

## Student-led symposium on patient-centered reproductive healthcare

Lauren Oliver<sup>1</sup>, Sarah Beth Bell<sup>2</sup>, Christen Jarsaw<sup>3</sup>, Ian Peake<sup>4</sup>, Supriya Kohli<sup>5</sup>, Eli Forst<sup>6</sup>, Baylee Stevens<sup>7</sup>, Abigail Campbell<sup>8</sup>, Kayla Stromsodt<sup>8</sup>, Isha Jhingan<sup>8</sup>, Kathryn Lindsay<sup>8</sup>, and Alexandra Regens<sup>9</sup>

<sup>1</sup>MD, Resident, Department of Gynecologic Surgery and Obstetrics, University of Nevada, Las Vegas, United States

<sup>2</sup>PhD, Staff Scientist, Office for Research Development, University of Oklahoma, Tulsa, United States

<sup>3</sup>MD, Resident, Department of Obstetrics and Gynecology, Mountain Area Health Education Center, Asheville, United States

<sup>4</sup>MD, Resident, Department of Obstetrics and Gynecology, SUNY Downstate Health Sciences University, Brooklyn, United States

<sup>5</sup>BA, Medical Student, University of Oklahoma College of Medicine, Oklahoma City, United States

<sup>6</sup>MD, Resident, Department of Pediatrics, University of Colorado, Denver, United States

<sup>7</sup>BS, Medical Student, University of Oklahoma College of Medicine, Oklahoma City, United States

<sup>8</sup>MD, Resident, Department of Gynecologic Surgery and Obstetrics, University of Nevada, Las Vegas, United States

<sup>9</sup>MD, Assistant Professor, Department of Obstetrics and Gynecology, University of Oklahoma College of Medicine, Oklahoma City, United States

### Abstract

**Background:** Medical curricula addressing sexual and reproductive health often do not have an adequate focus on inclusivity and trauma-informed care. Failure to address culturally competent approaches toward sexual and reproductive health can result in substandard care for patients from diverse backgrounds. **Methods:** A Reproductive Healthcare Symposium was hosted to address existing reproductive healthcare curricula gaps. A patient-centered, interdisciplinary lens was used to discuss topics such as providing inclusive care, tenets of trauma-informed care, advocacy tactics, and expanding accessibility for underprivileged communities. This paper examines pre-post learning outcomes from the 2021–2023 symposiums. **Results:** Each year, attendees felt significantly more comfortable communicating a

patient's reproductive healthcare needs to another health professional, addressing reproductive health-related concerns in their field, evaluating their biases, and managing them. In the 2022 and 2023 conferences, students felt significantly more confident working on an interdisciplinary team to address a patient's reproductive concerns. **Discussion:** Student-led conferences offer unique ways to address education gaps regarding reproductive freedoms and gender-affirming care in changing landscapes. These conferences can be tailored to a region's particular reproductive healthcare needs.

**Keywords:** reproductive healthcare, reproductive justice, sexuality, inclusivity, LGBTQ+, disability, racism, bias, discrimination, social determinants of health

**Date submitted:** 2-August-2024

**Email:** Sarah Beth Bell (sarah-bell@ouhsc.edu)

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

### Background

Reproductive and gender-based health education is a growing field that requires future healthcare providers to be familiar with inclusive and culturally competent care to serve diverse populations.<sup>1</sup> Topics within this field of medicine include but are not limited to caring for the LGBTQ+ population,<sup>2,3</sup> working with patients from

Citation: Oliver L, Bell S, Jarsaw C, Peake I, Kohli S, Forst E, Stevens B, Campbell A, Stromsodt K, Jhingan I, Lindsay K and Regens A. Student-led symposium on patient-centered reproductive healthcare. *Educ Health* 2024;37:396-401

**Online access:** [www.educationforhealthjournal.org](http://www.educationforhealthjournal.org)

DOI: 10.62694/efh.2024.145

Published by The Network: Towards Unity for Health

various racial and ethnic backgrounds,<sup>4,5</sup> understanding the needs of those with physical and mental disabilities,<sup>6,7</sup> navigating advocacy strategies,<sup>8</sup> and mitigating biases.<sup>9</sup> However, despite the increasing variety of reproductive healthcare needs, many students find that their healthcare curriculum seldom focuses on these topics. Healthcare students have reported feeling

unprepared for LGBTQ+ reproductive health needs in their preclinical education curriculum, despite their willingness to learn.<sup>10</sup> A review of 20 US medical schools' curricula showed significant gaps in reproductive health education, with only 10% of the reproductive health care topics discussing abortion, another 10% focusing on infertility, and a mere 6% concentrating on reproductive counseling.<sup>11</sup> Bridging this educational gap is critical to producing educated and informed healthcare providers. To serve an increasingly diverse patient population, students in healthcare fields need to be provided with more resources and training in comprehensive reproductive care. Furthermore, students should be aware of the specific barriers to access in their region to understand better the structural factors affecting their patients' health and well-being. These can include state policies that restrict access to care, and institutional policies that are not inclusive and welcoming to all genders.

While the lack of comprehensive reproductive and gender-based health education is well documented in the literature, there are few studies on student-led initiatives addressing this knowledge gap. The studies that do exist have found that medical students feel more confident caring for patients' reproductive and sexual healthcare needs following participation in student-led educational initiatives, especially as they pertain to caring for sexual and gender minority patients.<sup>12-14</sup> Additionally, the student-led format allows students to tailor educational topics to reflect the specific learning needs they identify within their curriculum and patient population. Our educational approach is unique in that it includes students across health professional programs. It is one of the first to be conducted within a region of the United States with restrictive reproductive healthcare legislation.

To address the reproductive and gender educational gap, students from a medical school in Oklahoma began hosting an annual Reproductive Health Symposium. This student-led conference provides patient-centered reproductive health education from an interdisciplinary viewpoint. It uses a virtual format during the conference to enhance access regardless of learner location. Conference attendees learn about identifying barriers to care, evaluating and mitigating their biases, and fostering an interdisciplinary team environment to meet patients' multifaceted reproductive healthcare needs. This study used pre- and post-conference surveys to

determine how the Reproductive Health Symposium impacts participants' perceived knowledge and skills of reproductive healthcare provision. We hypothesized the increased exposure to comprehensive reproductive education in these symposiums would help students feel better prepared to address reproductive health concerns in a diverse patient population.

### **Methods**

The Reproductive Health Symposium was created and hosted by students at a medical school in Oklahoma with the support of the university's Office of Interdisciplinary Education. The inaugural conference was held in 2020, and subsequent conferences in 2021, 2022, and 2023 received IRB approval to implement pre- and post-conference surveys for learner feedback.

Students from all health disciplines at the host university were invited to register for the conference via email, social media posts, fliers with QR codes, and word of mouth. Voluntary pre-conference Qualtrics surveys were included in event registration. The surveys used Likert scales to assess students' current perception of comprehensive reproductive health implementation in their curriculum and perceived ability to work in an interdisciplinary team; identify and manage implicit biases; recognize barriers to reproductive healthcare for minority populations; and understand legal barriers to reproductive choice.

Conferences were held on Zoom and consisted of one keynote speaker followed by three hours of breakout sessions. Attendees could choose between 2-3 topics during each hour of breakout sessions, and sessions were recorded so participants could watch any missed sessions later. Topics were chosen to reflect disparities in reproductive healthcare and outline tangible solutions (see Table 1). The 2022 and 2023 conferences also included various interdisciplinary sessions and supplemental hands-on workshops for those attending in person, as described in Table 1.

Following the conference, both in person and virtual attendees were invited to complete a voluntary post-conference Qualtrics survey that paralleled the pre-conference survey. During the 2022 conference, responses were incentivized by a \$5 donation to local nonprofit organizations for each survey completed, and an extra \$2 was added for each survey completed within the first 24 hours after the conference conclusion. SPSS Statistics software

**Table 1: Conference and workshop topics**

| 2021  | 2022   | 2023   |
|---|--|--|
| Bias in Reproductive Healthcare                       | Care for the Two-Spirit Person                     | Fertility and Cancer: A Patient's Journey                              |
| Ethics and Health                                     | Post-Roe Oklahoma*                                 | In Plain Sight: Normalizing Diverse Clinical Presentations             |
| Sterilization   | Perinatal Substance Use                            | Interfaith Perspectives: Healing from Purity Culture*                  |
| Transgender Experiences in Health*                    | Patient Reproductive Health                        | Racial Inequity in Reproductive Healthcare                             |
| Adolescent Health                                     | Home Births and Midwives                           | Maternal Health Disparities in Oklahoma                                |
| Birth Control Counseling                              | Rural Reproductive Health                          | Reproductive Justice and Access to Reproductive Healthcare in Oklahoma |
| Pelvic Floor Dysfunction                              | Reproductive Healthcare in Folks with Disabilities | State of Trans Healthcare in Oklahoma                                  |
| Reproductive Healthcare in Legislation and the Courts | Birth Control Counseling**                         | The Role of Occupational Therapy in Perinatal Health                   |
| What to Expect When Your Patient Is Expecting         | Pelvic Exams and IUD Placement**                   | Trans-Inclusive Reproductive Healthcare and Education                  |
| Transfeminine Health                                  | Pelvic Floor Therapy**                             | Birth Control Counseling**   |
|   |  | IUD Placement and Pain Management**                                    |
|   |  | Vaginal Delivery Simulation**  |

\*Panel

\*\*Workshop

version 27 (International Business Machines, Aramontk, New York, USA) was used for data analysis. The analyses included descriptive statistics and *t*-tests for pre-post comparisons. Cohen's *d* effect sizes were also computed for each pre-post comparison.

**Results**

Across the three years the conference was evaluated, approximately 234 students attended the conference. Of those attendees, 112 completed optional pre-post surveys, with 35 completing them in 2021, 43 in 2022, and 35 in 2023. Participants were primarily women, with 83.1% (*n*=94) identifying as women, 10.6% (*n*=12) identifying as men, and 6.2% (*n*=7) identifying as another gender. The majority of participants were students in the College of Medicine (64.6%, *n*=73), and other disciplines varied each year but included nursing (8.8%, *n*=10), allied health (8.0%, *n*=9), public health (5.3%, *n*=6), and more.

Participants were asked on a scale of 1 to 5 how well they thought their program was doing regarding

integrating reproductive health into their curriculum before and after the conference each year. Responses were as follows: 2021 pre-conference 3.11 (*SD*=1.03), 2021 post-conference 3.18 (*SD*=0.99), 2022 pre-conference 3.09 (*SD*=1.11), 2022 post-conference 3.26 (*SD*=1.02), 2023 pre-conference 3.17 (*SD*=0.99), and 2023 post-conference 3.63 (*SD*=0.81). There were no significant changes in these values before and after the conference.

Participants were asked about a variety of competencies before and after the conference. Response options for each question were on a 5-point Likert scale ranging from strongly disagree to strongly agree, with higher scores indicating higher levels of agreement. Table 2 describes the results of the questions that were asked over the course of three years. The Table in the supplemental materials includes additional questions that were asked only one or two years, and the means and standard deviations for each question.

**Table 2: Pre- and Post-Survey Responses**

|   | 2021                                  | 2022                                  | 2023                                  |
|---|---------------------------------------|---------------------------------------|---------------------------------------|
|   | <i>p</i> -value<br>and<br>effect size | <i>p</i> -value<br>and<br>effect size | <i>p</i> -value<br>and<br>effect size |
| Competency addressing concerns related to reproductive health in my field   | <i>p</i> =0.022*<br><i>d</i> =0.43    | <i>p</i> <0.001*<br><i>d</i> =0.60    | <i>p</i> <0.001*<br><i>d</i> =0.85    |
| Competency regarding my ability to evaluate my biases with regards to reproductive decisions                        | <i>p</i> =0.001*<br><i>d</i> =0.62    | <i>p</i> <0.001*<br><i>d</i> =0.59    | <i>p</i> =0.024*<br><i>d</i> =0.42    |
| Competency regarding my ability to manage my biases with respect to reproductive health decisions                   | <i>p</i> =0.001*<br><i>d</i> =0.60    | <i>p</i> =0.021*<br><i>d</i> =0.37    | <i>p</i> =0.005*<br><i>d</i> =0.54    |
| Competency regarding understanding the barriers LGBTQ+ individuals face in obtaining reproductive care              | <i>p</i> =0.001*<br><i>d</i> =0.79    | <i>p</i> =0.067†<br><i>d</i> =0.36    | <i>p</i> =0.088†<br><i>d</i> =0.36    |
| Competency regarding understanding the barriers to reproductive choice in Oklahoma                                  | <i>p</i> =0.001*<br><i>d</i> =0.69    | <i>p</i> =0.223<br><i>d</i> =0.24     | <i>p</i> =0.002*<br><i>d</i> =0.64    |
| Competency regarding understanding how barriers to care may disproportionately affect minority populations          | <i>p</i> =0.668<br><i>d</i> =0.08     | <i>p</i> =0.003*<br><i>d</i> =0.49    | <i>p</i> =0.076†<br><i>d</i> =0.32    |
| Competency regarding working on a team with other health professionals to address a patient’s reproductive concerns | <i>p</i> =0.164<br><i>d</i> =0.25     | <i>p</i> <0.001*<br><i>d</i> =0.67    | <i>p</i> =0.008*<br><i>d</i> =0.50    |
| Competency regarding communicating a patient’s reproductive health needs to another health professional             | <i>p</i> =0.062†<br><i>d</i> =0.33    | <i>p</i> <0.001*<br><i>d</i> =0.64    | <i>p</i> =0.005*<br><i>d</i> =0.54    |

\* Indicates  $p < 0.05$ , † indicates  $p < 0.10$ . The 2021 data was analyzed using independent *t*-tests, whereas the 2022-2023 data was analyzed via *t*-tests due to the implementation of anonymous ID codes to pair pre-post data.

### Discussion

Data from the Reproductive Health Symposium indicates that learners do not currently feel their reproductive health curriculum is comprehensive enough to effectively address a variety of gender, sexual, and reproductive health-based needs. However, learners felt their patient-centered reproductive healthcare knowledge and skill levels increased after the conference. Participants felt more competent addressing concerns related to reproductive health in their field, could better explain the roles and benefits of different

professionals in reproductive care, felt more prepared to work and communicate with other health professionals, were better able to evaluate and manage their biases. In addition, they further understood how barriers to care may disproportionately affect minority populations and felt more knowledgeable about the reproductive healthcare needs of those with a disability. While this symposium was effective for attendees, students not interested in attending may have larger knowledge gaps than those who chose to attend. Ideally, some topics addressed in the symposium



could be implemented into classroom curricula. In all three years, students reported significant gains in competency in addressing concerns related to reproductive healthcare in their respective fields. Further research could examine what specifically was taught in this symposium as opposed to the classroom that resulted in a gain in this fundamental competency.

This symposium evaluation has some limitations. First, as previously suggested, the nature of this conference draws students who are interested in gender, sexual, and reproductive health. These students often possess a general knowledge of these topics, causing a potential selection bias. In addition, because most students responding to surveys were medical students, survey responses may not adequately assess the perceptions of other health disciplines (pharmacy, nursing, PT, OT, etc.). Future directions of this research include greater

interdisciplinary participation, incentivization to increase the survey response rate, and appropriately addressing areas where knowledge gains were modest compared to other areas.

This type of conference is a practical, effective way to increase learners' knowledge and confidence in providing comprehensive reproductive healthcare to a diverse patient population. Furthermore, the additional hands-on training workshops may improve student comfort when performing these skills in the clinical setting. When implementing this type of conference, tailoring it to address state or region-specific healthcare needs may be beneficial. Symposia like this provide educational opportunities to expand on topic areas not typically taught in the classroom, providing a space for interested learners to increase their knowledge about patient-centered reproductive healthcare.

## References

1. Rubin ES, Rullo J, Tsai P, Criniti S, Elders J, Thielen JM, Parish SJ. Best practices in North American pre-clinical medical education in sexual history taking: consensus from the summits in medical education in sexual health. *The Journal of Sexual Medicine*. 2018 Oct;15(10):1414-1425. <http://dx.doi.org/10.1016/j.jsxm.2018.08.008>.
2. Keuroghlian AS, Ard KL, Makadon HJ. Advancing health equity for lesbian, gay, bisexual and transgender (LGBT) people through sexual health education and LGBT-affirming health care environments. *Sexual Health*. 2017 Feb 6;14(1):119-122. <http://dx.doi.org/10.1071/SH16145>.
3. Pregnall AM, Churchwell AL, Ehrenfeld JM. A call for LGBTQ content in graduate medical education program requirements. *Academic Medicine*. 2021 Jun 1;96(6):828-835. <http://dx.doi.org/10.1097/ACM.0000000000003581>.
4. Butler M, McCreedy E, Schwer N, Burgess D, Call K, Przedworski J, Rosser S, Larson S, Allen M, Fu S, Kane RL. *Improving Cultural Competence to Reduce Health Disparities*. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK361126/>.
5. Joseph OR, Flint SW, Raymond-Williams R, Awadzi R, Johnson J. Understanding healthcare students' experiences of racial bias: a narrative review of the role of implicit bias and potential interventions in educational settings. *International Journal of Environmental Research and Public Health*. 2021 Dec 3;18(23):12771. <http://dx.doi.org/10.3390/ijerph182312771>.
6. Lee MS, Diaz M, Bassford T, Armin J, Williamson HJ. Providing Equitable Access to health care for individuals with disabilities: an important challenge for medical education. *Harvard Public Health Review* (Cambridge, Mass.). 2021;44. <http://dx.doi.org/10.54111/0001/RR2>.
7. Hempler NF, Pals RA, Pedersbæk L, DeCosta P. Barriers and facilitators of effective health education targeting people with mental illness: a theory-based ethnographic study. *BMC Psychiatry*. 2018 Dec;18:1-10. <http://dx.doi.org/10.1186/s12888-018-1924-3>.
8. Daya S, Choi N, Harrison JD, Lai CJ. Advocacy in action: medical student reflections of an experiential curriculum. *The Clinical Teacher*. 2021 Apr;18(2):168-173. <http://dx.doi.org/10.1111/tct.13283>.

9. Capers IV Q. How clinicians and educators can mitigate implicit bias in patient care and candidate selection in medical education. *ATS Scholar*. 2020 Sep;1(3):211-217. <http://dx.doi.org/10.34197/ats-scholar.2020-0024PS>.
10. Arthur S, Jamieson A, Cross H, Nambiar K, Llewellyn CD. Medical students' awareness of health issues, attitudes, and confidence about caring for lesbian, gay, bisexual and transgender patients: a cross-sectional survey. *BMC Medical Education*. 2021 Dec;21:1-8. <http://dx.doi.org/10.1186/s12909-020-02409-6>.
11. Duane M, Carson G, VanderKolk K, Adams E, Gordon L. An Evaluation of US Medical Schools' Productive Health and Family Planning Curricula. *Issues in Learning and Medicine*. 2022;37:117. Available from: <https://pubmed.ncbi.nlm.nih.gov/36629762/>.
12. Grosz AM, Gutierrez D, Lui AA, Chang JJ, Cole-Kelly K, Ng H. A student-led introduction to lesbian, gay, bisexual, and transgender health for first-year medical students. *Family Medicine*. 2017 Jan 1;49(1):52-56. Available from: <https://pubmed.ncbi.nlm.nih.gov/28166581/>.
13. Salkind J, Gishen F, Drage G, Kavanagh J, Potts HW. LGBT+ health teaching within the undergraduate medical curriculum. *International Journal of Environmental Research and Public Health*. 2019 Jul;16(13):2305. <http://dx.doi.org/10.3390/ijerph16132305>.
14. Mahabamunuge J, Morel K, Budrow J, Tounkel I, Hart C, Briskin C, Kasoff M, Spiegel S, Risucci D, Koestler J. Increasing medical student confidence in gender and sexual health through a student-initiated lecture series. *Journal of Advances in Medical Education & Professionalism*. 2021 Oct;9(4):189. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8521215/>.