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Twelve tips for incorporating and teaching sexual and gender minority health in medical school curricula

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ABSTRACT

The World Health Organization has identified many barriers to improving the health of lesbian, gay, bisexual, and transgender (LGBT) patients, including challenges to incorporating and teaching about healthcare for such patients, which we call “sexual and gender minority” (SGM) health content. These challenges include structural and logistical barriers to incorporating SGM health content into undergraduate medical curricula, as well as lack of support in identifying high-quality pedagogical methods for teaching this material. Here, we provide twelve tips for incorporating and teaching SGM health curricular content in undergraduate medical education, including resources and strategies to support individual educators. Based on our success in developing and implementing this content, we believe that our approach can be effectively used by individual educators aiming to incorporate SGM health curricular material into their teaching, and to support individuals or groups championing the inclusion of a SGM health topical sequence in medical curricula.

Introduction

Existence of health disparities of lesbian, gay, bisexual, and transgender (LGBT) individuals is well documented. The World Health Organization (WHO) identifies many barriers that prohibit the delivery of optimum health care for LGBT patients, including “institutionalized prejudice, social stress, social exclusion and anti-homosexual hatred and violence, internalized shame about [one’s] sexuality” (World Health Organization 2013); as well as negative attitudes toward LGBT patients held by medical trainees and providers (Jin et al. 2014). Another critical barrier is subpar medical curricula and teaching about health standards for LGBT patients (World Health Organization 2013). When polling nearly 10,000 Canadian and American medical students about their training to care for LGBT patients, respondents claimed they did not feel fully prepared (White et al. 2015). Similarly, when polling over 120 South African medical educators in the amount and nature of LGBT content in courses, researchers found that “curricula [did] not adequately address LGBT-specific health issues” (Muller 2013).

At our institution, a partnership between students and faculty arose to respond to this gap in training and to foster incorporation of LGBT health content into the undergraduate medical curriculum. We identified strategies for individual teachers seeking to include such content in the courses or clerkships that they oversee and/or teach. In addition, we developed approaches that could be used by medical education communities to integrate content across the curriculum. We changed the nomenclature from “LGBT health” to the more inclusive “sexual and gender minority (SGM) health” to incorporate care for patients who may have concerns regarding gender but do not identify as transgender. These include those whose gender is not

congruent with the sex assigned to them at birth but who do not necessarily identify as transgender (gender nonconforming), and those who are born with differences in sex development. In this article, we describe twelve tips that have proven effective for integrating and teaching SGM health-related content in the medical curriculum.

Tip 1

Create a common language around sexual orientation and gender identity

Learners enter medical school with diverse life experiences and belief systems that precede their familiarity with and understanding of the evidence-based, multi-dimensional paradigms of sexual orientation and gender identity. Learners may not, for example, distinguish between the concepts of gender and sexual orientation or grasp the idea of sexual and gender identities existing along continua rather than in binary categories. Creating a common repertoire of terms and concepts is therefore a critical step in developing an effective framework for teaching curricula related to SGM health. Developing a shared understanding of *concepts* is as important as defining specific terms. Several institutions have piloted introductory or “SGM 101” sessions which introduce key concepts. Online materials are available to help structure such training sessions, complete with curricular implementation guides (e.g. OUT Well-Being 2012; AAMC 2017b). Alternately, numerous copyright-free resources exist to assist in developing didactic materials. For example, the Genderbread Person infographic is a popular tool depicting concepts of gender identity, gender expression, biological sex, and attraction (Killermann 2015). Alternatively, the Gender Unicorn infographic more clearly distinguishes between physical and emotional attraction

and represents gender identity and expression on continua (Trans Student Educational Resources 2017).

At our institution, we also developed a reference glossary based on several existing lexica available in the literature and online (Kaiser Permanente 2004; OUT Well-Being 2012; Hollenbach et al. 2014). With the help of the Associate Dean for Curriculum (MLS), the glossary was disseminated to faculty so that students would encounter consistent terminology across the four-year curriculum. Regardless of resources used to introduce the paradigms and language related to SGM health, educational activities used to do so should be introduced early in the pre-clinical curriculum in order to provide an appropriate foundation for learning.

Tip 2

Develop a carefully conceived competency-based curriculum

It is an established standard that curricula be well-anchored in values and goals shared in local educational communities (Kern et al. 2009). In our particular context, we drew from the Association of American Medical College's (AAMC's) published competencies that were developed nationally with the understanding that medical learners should be able to proficiently perform all stated tasks by their graduation from medical school. These guidelines clearly identify educational priorities and are therefore beneficial for educators, curriculum developers, and curriculum review committees. Medical educators in other countries may find these competencies to be applicable, or may identify or develop similar competencies appropriate for their trainees.

Beyond curricular design and evaluation, an agreed-on set of competencies may assist curriculum developers in *advocating* for the inclusion of SGM content in the curriculum if there are stakeholders who are yet to be convinced. Substantial barriers still exist to incorporation of such content in medical school curricula, including the perception that SGM health is a "niche" medical field. In fact, a 2011 survey of deans of Canadian and US medical schools found that the median time dedicated to teaching SGM health material was five hours across the entire curriculum (Obedin-Maliver et al. 2011). In our experience, framing the inclusion of SGM content within the context of available evidence and widely agreed-on competencies facilitated its eventual incorporation, in part because the content was perceived by adopting faculty as "academically robust" as opposed to an "unknown" or "radical" topic for which it would be difficult to find reliable source material.

Tip 3

Distribute SGM health content across the curriculum

Mapping agreed-on SGM health competencies to the curriculum can identify topics well-suited for particular courses and clerkships even if the faculty overseeing those curricular components do not initially identify as SGM curriculum faculty champions. For example, our mapping of SGM health competencies to the existing medical school curriculum made evident a clear opportunity for synergy between

already existing pre-clinical anatomy education on sex development and the more specific competency: "understanding the special healthcare needs and treatment options for patients born with differences of sex development (DSD)." Through curriculum mapping, we were able to identify places in the curriculum that were conducive to nearly effortless addition of SGM-specific information and examples.

Beyond matching SGM content to an appropriate curricular home, integration of this content across the curriculum provides learners with educational reinforcement and opportunities to encounter SGM content from numerous biomedical and psychosocial perspectives, facilitating integration across content areas. For example, the DSD-related material at our institution is included in pre-clinical sessions and again during pediatric clerkship didactics, allowing for reinforcement. Our institution's Professional and Ethical Responsibility course also includes a session focusing on the creation of normalcy in medicine, which complements and expands on concepts provided during other DSD-related sessions.

Tip 4

Situate sexual orientation and gender within a developmental context

A growing consensus amongst researchers suggests that sexual orientation and gender identity develop based on interactions between complex biological, social, and psychological factors, and that SGM individuals face particular challenges at each developmental stage (Institute of Medicine 2011). This understanding aligns with existing themes within typical medical school curricula about the provision of healthcare across the lifespan. However, based on our experience and on anecdotal evidence from colleagues at peer institutions, the "typical" presentation of SGM health within medical curricula is that of an adult, often with sexual or mental health concerns (discussed further in Tip 9).

For learners to grasp the complexity of SGM health issues, sexual orientation and gender identity should be taught using developmental models. For example, the D'Augelli "life span" model suggests that sexual orientation can be fluid or fixed in different periods of one's life and that it is shaped by both biology and environment (Bilodeau and Renn 2005). Similarly, Ehrensaft's framework explains gender identity in a developmental context, describing a "true gender self," which both exists at birth and is shaped by one's surroundings, and a "false gender self," which one portrays based on perceived expectations from society (Ehrensaft 2012). These and other models are advantageous tools in medical school curricula for several reasons: they are based on interdisciplinary research, they complement existing frameworks for understanding typical development, and they describe non-normative sexual orientations or gender identities in an affirmative fashion instead of pathologizing them.

Sexual orientation and gender identity can also be situated in a developmental framework by incorporating SGM health content specific to childhood, adolescence, young adulthood, middle age, and old age. Even general SGM health educational activities may be modified slightly to

underscore the developmental nature of sexual orientation and gender identity. For example, our introductory SGM 101 session includes a panel discussion with SGM students and staff. Part of this session involves panel members sharing personal experiences with sexual orientation and gender identity in childhood, how these identities developed over time, and how their SGM identities have interacted with any other personal and professional identities they hold.

Tip 5

Explore the complexities of questioning, exploring, and forming sexual and gender minority identity, and the relevance to health

Patients seeking healthcare may be at any point in the process of exploring or questioning their sexual orientation or gender identity, and their reasons for seeking care may be related or unrelated to those dynamics. Educators must prepare students to provide non-judgmental reassurance and to avoid labeling patients exploring SGM identities or behaviors. These discussions may occur with patients in any demographic group, but may be particularly common with pediatric and young adult patients, underscoring the importance of teaching SGM health within a developmental model (Tip 4). Furthermore, some individuals who engage in same-gender sexual behaviors may not identify with traditional SGM identity labels. In our US context, for example, some Latino and African-American men may be open to sexual experiences with other men while not identifying as gay or bisexual. The health implications of identity exploration, formation, concealment, and disclosure are profound. For example, SGM identity disclosure and concealment have been linked to mental health risks, which vary by gender and time since coming out (Pachankis et al. 2015). Students should be educated about these and other health associations, and equipped with tools to sensitively and effectively address these risks.

Tip 6

Introduce sexual orientation and gender identity diversity as a longstanding global phenomenon

Numerous world cultures have historically integrated and celebrated non-binary gender identities and non-heteronormative sexual orientations within their societies (Sitkin and Murota 2017). The South Asian Hijra identity and the Native American Berdache (or “Two-Spirit”) tradition represent two examples: the Hijra identity is often conceptualized as a third, nontraditional gender, and the Berdache are individuals with typical anatomy but a distinct, non-binary gender identity (Callender et al. 1983; Agrawal 1997). However, in our experience, students may conceptualize sexual orientation and gender identity diversity as being a relatively recent, western phenomenon characterized by particular SGM identities and politics. In order to best serve patients whose experiences and identities may not align with these assumptions, students should be taught to view sexual orientation and gender identity diversity as a universal phenomenon which may be understood and expressed in

various ways by different cultural groups. Teaching SGM health in such a manner also challenges learners’ unconscious assumptions about the nature of sexual orientation and gender identity and how diversity of these identities may operate in an individual’s or community’s life. History of Medicine, Sociology of Medicine, Medical Anthropology, and/or Global Public Health courses may be particularly adept at conveying this content. Alternately, such content can be integrated into clinical cases, professionalism coursework, public health coursework, or evolution and genetics for which learners could be asked to read select articles or book chapters, such as from Joan Roughgarden’s “Evolution’s Rainbow” (Roughgarden 2009).

Tip 7

Incorporate intersectionality whenever possible

Any patient presenting to healthcare possesses a multiplicity of identities, including but not limited to race, ethnicity, sexual orientation, gender identity, age, religion, nation of origin, and socioeconomic status. Patients may view one or more of these identities as particularly salient, depending on their presenting condition or the healthcare context. Whenever possible and appropriate, the diversity and intersectionality of identities should be stressed when teaching about SGM health. Previous recommendations for teaching intersectionality include: educating about systems that perpetuate inequality; selecting specific and meaningful metrics for intersectionality; and committing to intersectional health equity programs over extended time periods (Eckstrand et al. 2016).

As an example of intersectional curricular material, we collaborated with faculty at our institution to develop an intersectional implicit bias training for third year medical students in the clerkships. We developed materials for this training that addressed the overarching theme of implicit bias toward stigmatized social groups, rather than creating curricular materials focused only on implicit bias towards SGM individuals. The result was a three-hour session for all clerkship students, involving didactics, interactive exercises, and small groups interviewing standardized patients portraying cases involving intersectional identities. In a similar manner, others have suggested using structural competency as a framework for incorporating intersectional identities (Donald et al. 2017). This approach emphasizes the disproportionate impact on all minority populations of systemic and societal forces such as access to healthcare, legal protections, and bias (both implicit and explicit).

From a pedagogical perspective, there are several important benefits to incorporating intersectionality. First, a common constraint voiced by faculty at our institution was limited “space” within any given curriculum component to address the myriad identities and issues. We empathized with educators juggling these demands, and provided suggestions for ways that SGM content might be integrated with other, equally important content in an intersectional fashion. Importantly, an additional benefit is that this approach greatly enhances curricular material by better encapsulating the intersectionality of patient identities and healthcare concerns, ultimately yielding richer content.

Tip 8**Present SGM subpopulation-specific health content**

Some SGM health competencies may be addressed with curricular content that broadly addresses the healthcare needs of the general SGM population. For example, interviewing patients with language inclusive of a range of SGM identities and sexual practices represents a skill that can be applied to interactions with all patients. However, differences in the specific healthcare needs of SGM subpopulations necessitate inclusion of subpopulation-specific content. For example, to prepare learners to provide high quality care to transgender and gender non-conforming patients, curricula must incorporate gender minority-specific topics such as pubertal suppression, sex hormone therapy, and gender affirming surgical care. Similarly, while topics such as fertility and family building are relevant to all SGM subpopulations, the relevance of specific medical therapies, such as reciprocal *in vitro* fertilization (IVF) or fertility preservation, may vary by subpopulation.

Tip 9**Avoid stereotyping sexual and gender minorities**

Educators must walk a fine line between presenting targeted, subpopulation-specific SGM content and reinforcing stereotypes. For example, global epidemiological data show that men who have sex with men (MSM) are at significantly higher risk compared to men who have sex with women for infections such as syphilis and HIV (Pathela et al. 2011; Purcell et al. 2012; Centers for Disease Control and Prevention 2016; Joint United Nations Program on HIV/AIDS 2016). However, it is inappropriate to *only* include or to *overemphasize* the association between MSM and sexually transmitted infections, by presenting such vignettes multiple times or as the first encounter with SGM health in the curriculum. Such a strategy may unintentionally predispose learners to developing a limited, biased understanding of the relevance of SGM identities and behaviors to health, thereby becoming a part of the “hidden curriculum” that reinforces beliefs and attitudes contrary to educators’ intentions (Apple 1971; Hafferty and Franks 1994).

Educators may also wish to incorporate SGM patients into case vignettes and other educational activities in which the patient’s SGM identity does not directly relate to the chief medical concern, encouraging students to decouple stereotypical associations. In a related way, teachers should incorporate counter-stereotypical examples, such as a patient vignette involving a transgender individual who does not wish to pursue gender-affirming surgery or an MSM patient presenting with a chief concern unrelated to sexual health. Repeated counter-stereotyping has consistently been shown to reduce stereotyping (Kawakami et al. 2000; Gawronski et al. 2008; Lai et al. 2014; Woodcock and Monteith 2013).

Tip 10**Identify and cultivate faculty expertise without overburdening individual faculty**

While some faculty may feel comfortable integrating SGM health content into their learning activities, we found that

many *potential* faculty champions felt unprepared, “under-qualified”, or time-constrained in their ability to develop and deliver SGM health content. We therefore worked to develop content expertise and confidence among these faculty. A faculty-student support team assisted interested faculty in identifying potential SGM health topics to be incorporated into course and clerkship activities which they taught or oversaw, and in locating activity-specific resources and experts. This strategy facilitated the development of teaching materials, while also enabling faculty to remain active curriculum developers and to acquire increased familiarity and confidence with the curricular content.

There is an abundance of free resources to support curriculum development for potential faculty champions. Sample resources include: learning modules from the Australian National LGBTI Health Alliance (National LGBTI Health Alliance 2014); Ireland’s Rainbow Project (Rainbow Project 2017); AAMC’s clinical vignettes (AAMC 2017a) and materials on MedEdPORTAL (AAMC 2017b); and the National LGBT Health Education Center within the Fenway Institute (National LGBT Health Education Center 2017); as well as international organizations such as the World Professional Association for Transgender Health (World Professional Association for Transgender Health 2017). Experts in curricular content may be located within one’s institution, at peer institutions, or at local or national organizations. In our case, a state-based volunteer speakers’ bureau dedicated to improving respect for SGM people was helpful in providing resources for teaching (Stonewall Speakers 2017). Local patient advocacy organizations can also enrich this curricular material and are often eager to contribute a patient voice to medical education.

Beyond focusing on the development of individual faculty, we also encourage curriculum developers to promote forums for intellectual exchange and collaboration between faculty interested in SGM health curriculum. This strategy may take the form of periodic institution-wide calls for participation, individual- or group-level introductions of parties who may share common interests, or development of a SGM health educational interest directory, as was created at our institution as part of a broader campaign to promote collaboration around SGM health topics. Such forums empower faculty to further take ownership of curricular content, to continue to independently develop content, and to form innovative partnerships with other members of the educational community.

Tip 11**Involve but do not over-burden students**

Students can and should be engaged as partners in developing SGM health curricular content. From the vantage point of learners, students make valuable recommendations about the most effective pedagogies and the level of accessibility of information included in course content (Cook-Sather et al. 2014). Additionally, the dialog that occurs between students and educators when planning curricular materials yields richer and more successful teaching and learning compared with planning devoid of student input (Nierenberg 1998). Specifically, SGM medical trainees are highly motivated to contribute to health education curricula, including assisting educators in keeping SGM-related

terminology up to date and sharing their personal experiences with the healthcare system (Grosz et al. 2017).

However, students must not be relied on as the *sole* drivers of curriculum development or delivery. Such expectations result in an unfair burden on minority students to educate their peers and to contribute to diversity initiatives, described in the literature as the “minority tax” (Rodríguez et al. 2015). Additionally, on a practical level, over-reliance on student curriculum champions limits institutional memory and sustainability, as the future of curricular components becomes uncertain when those students graduate.

We consciously promoted faculty–student partnerships, both among faculty and students interested in particular curricular components, and within the support team for faculty development. Using this approach, students contributed their passion and content-specific insights to curricular projects. The role of the faculty was to actively collaborate with students to position SGM health competencies within the curriculum and to assume responsibility for maintaining these curricular elements in the future.

Tip 12

Empower allies

A crucial step in championing the inclusion of SGM health in the curriculum is empowering allies to participate. As was noted in a recent commentary on this topic, “one does not have to be black, lower class, gay, or disabled to help foster diversity, inclusion, and equity” (Cyrus 2017). The tips provided above have noted ways of engaging and empowering both faculty and students in the enterprise of teaching SGM health content. As we stated, faculty who were not, themselves, SGM-identified benefitted from addressing their fears of appearing to be “imposters” or “unqualified”; with access to necessary resources and support, they were able to replace these emotions with feelings of empowerment. Similarly, students interested in incorporating SGM content into the curriculum do not need to be SGM-identified, but merely need to have an interest in addressing diversity in their patient populations. They should be empowered as allies as well. We also found that development of allies in the medical school administration was invaluable, if not essential. Again, the Associate Dean of Curriculum (MLS), and other administrators, including the Dean of the Medical School, were instrumental in providing SGM faculty and students entrée into important educational meetings and decision-making that impacted the adoption of SGM health-related curriculum. In brief, relationship-building and empowering allies is a key to successful implementation and sustainability of this curriculum.

Conclusions

We have provided 12 tips for teaching and incorporating SGM health curricular components in medical school curricula. Our approach is based on experiences with our own efforts at championing this material at our institution, including key barriers we faced such as limited curricular “space” or potential faculty allies who felt unequipped to champion SGM health material. These tips do not require a particular sequential order of completion, and should be adapted based on an institution’s local context. Our efforts,

which have been well-received by students, faculty, and educational leaders, benefited from both strategic planning about developing an SGM topical sequence and from a strong focus on arming individual instructors with pedagogical tools and support. Given the numerous challenges of teaching SGM health material, we hope that our strategy for integrating and delivering this curricular content may be helpful to other students and faculty wishing to champion SGM health in their own medical school curricula.

Notes on contributors

John Encandela, PhD, is an Associate Professor of Psychiatry and Associate Director for Curriculum and Educator Development at the Yale University School of Medicine Teaching and Learning Center. In addition to providing evaluation expertise, he was a primary collaborator in designing, distributing, and providing support for curricular pitches for LBGTL-related healthcare curriculum at YSM.

Nicole A. Sitkin is a third-year medical student and Founding Chair of the Dean’s Advisory Council on LGBTQ Affairs at the Yale University School of Medicine. She was a primary collaborator in designing, distributing, and providing support for adoption of curricular pitches for the LGBTQ Health thread in the YSM curriculum.

Michael Solutke is a first-year medical student at Yale University School of Medicine and a leader of the health trainee LGBTQ interest group, OutPatient. He has been involved in pitch development and implementation of pitches for the LGBTQ Health thread in the YSM curriculum.

Michael L. Schwartz, PhD, is an Associate Professor of Neuroscience and Associate Dean for Curriculum at the Yale University School of Medicine. He provided institutional support for the initiative, contributed to the development of strategies to approach educational leaders and faculty, and interfaced with other stakeholders to facilitate the development and implementation of the LGBTQ health thread in the YSM curriculum.

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

References

- Hollenbach AD, Eckstrand KE, Dreger A. 2014. Implementing curricular and institutional climate changes to improve health care for individuals who are LGBT, gender nonconforming, or born with DSD: a resource for medical educators. 1st ed. Washington (DC): AAMC.
- Agrawal A. 1997. Gendered bodies: the case of the ‘third gender’ in india. *Contrib Indian Sociol.* 31:273–297.
- Apple MW. 1971. The hidden curriculum and the nature of conflict. *Interchange.* 2:27–40.
- AAMC. 2017a. Clinical vignettes. Washington (DC). [accessed 2017 Nov 01]. <https://www.aamc.org/initiatives/diversity/450606/clinical-vignettes.html>.
- AAMC. 2017b. MedEdPORTAL. Washington (DC). [accessed 2017 Nov 01]. <https://www.mededportal.org/>.
- Bilodeau BL, Renn KA. 2005. Analysis of LGBT identity development models and implications for practice. *New Dir Stud Serv.* 2005:25–39.
- Callender C, Kochems LM, Bleibtreu-Ehrenberg G, Broch HB, Brown JK, Datan N, Granzberg G, Holmberg D, Hultkrantz A, Jacobs E, et al. 1983. The North American Berdache [and comments and reply]. *Curr Anthropol.* 24:443–470.
- Centers for Disease Control and Prevention. 2016. Sexually transmitted disease surveillance 2015. Atlanta (GA). Available from: <https://www.cdc.gov/std/stats15/std-surveillance-2015-print.pdf>.

- Cook-Sather A, Bovill C, Felten P. 2014. Engaging students as partners in learning and teaching: a guide for faculty. San Francisco: Jossey-Bass.
- Cyrus KD. 2017. A piece of my mind: medical education and the minority tax. *JAMA*. 317:1833–1834.
- Donald CA, DasGupta S, Metz J, Eckstrand KL. 2017. Queer frontiers in medicine: a structural competency approach. *Acad Med*. 92:345–350.
- Eckstrand KL, Eliason J, St. Cloud T, Potter J. 2016. The priority of intersectionality in academic medicine. *Acad Med*. 91:904–907.
- Ehrensaft D. 2012. From gender identity disorder to gender identity creativity: true gender self child therapy. *J Homosex*. 59:337–356.
- Gawronski B, Deutsch R, Mbirikou S, Seibt B, Strack F. 2008. When “just say no” is not enough: affirmation versus negation training and the reduction of automatic stereotype activation. *J Exp Soc Psychol*. 44:370–377.
- Grosz AM, Gutierrez D, Lui AA, Chang JJ, Cole-Kelly K, Ng H. 2017. A student-led introduction to lesbian, gay, bisexual, and transgender health for first-year medical students. *Fam Med*. 49:52–56.
- Hafferty FW, Franks R. 1994. The hidden curriculum, ethics teaching, and the structure of medical education. *Acad Med*. 69:861–871.
- Institute of Medicine. 2011. The health of lesbian, gay, bisexual, and transgender people: building a foundation for better understanding. Washington (DC): National Academies Press (US). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK64806/>.
- Jin H, Earnshaw VA, Wickersham JA, Kamarulzaman A, Desai MM, John J, Altice FL. 2014. An assessment of health-care students’ attitudes toward patients with or at high risk for HIV: implications for education and cultural competency. *AIDS Care*. 26:1223–1228.
- Joint United Nations Program on HIV/AIDS. 2016. Prevention gap report. Geneva, Switzerland: UNAIDS. Available from: http://www.unaids.org/sites/default/files/media_asset/2016-prevention-gap-report_en.pdf.
- Kaiser Permanente. 2004. A provider’s handbook on culturally competent care: lesbian, gay, bisexual and transgender population. 2nd ed. Oakland (CA): Kaiser Permanente.
- Kawakami K, Dovidio JF, Moll J, Hermsen S, Russin A. 2000. Just say no (to stereotyping): effects of training in the negation of stereotypical associations on stereotype activation. *J Pers Soc Psychol*. 78:871–888.
- Kern DE, Thomas PA, Hughes MT. 2009. Curriculum development for medical education: a six-step approach. 2nd ed. Baltimore (MD): Johns Hopkins University Press.
- Killermann S. 2015. The genderbread person v3. Austin (TX). [accessed 2017 Nov 01]. <http://itspronouncedmetrosexual.com/2015/03/the-genderbread-person-v3/#sthash.vrymilbj.dpbs>.
- Lai CK, Marini M, Lehr SA, Cerruti C, Shin JE, Joy-Gaba JA, Ho AK, Teachman BA, Wojcik SP, Koleva SP, et al. 2014. Reducing implicit racial preferences: I. A comparative investigation of 17 interventions. *J Exp Psychol Gen*. 143:1765–1785.
- Muller A. 2013. Teaching lesbian, gay, bisexual and transgender health in a South African health sciences faculty: addressing the gap. *BMC Med Educ*. 13:174.
- National LGBTI Health Alliance. 2014. Knowledge hub. Newtown, Australia. [accessed 2017 Nov 01]. <http://lgbtihealth.org.au/hub/>.
- National LGBT Health Education Center. 2017. Boston (MA): The Fenway Institute. [accessed 2017 Nov 01]. <https://www.lgbthealtheducation.org/lgbt-education/learning-modules/>.
- Nierenberg DW. 1998. The use of “vertical integration groups” to help define and update course/clerkship content. *Acad Med*. 73:1068–1071.
- Obedin-Maliver J, Goldsmith ES, Stewart L, White W, Tran E, Brenman S, Wells M, Fetterman DM, Garcia G, Lunn MR. 2011. Lesbian, gay, bisexual, and transgender-related content in undergraduate medical education. *JAMA*. 306:971–977.
- OUT Well-Being. 2012. Understanding human sexuality: train-the-trainer manual. Pretoria, South Africa. Available from: <https://www.out.org.za/index.php/library/manuals>.
- Pachankis JE, Cochran SD, Mays VM. 2015. The mental health of sexual minority adults in and out of the closet: a population-based study. *J Consult Clin Psychol*. 83:890–901.
- Pathela P, Braunstein SL, Schillinger JA, Shepard C, Sweeney M, Blank S. 2011. Men who have sex with men have a 140-fold higher risk for newly diagnosed HIV and syphilis compared with heterosexual men in New York City. *J Acquir Immune Defic Syndr*. 58:408–416.
- Purcell DW, Johnson CH, Lansky A, Prejean J, Stein R, Denning P, Gau Z, Weinstock H, Su J, Crepaz N. 2012. Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. *Open AIDS J*. 6:98–107.
- Rodríguez JE, Campbell KM, Pololi LH. 2015. Addressing disparities in academic medicine: what of the minority tax? *BMC Med Educ*. 15:6.
- Roughgarden J. 2009. Evolution’s rainbow: diversity, gender, and sexuality in nature and people. 2nd ed. Oakland (CA): University of California Press.
- Sitkin NA, Murota D. 2017. Moving beyond the basics of the binary: addressing mental health needs and suicidality among transgender youth. *J Am Acad Child Adolesc Psychiatry*. 56:725–726.
- Stonewall Speakers. 2017. Guilford (CT). [accessed 2017 Nov 01]. <http://www.stonewallspeakers.org/>.
- Rainbow Project. 2017. Belfast, Ireland. [accessed 2017 Nov 01]. <https://www.rainbow-project.org/>.
- Trans Student Educational Resources. 2017. The gender unicorn. [accessed 2017 Nov 01]. <http://www.transstudent.org/gender>.
- White W, Brenman S, Paradis E, Goldsmith ES, Lunn MR, Obedin-Maliver J, Stewart L, Tran E, Wells M, Chamberlain LJ, et al. 2015. Lesbian, gay, bisexual, and transgender patient care: medical students’ preparedness and comfort. *Teach Learn Med*. 27:254–263.
- Woodcock A, Monteith MJ. 2013. Forging links with the self to combat implicit bias. *Group Process Intergroup Relat*. 16:445–461.
- World Health Organization. 2013. Improving the health and well-being of lesbian, gay, bisexual and transgender persons: report by the Secretariat. Geneva, Switzerland. Available from; http://www.ghwatch.org/sites/www.ghwatch.org/files/B133-6_LGBT.pdf.
- World Professional Association for Transgender Health. 2017. [accessed 2017 Nov 01]. <http://www.wpath.org/>.