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Improving Clinical Education and Training on Sexual and Gender Minority Health

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Abstract

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.

Keywords Sexual and gender minority (SGM) · LGBTQ · Medical education · Graduate medical education · Lesbian · Gay · Bisexual · Transgender

Introduction

Approximately 3.8% of the US population identifies as a sexual and/or gender minority (i.e., lesbian, gay, bisexual, transgender, or queer; LGBTQ) with nearly 0.6% identifying as a gender minority (i.e., non-cisgender); LGBTQ individuals live in every state and region of the country [1, 2]. Sexual and gender minority persons (including LGBTQ individuals) are also a marginalized population and suffer both health and healthcare disparities. The unique healthcare needs and experiences of these populations have been characterized by the Institute of Medicine report “The Health of Lesbian, Gay, Bisexual, and Transgender People:

Building a Foundation for Better Understanding” [3]. Utilizing recent data from the National Health Interview Survey, it has been revealed that sexual minority adults report poorer health status in a number of health categories [4]. Compared to their heterosexual peers, lesbian and bisexual women have higher rates of heart disease [5] as well as asthma and chronic obstructive pulmonary disease [6]. Similarly, gay and bisexual men have an increased risk of cardiovascular disease when compared to their heterosexual peers [7]. Cardiovascular health data remains mixed for transgender individuals [8] with recent data suggesting increased risk for myocardial infarction and stroke [9]. Consistently, transgender and gender non-binary individuals have significantly worse self-reported physical and mental health when compared to their cisgender peers [1, 10, 11]. The root cause of these and other health disparities has often been attributed to traditional risk behaviors (e.g., tobacco and alcohol). Yet, there is growing consensus that the cause of many health disparities among sexual and gender minority populations includes the deleterious effects of minority stress [12–17]. Sexual minority adults (i.e., lesbian, gay, bisexual) who experienced high rates of minority stress (i.e., reports of discrimination, rejection, internalized homophobia, and identity concealment) reported more total

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physical health problems (e.g., chronic diseases) [16] and poorer overall health than those who experienced less minority stress [4].

One of the mechanisms proposed to help address ongoing health(care) disparities for SGM populations is through education of healthcare professionals and providers [18]. As with other health(care) disparities, the recognition of differential and discriminatory attitudes and care for SGM persons in healthcare has also led to calls to address these disparities with efforts directed earlier in the professional education continuum. Several older studies demonstrated the existence of differential attitudes and beliefs among early healthcare professional trainees [19–25]. More recent publications have demonstrated and better defined the gaps that continue in the content and outcomes of curricula related to SGM/LGBTQ health in undergraduate medical education [26, 27].

This perspective piece serves as a narrative review of developments and trends in medical education over the past few years. In this article, we review contributions using the classifications of the medical education training continuum (i.e., undergraduate medical education [UME], graduate medical education [GME; resident, fellow], and continuing medical education [CME]), followed by a comment on the future directions of SGM research, medical education research, and how these two might interact in their respective changing contexts.

Pre-professional Education Regarding Sexual and Gender Minority Health

While this article is not dedicated to the review of LGBTQ/SGM health-related activities in the pre-professional space, it is worth noting two trends that directly impact the domains of training later in the medical education continuum. The first is that more students are able to have significant LGBTQ/SGM health(care) experiences prior to their entry into medical education (UME specifically). These can include shadowing or other experiences at dedicated LGBTQ/SGM health centers or community-based organizations, and even dedicated collegiate-level courses [28].

The second trend worth noting is that as interventions related to institutional climate at the collegiate/pre-professional level—such as Safe Space training—and political and other factors continue to evolve, these influence the background and experience our learners carry with them upon entry into medical training [29]. Some medical schools now ask about sexual orientation and/or gender identity (SO/GI), or allow applicants to indicate their status as SGM, and some actively recruit on this metric. Even for students who are not SGM identified, the inclusion of such content in pre-professional curricula and in the application process to medical school communicates to all the values of the profession with respect to SGM persons, and by

extension, SGM patients. Despite these trends, there are ongoing gaps regarding inclusivity in the admissions process [30].

Undergraduate Medical Education

It has been well documented that gaps exist in UME in both curriculum/content and educational outcomes related to LGBTQ/SGM topics [26], and more recent data have demonstrated the persistence of these gaps in the face of calls to action [31], and simultaneously given us additional information about the nature of these gaps. For example, several studies have reported ongoing gaps in curricular content related to LGBTQ/SGM topics [32], or gaps in outcomes, such as student comfort or perception of efficacy related to care provision for LGBTQ/SGM populations [33, 34]. Some of these gaps have been demonstrated to be generalizable to international contexts with medical students [35–37].

Other publications have helped move the field forward from a more focused perspective, choosing to address specific gaps and/or gather data on implementation of interventions in or across specific contexts. These interventions typically take one of two forms. One type is the more discrete event, usually consisting of time “carved out” of a curriculum. These can include dedicated didactic lectures, small group activities, or some combination of instructional methods used to create multi-session seminars. The second type is the more integrated approach, with content and objectives usually being interwoven within existing curricular structures to enhance the visibility of LGBTQ/SGM themes and to explicitly demonstrate the applicability of various curricular topics to LGBTQ/SGM populations.

The majority of LGBTQ/SGM-related medical education reports fall into the former category. As stated above, these types of activities permit a more focused approach, tailored to a very specific curricular context in which the session occurs. As these sessions are usually under the direct curricular oversight of the designing faculty member, it can be easier to introduce more advanced and/or current concepts. For example, one report described an approach for teaching sexual history-taking skills with a stated consideration of the implicit bias that can be present in the activity [38]. This 3-h session, which included the use of didactic lectures and standardized patient interactions, led to a significant increase in learner comfort with discussing sex with someone of a different sexual orientation. Additionally, it highlighted the improvement in comfort discussing sex in general, reinforcing the concept that curricular time devoted to improving skills in the context of one marginalized population can often lead to improvements in the application of that skill to a broader set of patients. Another report described a session focused on a more advanced history-taking process that included asking about sexual orientation and gender identity in the context of

identity (more broadly speaking) and resilience [39]. This 2-h session also makes use of didactic and experiential learning, the latter mostly in the context of small group sessions and role-play scenarios. This session importantly demonstrates the strength of moving topics of sexual orientation and gender identity beyond the confines of sexual history taking. Other reports have addressed topics such as LGBTQ/SGM youth [40, 41], transgender medicine [42], and topics related to differences in sex development (DSD) [43]. Greater numbers of interventions are being reported for interprofessional teams [41, 44]. Also importantly, while the majority of curricular interventions are directed at the pre-clerkship context, increasing numbers are being devoted to learning in the clerkships and beyond [40, 42]. It is also encouraging to see continued reports of interventions that are primarily student led in nature [45]. In fact, many of the SGM-related curricular interventions reported in the UME literature have significant involvement of UME learners, whether as primary authors, initial motivators for change, or contributors in other ways. This observation reinforces the importance of learners in helping to shape and drive curricular change.

Another recent trend is the increase in the number of reports of more systematic interventions within medical education programs. Some of these have taken the form of integration of multiple focused sessions [46]. One report documented the efforts of one school to develop a comprehensive, 4-year approach to LGBTQ/SGM education [47]. Another report documented how this same process happened within the context of one institution's curricular redesign [48].

Most interventions described have been required additions to a curriculum. However, reports continue about successful interventions of an elective nature, at various levels of training, including both pre-clerkship and clerkship/post-clerkship [49–52]. There is an important role for these interventions, often as preliminary steps toward eventual inclusion of some content, objectives, instructional methods, or assessments in required portions of the medical education program.

Ultimately, the successful incorporation of LGBTQ/SGM education into the greater UME context requires a longitudinal view of LGBTQ/SGM competencies and objectives, with a balance of instructional methods and assessments aimed at ensuring mastery of these competencies and objectives [53]. This usually requires coordination with central administrative oversight. Some schools have elected to do this as part of curriculum reform [52]. Others have chosen to dedicate ongoing faculty effort to the governance and oversight of such curricular “threads” [54]. For now, there appears to be no single best practice in oversight and management of how a curriculum handles LGBTQ/SGM education, and the optimal solution for any institution is likely to be very context dependent.

Lastly, it should be noted in this section that while the focus has been primarily on curricular interventions, particularly when dealing with topics related to marginalized identities, it

is difficult to disentangle curriculum from learning climate, the latter of which has also been reported as an ongoing issue in UME [55]. This issue was demonstrated in a recent study that showed the association between reduced bias, increased perceived skill/efficacy at caring for LGBTQ/SGM populations, and greater role modeling/positive interaction with LGBTQ/SGM faculty, residents, students, and patients [56].

Graduate Medical Education and Training Regarding Sexual and Gender Minority Health

Beyond undergraduate medical education, there remain a variety of avenues and training opportunities to address health professionals' understanding of and preparedness to address the unique healthcare needs and experiences of sexual and gender minorities. Notably, graduate medical education has the opportunity to train professionals on topics specific to their chosen specialty as they relate to sexual and gender minority health, allowing for a more tailored education with potentially further specialization in sexual and gender minority health. However, there remains no mandated training on these topics. While the American Association of Medical Colleges (AAMC) provides, at minimum, recommendations for incorporating SGM-specific content in the curricula of undergraduate medical institutions, these are not required and the Accreditation Council on Graduate Medical Education does not include sexual and gender minority-specific education at all [57, 58]. This lack of required training across graduate medical education has led to a dearth of opportunities for medical and surgical professionals interested in pursuing careers that focus on sexual and gender minorities. What follows is a review of the limited literature addressing SGM training in residency and fellowship.

A search of the graduate medical education literature reveals that nearly all specialties have considered sexual and gender minority health in training, including Psychiatry, Internal Medicine and Family Medicine, Endocrinology, Emergency Medicine (EM), Plastic Surgery, and Urology [59–72]. However, publications highlight a lack of required, standardized training competencies; insufficient clinical opportunities for trainees; and limited faculty expertise.

While over half (58%) of US internal medicine residency programs have content in their curricula addressing the unique health issues affecting racial/ethnic minorities, less than a third (30%) provide comparable content regarding the health of sexual minority men and women. There is no mention of the health of gender minority individuals, such as transgender people [73]. Further, a 2015 dissertation on medical resident sexuality education showed no education to minimal education about transgender patients (average score 1.55 out of 5, 0 representing no education) and 83.1% reporting minimal or no transgender health education during residency [74]. Only one

publication addressed Emergency Medicine and found that sexual and gender minority topics averaged a total of 45 min over the course of training and did not specifically address transgender health [68]. Surveys of plastic surgery and urology residents found that only 65% and 54% of respondents, respectively, had education on or direct exposure to transgender patient care during residency; there was no mention of sexual minority patients [71]. The literature demonstrates a consistent underexposure to sexual and gender minority health in both graduate classroom and clinical settings.

Discrimination towards sexual and gender minorities and a lack of appreciation for the unique healthcare needs of these populations remain barriers to graduate education and training. Surveys have demonstrated variation in attitudes by geographic region, with directors of residency programs in the Southeastern USA having more negative attitudes regarding the importance of transgender health education [69]. Yet, among Emergency Medicine program directors, only 16% did not support the inclusion of specific education and training regarding sexual and gender minority health [68]. Despite this variation in program director valuation, trainees increasingly believe their residency and fellowship training ought to include training in SGM health. In a study of Internal Medicine residents, nearly all (97%) believed they should receive training to provide comprehensive care for gender minority patients, yet only 45% had any prior education on these issues [65]. In a study of Endocrinology fellows, 93.8% indicated the importance of transgender health training but only 72.2% of responding programs provided teaching on transgender health [67]. As mentioned earlier, it is likely that as undergraduate medical education incorporates sexual and gender minority education, there will be increasing pressure to do the same in graduate medical education.

Graduate medical education attempting to address SGM health has focused largely on didactic interventions, with few clinical-focused opportunities. Specific to gender minority endocrinological care, didactics for internal medicine and family medicine trainees increased knowledge of gender-affirming hormone therapy [62]. In the absence of sexual and gender minority-specific clinical counters, Observed Structured Clinical Encounters (OSCEs) provided the opportunity to assess the ability of primary care residents to care for transgender patients and demonstrated that 61% of residents did not consistently collect patient gender identity data [75]. Consistent with prior educational interventions, a limitation to discrete curricular changes was documented in one study on psychiatry residents, where short-term increases in knowledge and comfort were not sustained when assessed with long-term follow-up [60]. Consequently, it has been posited that graduate medical education focused on achieving competencies at incremental curricular levels would have a more sustained impact on trainee knowledge and comfort in providing care to SGM patients and, ultimately, would improve clinical outcomes [60, 67].

Without a mandate in graduate medical education, current trainees are seeking additional opportunities to be prepared to care for sexual and gender minorities; some institutions are catering to these dedicated professionals. For example, the American Medical Association (AMA) Foundation announced plans to develop a fellowship to provide advanced training and education to physicians interested in providing care focused on sexual and gender minorities [76]. Additional fellowships have been started to provide specialty training to surgeons preparing to provide gender-affirming care for gender minority patients.

While these training opportunities are welcome advances in preparing the healthcare workforce to care for sexual and gender minorities, they remain limited. A curricular mandate from the Accreditation Council for Graduate Medical Education (ACGME) would be the most direct and broadly applicable way to integrate sexual and gender minority care into graduate medical education [69–72]. An ACGME professional mandate would standardize expectations for trainee competencies, mirroring those of the AAMC's recommendations, and would move towards case log requirements for surgical fields, accreditation of fellowships dedicated to sexual and gender minority health, and specialized gender-affirming procedures for surgical specialties [58, 70, 72, 77].

Continuing Education and Training Regarding Sexual and Gender Minority Health

For healthcare professionals who have completed training, opportunities for gaining additional practical knowledge of sexual and gender minority health are scarce and expectations to learn about these populations rare. Currently, Washington D.C. is the only jurisdiction that has a mandate for healthcare professionals to complete at least 1 h of continuing medical education (CME) regarding sexual and gender minority health [78].

Academic medical centers, including Johns Hopkins Hospital and Harvard Medical School, have crafted several online CME opportunities for healthcare professionals, though these are strictly didactic in nature with case-based learning. Additional CME opportunities have been developed by specialty organizations, including the World Professional Association for Transgender Health (WPATH) and GLMA: Health Professionals Advancing LGBT Equality, including clinical learning opportunities, particularly with regard to gender-affirming surgical care offered by WPATH. Larger professional associations, including the American Medical Association (AMA), have also begun to provide CME training during their annual and interim meetings. Yet, without mandates for healthcare professionals to acquire CME specific to sexual and gender minority health, there will likely not be universal adoption of these learning opportunities by current healthcare professionals.

Future Directions in Sexual and Gender Minority Healthcare Education

There are several trends in educational efforts that reflect advancements in education, advances in LGBTQ/SGM healthcare, or both. For example, within LGBTQ/SGM healthcare, there is a move to incorporate differences in sex development (DSD) and intersex populations within the broader goals of sexual and gender minority health, moving beyond discrete categorization of L, G, B, T, and Q. The AAMC recognized this trend and incorporated it into their recommendations for undergraduate medical education [58]. Additional work in the educational space should acknowledge the richness that is represented within the SGM domain, including non-binary classifications. There is also work directed at deficits in sexual health education, of which LGBTQ/SGM sexuality and sexual health is an important part, across the medical education continuum [79]. Additionally, current research is starting to recognize the multiple marginalized or stigmatized identities with which patients may present. This concept of intersectionality has been appreciated in the social literature for some time and merits closer consideration in SGM medical education. Lastly, keeping efforts related to health(care) disparities grounded in patient experiences is critical. Several reports have recently highlighted the value brought by incorporating the patient voice into educational efforts [80, 81].

Additional attention should be given to advances and trends in medical education in general. Three trends are particularly important for educational development efforts in the SGM domain. First is the gradual move towards competency-based education, which is being realized in several domains of medical education [82]. With this move away from time-based education and toward competency-based education comes another future direction: the need for validated assessments in order to assist in the determination of competence. Many interventions in SGM medical education have been assessed at lower levels of outcome [83, 84]—namely acceptability of the intervention by the learners, or by change in perceived self-efficacy or comfort in certain aspects of care provision. The ability to evaluate and refine instructional methods, and ultimately to attain determinations of competence, requires the development and validation of knowledge- and skill-based assessments related to SGM clinical care. Finally, one additional trend in medical education, and future direction for SGM medical education, is the goal of generating a unified training continuum from UME to GME, and perhaps beyond [85, 86].

This combination of trends leads to the identification of some clear outstanding needs for the advancement of SGM-related medical education efforts. These are summarized in Table 1. As with all efforts in SGM-related fields and in medical education, there should be a plan at the outset to study

Table 1 Relative gaps in the SGM-related medical education literature

Interventions in clerkship/post-clerkship contexts
Interventions in the GME/CME space
Interprofessional and team-based care interventions
Curricula dealing with intersectional identities (including SGM)
Reports of patient-level input in education
Studies of assessments, particularly related to knowledge and skills

these proposed interventions in a scholarly way and to disseminate results. Many venues exist currently beyond broader education and medical journals, including specialty and subspecialty journals and conferences, SGM-related journals and conferences, and other educational fora that exist to disseminate and serve as a repository for educational interventions (e.g., MedEdPORTAL).

Conclusion

This narrative review of the recent literature on medical education related to sexual and gender minority populations demonstrates a growing interest in the development and implementation of SGM-specific training in medical education across the learning continuum. Despite this trend, which continues to grow exponentially, there remains no mandate for the incorporation of these curricula within undergraduate, graduate, and continuing medical education. It is our hope that the review provided here, along with the highlighting of persistent gaps in the overall literature, can ground future efforts to help the medical profession move forward in its mission to end health(care) disparities for all.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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