MS4, N=312) served as a control group that did not receive the curriculum. Intervention effects were tested using analysis of variance models adjusted for baseline scores. The study was approved by the IRB.

Results/Outcomes:
Eighty-one percent of MS1-MS4 students completed pre/post assessments (Intervention N=278, Control N=230). Students receiving eQuality showed a greater increase in knowledge scores in comparison to the control group (M=7.87 versus M=2.64, F=45.9, p<.001). Baseline knowledge scores were lower for intervention students who self-identified as religious and/or conservative. These students’ knowledge scores increased at the same rate as other intervention students and more than control students self-identifying as religious and/or conservative. Analysis of intervention effects on attitude are forthcoming; baseline attitude scores were significantly lower for the intervention group than the control group, (M=3.78 versus M=3.93, F=10.02, p=.002). Qualitative responses suggested that many students in the intervention group appreciated eQuality curriculum and had not realized the severity of LGBT health disparities prior to the intervention. Self-reported confidence scores about LGBT health knowledge also significantly improved after participation in the intervention compared to controls (M=2.20 versus M=1.83, F=84.25, p<.001).

Discussion:
The pilot year of the eQuality curriculum demonstrated significantly improved student knowledge and confidence regarding LGBT health. Smaller knowledge gains and higher baseline attitude scores in the control group suggest that, while LGBT health knowledge/attitudes may improve intrinsically during clinical years possibly due to patient exposure, a comprehensive curriculum is needed to make broader, meaningful gains. Furthermore, knowledge gains made by the intervention group—despite having less inclusive attitudes toward LGBT populations at baseline than the control group—suggest that this curriculum could improve competency among medical students with disparate personal beliefs and backgrounds.

Significance:
Integrating an LGBT curriculum is feasible and effective in improving medical student knowledge toward LGBT health. Longitudinal tracking of attitudes, knowledge, and skills gained after multiple iterations of eQuality, as well as the
incorporation of clinical assessments and integration into medical school years three and four, may yield greater improvements toward LGBT health. The eQuality program can model healthcare equity training in undergraduate medical education to help prepare students to effectively treat these patient populations.

References: References:
1. AAMC Advisory Committee on Sexual Orientation, Gender Identity, and Sex Development. Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who are LGBT, Gender Nonconforming, or Born with DSD. Washington, DC: Association of American Medical Colleges; 2014.

Level of Audience: Early-career
Focus of Presentation: UME
PRESENTER: Susan Sawning
AUTHORS/INSTITUTIONS: S. Sawning, A. Holthouse, S. Steinbock, L. Weingartner, L.J. Martin, K. Leslie, V. Jones, E.J. Noonan, E. Cash, M. Shaw, University of Louisville, Louisville, Kentucky, UNITED STATES|J. Potter, Harvard University, Cambridge, Massachusetts, UNITED STATES|J. Davis, The Ohio State University College of Medicine, Columbus, Ohio, UNITED STATES|K. Eckstrand, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, UNITED STATES
Purpose: Transgender individuals face various health disparities, including increased prevalence of psychiatric disorders, substance abuse, and suicide. The biggest barrier to medical care for transgender patients is lack of providers with expertise in transgender medicine. Despite the increasing recognition of this population's needs, few medical schools provide formal education on transgender health. The purpose of this study is to evaluate the impact of an educational module on transgender health on medical students.

Approach/Methods: A brief online module reviewing transgender health was introduced into the preclinical medical school curriculum. Anonymous survey instruments were completed before and after module completion, which included demographic information. Perceived skills and attitudes were assessed by level of agreement with 19 five-point Likert statements. Knowledge was assessed using 9 true/false and multiple choice questions. The primary study sample group consisted of Year 2 medical students. Year 1 medical students who were not exposed to the study intervention served as a control group. One-way ANOVA and Chi-square tests of association were performed to compare scores before and after intervention, and between groups.

Results/Outcomes: A total of 131 (32.8% response rate) students completed the survey at baseline and 59 (29.5% response rate) students followed up after the module. Results of a one-way ANOVA demonstrated a significant increase in perceived skills to care for transgender patients between Year 2 pre-test (mean=2.90) and Year 2 post-test (mean=3.73) (p=0.000). Differences in measures of attitudes pre- (mean=4.27) and post-test (mean=4.19) were not statistically significant (p=0.56). Scores on knowledge items significantly improved on four of eight items. Correct responses on Items 1 (Chi-square=4.38, p=0.04), 7 (Chi-square=7.94, p=0.005), 8 (Chi-square=5.21, p=0.023), and 9 (Chi-square=49.81, p=0.000), the latter three specifically assessing medical practices for transgender patients, were statistically different from pre to post test.

Discussion: Exposure to the educational module significantly improved measures of perceived skills and knowledge, but did not effect a change in attitude scores. Differences in attitude were likely insignificant due to a pre-existing high level of agreement regarding the importance of transgender care.

Significance: This study demonstrates the effectiveness of incorporating a brief electronic education module in improving medical students' skills and knowledge about transgender health. It remains to be seen whether improved education on transgender issues will improve future clinical care for these patients.


Level of Audience: Mid-career

Focus of Presentation: UME

PRESENTER: Riley Smith | JC Chen

AUTHORS/INSTITUTIONS: R. Smith, J. Chen, C. Walker, R. Cooper, J. Schaffir, College of Medicine, The Ohio State University, Columbus, Ohio, UNITED STATES
Purpose: Reproductive justice (RJ) highlights the social, cultural, political and economic inequalities that exist in reproductive health. Reproductive justice education and training for health care providers is important because physicians contributed to past and ongoing reproductive injustices in the United States, including coercive sterilization and contraceptive practices. Currently, there is no formalized physician education in RJ. Training in RJ can help realize larger transformative medical education goals, as RJ values encourage advocacy and linkage with community organizations. Moreover, education in RJ can address undergraduate and graduate medical education competencies in professionalism, cultural competency, and patient communication.

In this first step in curriculum design, we collaborated with a multidisciplinary team of RJ experts using a Delphi method to determine what topics to cover in a RJ curriculum for physicians.

Approach/Methods: With the guidance of an Advisory Board of senior leaders in RJ, we recruited a cohort of experts who work in RJ advocacy, academics and research. This multidisciplinary group participated in a three-round Delphi survey, which is a qualitative method used to anonymously elicit expert opinion and determine expert consensus. In the first round, participants answered open-ended questions about what RJ-related topics should be included in the curriculum. These qualitative data were analyzed using an iterative content analysis process to create a codebook of curriculum topics. Topics were then organized into broad thematic areas. In the next round, experts were asked to rate agreement the inclusion of each topic in the curriculum, using a 5-point Likert scale. Agreement of greater than 85% agreement was considered consensus on a topic. Additionally, experts were offered the opportunity to revise and recommend additional topics. In the third round, revised topics were re-rated and final comments collected.

Results/Outcomes: A total of 70 RJ experts were recruited to participate and 42 (60%) completed the first Delphi survey. Qualitative analysis resulted in 58 recommended curriculum topics. We then categorized individual topics into 12 broad themes: defining RJ, advocacy training; historical injustices; legal issues; oppression; power and privilege; health disparities; healthcare access; reproductive health topics; LGBTQI Health; cultural competency and diversity; communication skills; and patient care. Participants agreed that 52 (89%) topics should be included in the reproductive justice curriculum for physicians. They agreed unanimously that physicians should learn how to: define reproductive justice; advocate using RJ values; recognize power differentials and create an inclusive environment for patients.

Discussion: Through expert opinion, we were able to identify topics that should be included in a RJ curriculum for physicians. These topics included novel content areas that are important for incorporation into medical education and are relevant for competency outcomes within undergraduate and graduate medical education. Moreover, themes involving advocacy, cultural competency, communication skills and patient care involve new kinds of skill building, which can help meet transformative educational goals in medicine.

Significance: We systematically elicited and promoted reflection on experts’ recommendations to design a novel curriculum in reproductive justice that will meet educational goals in both undergraduate and graduate education.


Level of Audience: Early-career
Focus of Presentation: UME, GME
PRESENTER: Charisse Loder
AUTHORS/INSTITUTIONS: C. Loder, C.M. Stalburg, L.H. Harris, University of Michigan, Ann Arbor, Michigan, UNITED STATES
Purpose: Underrepresented minorities in medicine (URiM) across the continuum of training experience difficulty obtaining mentors.\(^1\,\(^2\) even prior to college.\(^3\) Near-peer mentorship may be a strategy to engage with prospective medical students. We sought to explore the value of medical and premedical high school students peer-mentorship relationships.

Approach/Methods: The Doctors of Tomorrow (DoT) program is a high school and medical school partnership pipeline program between the University of Michigan Medical School and Cass Technical High School, a public college preparatory school in Detroit, MI. It includes mentorship, hands-on clinical experiences, academic preparation, and professional development. Transcripts from 2 focus groups with high school students, 71 personal narratives, and transcripts from 2 focus groups and 11 semi-structured interviews with medical student mentors were examined to explore their mentor relationships and experiences in the program. All data was reviewed iteratively to generate initial codes, and compared and discussed among the authors (GS, PR) to ensure trustworthiness of the analysis. Recurring codes were organized into categories, then further compared, scrutinized and organized into broader themes (AH, GS, PR).

Results/Outcomes: 113 high school students and an equivalent number of medical students participated in the DoT program from 2012 to 2016. High school student protégés and mentors valued their peer mentorship relationships based on the frequency of regular personal contact (i.e., via email, text, or in-person). One protégé commented, "…having lunch and talking with my mentor. This is important and memorable, because he was helping and telling me about medical school. My mentor always sent me emails over the breaks to make sure that I was doing well, and to see how I was enjoying myself." Another theme we identified was the importance of the longitudinal nature of the experience, "I also will learn so much myself as I form this longitudinal relationship with a student. I would love to really push myself to become a friend and someone to look up to for the student." The final theme we identified was the value of common interests they shared between mentors and protégés. Both parties expressed the importance of integrating opportunities to share personal interests in addition to having discussions about academic medicine. One protégé noted, "[My mentor] shared stories about her family which is quite similar to mine. She talked about her experience in college and then she talked about medical school... When the meeting came to a close I didn’t want to go home. I wanted to stay planted in my chair talking to her. That night I stayed up thinking about the medical field."

Discussion: The mentorship relationships provided high school students with an intimate view of the medical profession. Mentorship pairs were not racially congruent, however protégés were able to recognize similarities in their own interests, and personal traits with that of their mentor.

Significance: Near-peer relationships between high school and medical students may be an innovative strategy to promote health care careers, increase access to mentorship and develop meaningful mentorship relationships for URiM pre-college students.


Level of Audience: Mid-career

Focus of Presentation: UME, GME

PRESENTER: Adrianne Haggins