Changing Medical Minds

Analysis of Shifting Trends in Attitudes, Knowledge, and Beliefs in Pre-Clinical Medical Students Regarding LGBT+ People and Healthcare

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Background

The health of lesbian, gay, bisexual, transgender and other sexual and gender minorities (hereafter, LGBT+) is a topic that has been studied piecemeal and with great emphasis in particular areas (e.g. HIV/AIDS in men who have sex with men; breast cancer in women who have sex with women). Little attention has been paid, until recent years, to the other dimensions of LGBT+ health, the inequalities that lead to disparities, or the particular demands placed on providers to be culturally competent and capable of providing adequate care.

In an effort to help set the agenda for the LGBT+ student organization at the University of Vermont College of Medicine, and in an effort to help understand what portions of the current curricula (the Vermont Integrated Curriculum, or VIC) were effective in producing physicians capable of achieving competence in the care of LGBT+ patients, a study was undertaken to examine the attitudes / beliefs and knowledgebase of the Class of 2015 at the COM. While revealing, the study was used as a pilot for this work, which has been able to provide more longitudinal information, in addition to data about who med students are before they start medical school, and how the medical school curricula changes their attitudes and beliefs, not just their knowledgebase.

Few existing studies attempt to capture the work being done, or the work that's needed, at medical schools to produce physicians capable of adequately caring for LGBT+ patients. The Liaison Committee on Medical Education (LCME) and the Association of American Medical Colleges (AAMC) both have guidelines on aspects of teaching and learning, hiring, faculty development, and continuing education opportunities regarding LGBT+ competency. And while institutions are held to varying and self-identified standards for achieving competency on issues of diversity and inclusion, little data exists to generate, direct, and evaluate existing and new methods of achieving cultural competency. The best data suggests that US medical schools spend, on average, around 4 hours in the preclinical years on LGBT+ healthcare, in an inconsistent variety of areas.

This study, then, is an effort to capture data at one institution regarding the attitudes and beliefs of current medical students, assess in a rudimentary way the efficacy of the curricula in addressing LGBT+ health, and provide a jumping off point for further study. Previous work, looking at attitudes and beliefs of medical students at the University of California San Francisco School of Medicine, has shown that even small-scale interventions geared at producing LGBT+ competent physicians can have a significant impact on student performance, attitudes, and beliefs about LGBT+ people.

Finally, this study was an attempt to make visible the needs of LGBT+ patients to both medical students and to administration at the UVM COM. After Phase I of the study was implemented in the orientation week for the Class of 2016, several subjects approached the researchers independently and thanked them for bringing LGBT+ health and questions about health disparities to bear on the orientation week events. Because of the variable visibility of LGBT+ patients, providers, supporters, and community members, making explicit in the first week of medical school the investment of the COM in producing LGBT+ competent physicians was not unnoticed by the study's subjects.

Hypothesis

We hypothesized that exposure to the curricula at UVM, and the experience of undergraduate medical education in general would impact the knowledge, attitudes, and beliefs of medical students regarding LGBT+ issues. However, because the curricula is constantly in development, and indeed most of the authors were involved in developing the curricula to effect this very change, we were optimistic that knowledge among research subjects would increase, and hopeful that attitudes and beliefs would shift in the face of that knowledge.

Because many of the educational interventions and developments that finally came to represent the sum of the undergraduate medical LGBT+ education were not yet finalized at the study outset, identifying which of the interventions would have the greatest impact would not have been possible. These innovations have been recently published in a poster at the Northeast Group on Educational Affairs Conference, a division of the AAMC.

Methods

This study was completed in three phases.

The first two phases consisted of an electronic survey administered to the Class of 2016 at the University of Vermont College of Medicine. Phase I was administered to the class prior to starting medical school (during orientation week) in August 2012. Phase II was administration of the same survey to the same population after the completion of their pre-clinical coursework and prior to starting clinical rotations (during orientation week) in March 2014.

The survey was designed by the Gender & Sexuality Alliance at the College of Medicine at the University of Vermont and developed following a previous study of the Class of 2015. The study design was informed by a PubMed search for English language publications containing the words *lesbian, gay, homosexual, bisexual, transgender, medical education, medical student,* and *curriculum* in the title, abstract, or both to identify previous LGBT+ health-related medical education surveys.

A four-point Likert scale was used for scaled questions (rather than a five-point scale), forcing respondents to choose whether they agreed or disagreed with the given statement. Extensive discussion preceded this decision, but ultimately the survey designers felt that forcing subjects to choose which answer they agreed with most (rather than allowing subjects to choose a neutral option) would result in more accurate reflections of their attitudes and beliefs.

The survey was administered via the SurveyMonkey website, and responses were collected without identifying information or demographic information to ensure anonymity of subjects. (Given the sensitive nature of the questionnaire and the relatively small sample size of our peers, we felt that anonymity could not be guaranteed via a study that collected even basic demographic information.) The study was approved by the Office of Medical Student Education for Phase I, Phase 2, and Phase 3, and was approved by the Institutional Review Board for Human Subjects Research at the University of Vermont.

Phase 3 of the study was a focus group that was designed to address salient points from the data collected in Phase 1 and Phase 2. The focus group consisted of 5 participants, from the same subject pool, who self-selected to participate in the group. Solicitation was conducted electronically, and the focus group met in person at the COM in November 2014.

Results

A complete set of survey questions, and a complete compendium of results are shown in the links elsewhere on this poster. Quantitatively significant results are reported here.

Phase 1 of the study was offered to the entire Class of 2016 (total=114 at the time of administration) during a 15 minute session of their orientation week activities; 112 completed the survey (98.2%).

Phase 2 of the study was offered to the entire Class of 2016 advancing to clerkship at the regularly scheduled time during their clerkship orientation week activities (total=107 at the time of administration); 69 completed the survey (61.6%).

Phase 3 of the study was offered to the entire Class of 2016 during their clerkship year. They were invited to opt-in to a 1-hour focus group. Six subjects participated.

Q: Is there a difference between sex and gender?
In Phase 1, of 111 respondents, 22 (19.8%) believed there was no difference between sex and gender, while 89 (80.2%) believed there was (see Figure 2.1). In Phase 2, of 65 respondents, 1 (1.5%) believed there was no difference between sex and gender, while 64 (98.5%) believed there was (see Figure 2.2). Comparison between the two results was significant (p=0.001).

Q: Gathering a history from an LGBT+ patient is more challenging than gathering a history from other patients. (4-point likert scale)
In Phase 1, 2 respondents strongly agreed (1.8%), 30 somewhat agreed (26.8%), 49 somewhat disagreed (43.8%), and 31 strongly disagreed (27.7%). In Phase 2, 6 respondents strongly agreed (8.8%), 24 somewhat agreed (35.3%), 19 somewhat disagreed (27.9%), and 19 strongly disagreed (27.9%). Comparison between the two results was significant (p=0.036).

Q: Women who have sex with women should receive regular STI screening.
In Phase 1, 43 respondents strongly agreed (38.7%), 59 somewhat agreed (53.2%), 8 somewhat disagreed (7.2%), and 1 strongly disagreed (0.9%). In Phase 2, 59 respondents strongly agreed (86.8%), 9 somewhat agreed (13.2%), and 0 somewhat and strongly disagreed (0.0%). Comparison between the two results was significant (p<0.000).

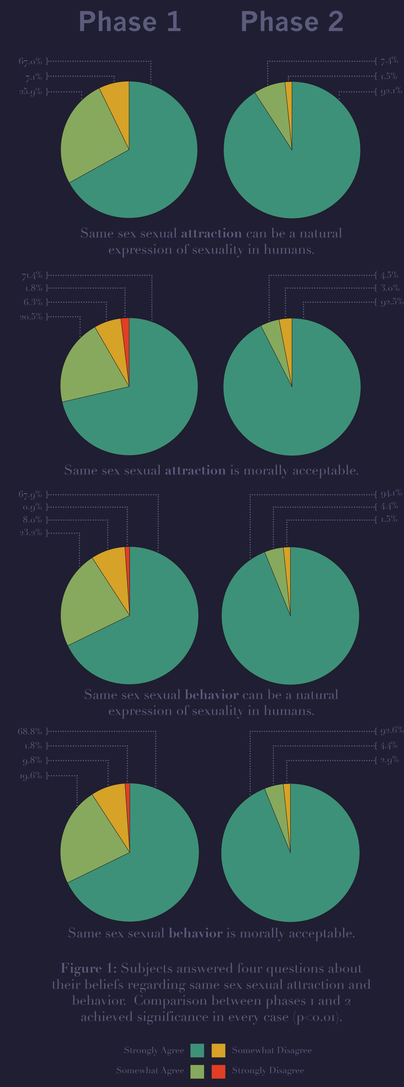

Figure 1: Subjects answered four questions about their beliefs regarding same sex sexual attraction and behavior. Comparison between phases 1 and 2 achieved significance in every case (p<0.01).

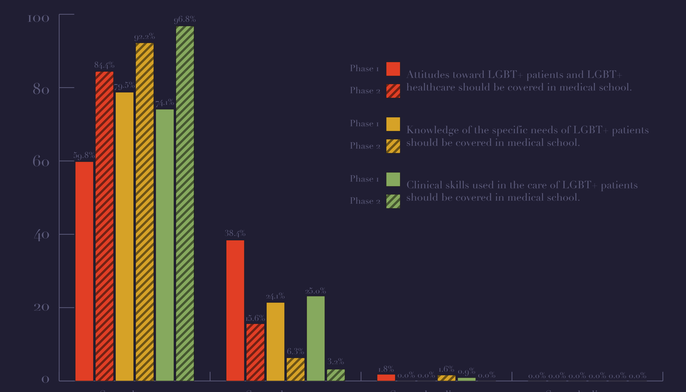

Figure 2: Subjects answered three questions about what material related to LGBT+ people, healthcare, and attitudes should be covered in medical school. Comparison between Phases 1 and 2 achieved significance in every case (p ≤0.005).

Q: Same sex sexual attraction can be a natural expression of sexuality in humans.
Q: Same sex sexual attraction is morally acceptable.
Q: Same sex sexual behavior can be a natural expression of sexuality in humans.
Q: Same sex sexual behavior is morally acceptable.
Results of these questions are shown in Figure 1.

Q: Attitudes toward LGBT+ patients and LGBT+ healthcare should be covered in medical school.
Q: Knowledge of the specific needs of LGBT+ patients should be covered in medical school.
Q: Clinical skills used in the care of LGBT+ patients should be covered in medical school.
Results of these questions are shown in Figure 2.

Conclusions

Results of all three phases of the study strongly suggest that significant and meaningful changes in subjects' attitudes, knowledge, and beliefs about LGBT+ people and LGBT+ healthcare occurred during the course of the pre-clinical years. These changes include

- an increase in the number of subjects who properly identify and articulate the difference between sex and gender;
- an increase in the number of subjects who properly defined the term "intersex";
- an increase in the percentage of subjects who believe gathering a history from an LGBT+ patient is more challenging than gathering a history from other patients;
- an increase in the number and percentage of subjects who believe women who have sex with women should receive STI screening;
- an increase in the percentage of subjects who believe that same sex sexual attraction and behavior can be natural expressions of sexuality in humans;
- an increase in the percentage of subjects who believe that same sex sexual attraction and behavior are morally acceptable;
- an increase in the percentage of subjects who believe that attitudes toward LGBT+ patients and healthcare, knowledge of specific needs of LGBT+ patients, and clinical skills used in the care of LGBT+ patients should be taught in medical school; and
- an increase in the number of subjects who believe that they feel informed about LGBT+ resources for their patients.

In Phase 3, subjects identified several factors within the COM curriculum they believed influenced these changes, including LGBT+ lectures, interactive group exercises (including having LGBT+ affiliated health professionals speak to small groups), public health research projects, and clinical skills scenarios. Subjects also identified several extracurricular activities, all sponsored by the GSA, including a sex & sexual health Jeopardy game, optional movie viewings, regular meetings, and special events (e.g. Burlington Pride), they believed were influential in bringing about these changes.

Subjects were clear in identifying another factor they believed to be largely responsible for these changes, which was the availability of "peer experts." Having classmates who were actively engaged in issues of LGBT+ social justice, health, and policy helped subjects feel comfortable supplementing what they learned in the curriculum with additional information, real-world experience, and a safe source to ask questions of.

As the COM continues to shine light on new ways that diversity can be a driver of excellence, the results of this study suggest that current practices are working well, but that additional work needs to be done to maintain the current climate, and to continue to cultivate an environment necessary for shaping the attitudes of incoming students into those that are appropriate for the care of all patients, including LGBT+ folk. Further, these results suggest that recruitment of peers at all levels of the institution—students, faculty, staff, residents—with expertise, knowledge, and experience in areas of LGBT+ healthcare, policy, and social justice will help to raise the collective level of knowledge and shape our collective beliefs about LGBT+ issues in healthcare, and in the community at large.