Sexual and Gender Minority Health: What We Know and What Needs to Be Done

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We describe the emergence of lesbian, gay, bisexual, and transgender (LGBT) health as a key area of study and practice for clinicians and public health professionals. We discuss the specific needs of LGBT populations on the basis of the most recent epidemiological and clinical investigations, methods for defining and measuring LGBT populations, and the barriers they face in obtaining appropriate care and services. We then discuss how clinicians and public health professionals can improve research methods, clinical outcomes, and service delivery for lesbian, gay, bisexual, and transgender people. (*Am J Public Health.* 2008;98:989–995. doi:10.2105/AJPH.2007.127811)

Over the past few decades, clinicians, public health researchers, and officials have become increasingly aware that lesbian, gay, bisexual, and transgender (LGBT) persons constitute sexual and gender minorities who have unique health care needs.[1,2] This recognition was enormously heightened by the emergence of the AIDS epidemic, which demonstrated that sexual behavior could have major public health consequences. But the realization that sexual minorities have specific health care needs could arguably have begun with Alfred Kinsey, whose work illuminated the important roles that sexual expression plays in people's lives.[3,4] Certainly, by the early 1970s, debates in the American Psychiatric Association about whether homosexual behavior was pathological suggested that clinicians were aware that their gay and lesbian patients had specific needs that could best be addressed by knowledgeable practitioners. The American Psychiatric Association ultimately recognized that homosexuality was not a psychiatric illness[5] but that societal and internalized homophobia may affect access to appropriate care and cause mental distress, which in turn might compromise optimal mental health.

Changing social norms, led by the women's liberation movement, challenged societal assumptions on gender roles and identities and helped to empower the gay liberation movement to demand civil liberties for sexual minorities. As part of the ethos of community-based activism, sexual minorities developed autonomous health facilities designed to provide culturally sensitive care.

By 1980, there were dozens of loosely networked clinics, mental health programs, and provider groups that focused on sexual minority health. These institutions were among the first to recognize an increase in sexually transmitted infections among men who have sex with men and to identify the need for safer-sex interventions. Because of their emerging expertise, public health officials increasingly looked to sexual minority clinical programs to assist in understanding the spread of new infections among men who have sex with men and to test promising solutions. Notable examples of these collaborations were the first hepatitis B vaccine trials in the late 1970s, which were often conducted in centers like the Howard Brown Clinic in Chicago, Illinois, which a cooperative of gay medical students and other health professionals founded in 1974.[6] The relationships that emerged from these collaborations enabled sexual-minority community programs and public health investigators to rapidly mobilize and collaborate when the AIDS epidemic was first recognized.

To respond to the spread of AIDS, many of the early sexual-minority clinical programs rapidly developed sustained partnerships with local academic centers and federal public health agencies. Clinics such as Fenway Community Health in Boston, Massachusetts, developed not only some of the first programs for the counseling and care of people living with HIV/AIDS in the United States, but also the infrastructure needed to administer competitively reviewed grants from the National Institutes of Health and the Centers for Disease Control and Prevention. This unprecedented development of freestanding health centers in sexual-minority communities, as well as the enhanced attention that clinicians and researchers needed to devote to understanding sexual-minority patients' lifestyles, created a new paradigm that demonstrated the feasibility of conducting large-scale surveys and clinical trials in these communities.

Many of the first people to respond to the HIV/AIDS epidemic were lesbians, bisexuals, and transgender persons who helped their HIV-infected peers. Many of these clinicians, public health professionals, and activists learned firsthand that HIV transmission was abetted by other clinical concerns, including other sexually transmitted infections, substance use, depression, and stress related to societal stigmatization of sexual minorities. They also became aware that other clinical problems appeared to be more prevalent among sexual minorities than among heterosexuals, such as excessive tobacco use, human papillomavirus–associated anal neoplasia, and body image concerns.

The recognition that most LGBT health issues were insufficiently understood led the Institute of Medicine to commission a report in 1999 on the status of lesbians' health,[7] which highlighted the need for new population-based research on the true prevalence and incidence of clinical problems in lesbians. National LGBT organizations such as the Gay and Lesbian Medical Association, the National Gay and Lesbian Task Force, and the Human Rights Campaign recognized the importance of advocacy for further research and resources focused on sexual minority health and health care delivery. By the mid-1990s,

almost 100 organizations joined together to form the National Coalition for LGBT Health to concentrate on advocating for these goals. The importance of these issues was duly recognized by the Department of Health and Human Services when it included lesbians and gay men as a population group experiencing health disparities in *Healthy People 2010: Understanding and Improving Health*[8] and subsequently provided support to the Gay and Lesbian Medical Association and the National Coalition for LGBT Health to convene an expert panel to draft a companion document to *Healthy People 2010*. This companion document[2] (which, unfortunately, the new administration in 2001 ignored) is still available online.

As with any minority population, the optimal provision of health care and prevention services to sexual and gender minorities requires providers to be sensitive to historical stigmatization, to be informed about continued barriers to care and the differential prevalence of specific risk factors and health conditions in these populations, and to become aware of the cultural aspects of their interactions with LGBT patients. We present current evidence on the issues most relevant to sexual and gender minority health. Although additional research is needed, since Kinsey's time, other research pioneers have made important strides in conducting well-designed, population-based studies on LGBT health, and practitioners have developed useful guidelines and programs that should inform best practices in today's society.

DEFINING AND MEASURING SEXUAL AND GENDER MINORITIES

Groups and individuals must be counted to receive attention, and enumeration requires reasonably precise definitions to label groups and sort individuals. Although the science of counting population groups is imperfect, enough consensus has developed to create acceptable projections on the basis of race/ethnicity and gender. However, increasing diversity within the US population has necessitated the development of a more nuanced understanding of minority group membership, including identification, behavior, and cultural beliefs. The LGBT population comprises many diverse groups, increasingly referred to as *sexual and gender minorities*. The classification of lesbians, gays, and bisexuals within research studies is generally made on the basis of sexual orientation. The term *sexual orientation* encompasses more than sexual behavior, because individuals may identify with a specific sexual minority group without expressing those behaviors. Women primarily oriented to other women are referred to as *lesbians*, men primarily oriented to other men as *gay*, and individuals oriented to both men and women as *bisexual*.[9]

Gender is a construct of biological, psychosocial, and cultural factors generally used to classify individuals as male or female. *Transgender* is an inclusive term to describe people who have gender identities, expressions, or behaviors not traditionally associated with their birth sex. Transgender people may identify more strongly with another gender (e.g., natal females who identify as men, natal males who identify as women) or with a variance that falls outside dichotomous gender constructions prevalent in Western cultures (e.g., individuals who feel they possess both or neither gender). In other cultures, ranging from American Indian to several in Asia, transgender persons are recognized as part of traditional society. *Intersex* refers to persons born with atypical genital or reproductive anatomy who usually identify as male or female, although some may change their gender identity in the course of their development.[10]

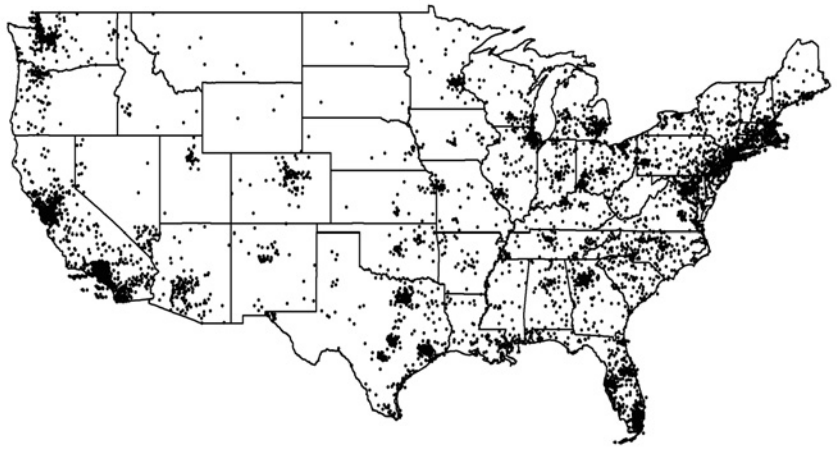
Sexual and gender identity are characterized by fluidity and change, as many individuals who report same-sex behavior identify as heterosexual and others consider themselves to be alternately heterosexual, bisexual, and homosexual (or some other variation in pattern), and as self-perception changes over time.

Some racial/ethnic minorities who engage in same-sex relations may be less likely to identify as gay or bisexual,[11,12] possibly because they identify gay culture with White society or because they fear an LGBT identity would alienate them from family and community.[13] For some in the LGBT population, *gay* and *lesbian* are conventional terms, applicable to middle-aged and older individuals. Sexual-minority youths may prefer terms such as *queer* or *questioning*. Individuals within transgender communities report more than 100 terms to convey what "outsiders" combine into the generalized term *transgender*.[14]

Awareness of sexual minority orientation appears to be occurring at younger ages; on average, initial same-sex experience occurs around age 14 to 16 years.[15,16] On the opposite end of the age spectrum, it is important to note that sexual and gender minorities do age. For the first time in US history, there is an identifiable cohort of LGBT elders, many of whom lack access to culturally competent health care and social services.[17]

From the perspective of population- and practice-based research, progress has been made to include sexual orientation as a demographic variable in several government surveys[18]; however, these surveys typically have just one question about sexual orientation and none for transgender identity.[19] Because of the paucity of measures, these data can be misleading and limited in usefulness. In the first national probability sample survey to specifically examine the sexual behaviors of US adults, 3 constructs—behavior, attraction, and identity—measured sexual orientation.[20] Individual and subgroup percentages varied substantially across these 3 measures. Men were twice as likely as women to identify as homosexual and more than twice as likely to report same-sex behavior since puberty. Respondents who lived in or near major urban areas or had advanced education were more likely to report same-sex behavior and were more likely to identify as homosexual or bisexual than those in nonurban areas. Latino and Asian men were less likely to report same-sex behavior but approximately twice as likely to report same-sex desire, attraction, or appeal compared with Black or White men. Thus, the use of a single measure may mask subgroup differences, contributing to the general perception that sexual and gender minorities are far less numerous and diverse than is actually the case.

Despite their limitations, government surveys with sexual orientation measures have helped increase awareness for policymakers and the general public that LGBT people are distributed throughout the United States and, to some extent, may help distinguish how sexual minorities are alike and different from the general population. The most prominent



Source. Data were from the US Census Bureau.[66]
Note. 1 dot = 100 same-sex households. Total = 594 391 same-sex households.

FIGURE 1—Same-sex households in the continental United States, by county: 2000.

TABLE 1—Leading Health Indicators and Sexual and Gender Minorities

Leading Health Indicators in the General US Population[a]	Areas of Increased Concern for Sexual and Gender Minorities[b]
Physical activity	
Overweight and obesity	√
Tobacco use	√
Substance abuse	√
Responsible sexual behavior	√
Mental health	√
Injury and violence	√
Environmental quality	
Immunization	
Access to care	√

[a]According to *Healthy People 2010*.[8]
[b]According to Makadon et al.[24]

government survey with a sexual orientation measure was the 2000 US Census, which counted about 1.2 million individuals who identified as living with a same-sex partner.[21] (See Figure 1 for a depiction of the distribution of same-sex households across the nation.)

Sexual identity, behavior, and attraction were more recently measured in the 2002 National Survey of Family Growth, leading to the finding that 4.1% of the US population aged 18 to 44 years (more than 4.5 million individuals) identified as homosexual or bisexual.[22] Among women aged 18 to 44 years in the National Survey of Family Growth, 1.3% thought of themselves as homosexual and 2.8% as bisexual; among men aged 18 to 44 years, 2.3% thought of themselves as homosexual and 1.8% as bisexual.

To increase understanding of LGBT population groups and their health-related needs, it is critical that population-based surveys and social behavioral research studies continue to expand and improve the measurement of sexual and gender minority identity and behavior. To this end, the National Institute of Child Health and Human Development has recently awarded funding to Fenway Community Health to develop the first federally funded population research center focused on LGBT health. This initiative will be developed in conjunction with the Inter-University Consortium for Political and Social Research of the University of Michigan in Ann Arbor; the Boston University School of Public Health; and a national consortium of academic investigators, university centers, and community-based organizations.

UNIQUE CLINICAL CONCERNS OF SEXUAL AND GENDER MINORITY POPULATIONS

In light of previous societal and professional misconceptions of sexual and gender minorities, it is not surprising that clinicians and public health researchers are only now learning about the range of health disparities and unique clinical issues affecting LGBT people. Existing research, although limited, points to a higher prevalence of certain conditions among LGBT patients that merit attention.[1,2,23,24] Many of the issues that disproportionately affect sexual and gender minorities, such as substance abuse, overweight and obesity, and tobacco use,[1,2,24] are among the leading health indicators designated by *Healthy People 2010*[8] (Table 1). Clinicians and public health professionals need to understand the dynamics and expression of these health issues in LGBT people to fill the voids left by previous biases. To educate a new generation of clinicians, the American College of Physicians has published the first comprehensive text on the care of sexual and gender minority patients, *The Fenway Guide to Lesbian, Gay, Bisexual, and Transgender Health*.[24]

Among the most significant areas of clinical concern for LGBT patients are mental health disorders, particularly diagnoses of depression and anxiety.[25] Some studies have also found a higher prevalence of eating and body image disorders among gay and bisexual men compared with their heterosexual peers.[26] Mental health disorders are not inherent to being a sexual minority person but can manifest as a result of leading marginalized lives, enduring the stress of hiding one's sexuality, or facing verbal, emotional, or physical abuse from intolerant family members and communities.[27–29]

Although adolescents and young adults today have an easier time coming out because of greater general acceptance and more visible role models, recent studies suggest that LGBT youths are still at greater risk for suicide attempts than non-LGBT youths.[30] Clinicians and service providers need to be sensitive to the potential stressors of coming out and the process of forming a positive identity as an LGBT person, and should be prepared to answer questions and make referrals. Clinical and public health professionals can work to develop programs that specialize in the care of LGBT populations and can advocate

for policies that diminish the stigma LGBT people encounter.

Some studies have found higher rates of substance use in sexual and gender minorities compared with heterosexual cohorts, although some of the earliest research recruited participants from bars, resulting in selection bias.[31] Recreational drug use, particularly stimulant use, among gay men has been associated with higher rates of unsafe sexual practices and HIV and other sexually transmitted infections.[32,33] Male-to-female transgender individuals may also be at higher risk for drug use and sexual risk behaviors.[34] Researchers have also found higher rates of heavy alcohol use and related problems among lesbians and bisexual women, and possibly gay and bisexual men, compared with heterosexuals.[35,36] There is strong evidence to suggest a higher prevalence of tobacco use in sexual minorities as well.[37–39] Several promising LGBT-specific tobacco cessation interventions have been developed; more information on these programs can be found through the National LGBT Tobacco Control Network Web site.[40]

Lesbians are more likely than women of other sexual orientations to be overweight and obese,[41] putting them at increased risk for cardiovascular disease, lipid abnormalities, glucose intolerance, and morbidity related to inactivity. Transgender patients may have enhanced cardiovascular risks because of exogenous hormone use.[42] Individuals who are HIV infected can be at higher risk for lipid abnormalities, depending on their regimen.[43]

Clinicians and epidemiologists have expressed concern that some LGBT populations are at increased risk for some cancers. Because of discomfort with the medical community, lesbians may seek routine breast and cervical cancer screening less often than heterosexual women.[44,45] In addition, lesbians and their providers may underestimate their risk of cervical cancer.[46] Many lesbians may have multiple risk factors for cervical cancer, including a history of sex with men at an early age.[47] Lesbians and bisexual women, independent of their current sexual practices, require the same schedule of Papanicolaou tests and human papillomavirus vaccination as other women.

Anal cancer is an important health concern for men who have sex with men. Because of the high prevalence of anal human papillomavirus in men who engage in receptive anal intercourse, trials are under way to evaluate the use of the human papillomavirus vaccine in men who have anal intercourse. There is growing evidence that routine anal Papanicolaou tests for men who are HIV infected is cost-effective in preventing anal cancer.[48] Although the data are less clear on the benefit of routine anal Papanicolaou tests for at-risk HIV-uninfected men who have sex with men, some experts recommend routine screening for this population, though perhaps less frequently than they do for HIV-infected men who have sex with men.[48]

Transgender individuals who have undergone sex reassignment surgery but retain pretransition organs or tissue remnants need careful follow-up for potential oncological problems commonly associated with their natal sex, including prostate,[49] breast, cervical, and ovarian cancer. Transgender health in general has not been a focus of specialized clinical care because of an even greater lack of data and resources than with gay and lesbian health. Transgender individuals have had to struggle to have their clinical issues taken seriously and to find appropriate resources for care. Guidelines for the care of transgender people are available online[50] but are not yet widely disseminated or taught. Transgender people also face financial barriers to care, given that transitional therapies with either medication or surgery are expensive and rarely covered by insurers in the United States.[51]

Intersex individuals, sometimes referred to as people who have a variation or disorder of sex development, are not traditionally included as an LGBT population, but they have some of the same health care and stigmatization problems. Intersex children and adults require specialized approaches to medical, surgical, and emotional care. A consortium of clinicians, parents, patients, and advocates recently developed guidelines on the care of children with intersex conditions.[52] In the past few years, the medical community has recognized that genital variations should not automatically be surgically altered in infancy and that gender identity formation is the result of complex biological and social factors and may not be fully evolved until adulthood.[53]

Clinical care issues are not the only concerns unique to LGBT patients. LGBT individuals' family lives can affect their engagement and satisfaction with care. Increasingly, LGBT individuals are developing socially sanctioned long-term relationships and are raising families. Many of these people seek support in finding appropriate services, such as LGBT-friendly adoption agencies and legal resources. Individuals are also coming out at earlier ages[15] and turning to their clinicians for support—hence the need for primary providers sensitized to sexual and gender minority health concerns. In addition, many LGBT elders have fewer family connections than non-LGBT elders and are less protected when a partner dies or while hospitalized with a life-threatening illness than people who have legally sanctioned marriages by traditional family law.[17] Public health advocacy for policy changes and supportive programs will make a difference in ensuring equity for sexual and gender minority patients at these later stages of life.

BARRIERS TO OPTIMAL HEALTH CARE FOR SEXUAL AND GENDER MINORITY PATIENTS

Optimal health care for LGBT populations requires access to both competent medical personnel and sensitive prevention services. However, sexual and gender minorities continue to encounter numerous barriers to accessing care, clustering around 4 main issues: (1) reluctance by some LGBT patients to disclose sexual or gender identity when receiving medical care, (2) insufficient numbers of providers competent in dealing with LGBT issues as part of the provision of medical care, (3) structural barriers that impede access to health insurance and limit visiting and medical decisionmaking rights for LGBT people and their partners, and (4) a lack of culturally appropriate prevention services. Each of these barriers is important individually, and together they form a challenging gauntlet of barriers to the receipt of medical care for many LGBT citizens (see Ramchand and Fox[54] for an overview of these barriers in the case of American gay and bisexual men).

LGBT patients have multiple reasons for not disclosing their sexual or gender identity

to providers, including fears of homophobic reactions, confidentiality concerns, past negative experiences with providers, and fear of being stigmatized. To the extent that these concerns cause LGBT patients to delay receipt of care or withhold information that may be important to treatment, effective medical care can be compromised. But disclosure of sexual or gender minority identity is only likely to improve care if providers offer culturally competent and well-informed services in return—for example, the provider is aware of the unique health concerns of LGBT populations and is able to assess partnership status and sexual behavior without assumptions or judgment. Although attitudes are changing,[55] societal misperceptions and discomfort about homosexual behavior and identity persist, even among health care personnel.[56,57] Unfortunately, neither professional schools nor continuing education programs provide the training needed to improve the attitudes, knowledge, and skills of physicians and other health care professionals in caring for LGBT people.[58,59] Consequently, there are not enough clinicians who can provide optimal care to LGBT patients.

The structure of health insurance in the United States, which is largely financed through employers, can also inhibit LGBT people's access to clinical care. For example, only some organizations and legal jurisdictions extend insurance coverage to domestic partners, in effect denying coverage to unmarried partners of employed LGBT individuals. Furthermore, when antidiscrimination laws are not in place to prevent the loss of employment as a result of being identified as a sexual or gender minority, the danger of losing health insurance coverage is amplified. In addition to structural barriers to obtaining health insurance, lack of marriage rights for most LGBT long-term relationships means that even partners in decades-old relationships may be denied medical decisionmaking rights and prevented from providing crucial support during a partner's medical crisis.

Many of the variables associated with health risks among LGBT populations may be unique to these populations and thus require tailored prevention services.[40,60] Unfortunately, there are few LGBT-specific prevention services to deal with violence victimization, substance abuse, mental health concerns, and other health care needs, except in large metropolitan areas.[2] Even then, most of these services have not been as thoroughly evaluated as HIV prevention services focusing on gay men. That said, the evidence base for efficacy trials of HIV prevention models among gay men[61] suggests that innovative prevention models to address the most important epidemics LGBT populations face might improve health outcomes, thereby lowering the demand for expensive health care services. Improvements in access to medical care and effective prevention services for LGBT patients could concomitantly improve the health care delivery for other vulnerable populations.

CREATING A HEALTHIER ENVIRONMENT FOR SEXUAL AND GENDER MINORITY PATIENTS

The provision of optimal care to sexual and gender minority patients requires welcoming clinical and program environments that promote good communication and allow individuals to feel comfortable discussing matters of their sexual identity, behavior, attractions, and any conflicts they may be experiencing.[62] It is critical to train providers and other staff to speak with patients and clients in a nonjudgmental, gender-appropriate, and professional way. These techniques should be taught during professional education[58] and staff training in health care and service facilities and should be reinforced with nondiscrimination policies in clinical and program settings, intake forms that ask about gender identities and same-sex partners, and visual cues in waiting and examination rooms that signal acceptance, such as brochures that discuss LGBT health risks and promotion.[63] Clinicians' efforts should be synergistic with those of public health departments, which could do more to ensure that their programs are culturally competent for this group. A handful of large city health departments (Boston, Chicago, Los Angeles, New York, and San Francisco) now have specific staff members dedicated to working with LGBT populations. However, acknowledgment of the public health issues affecting LGBT persons and plans and resources to address those issues at the state and federal level are still lacking.

To the extent public health has acknowledged the public health issues affecting LGBT persons, efforts have primarily occurred in the "traditional" realms of HIV/AIDS, sexually transmitted infections, and hepatitis. Activities to tailor public health prevention messages to the LGBT community in the areas of tobacco cessation, cancer, alcohol use, healthy weight, asthma, and cardiovascular health have been scant. Further, there has been a substantial dearth of data collection and analysis on the risk behaviors of and protective health factors for LGBT persons. However, Colorado, Massachusetts, North Dakota, and Vermont currently collect information about sexual orientation through their Behavioral Risk Factor Surveillance System.[64] The first transgender question to appear on a statewide Behavioral Risk Factor Surveillance System survey was in Massachusetts in 2007 (K. Cranston, MDiv, director, Massachusetts HIV/AIDS Bureau, written communication, August 18, 2007).

With the increasing weight of evidence-based data indicating that LGBT people experience substantial health disparities, it is incumbent upon federal and state public health officials to develop programs to remedy these disparities. Although LGBT patients make up approximately 2% to 5% of the US adult population, the proportion of resources allocated for their public health needs is substantially lower, particularly when looked at on a program-by-program basis. Schools of public health have been slow to incorporate teaching and research into LGBT health issues.[65] Advocacy for improving public health policy and the quality and number of public health programs for LGBT populations has been hampered by a lack of resources as well as by limited population-based data and the need to focus advocacy efforts on basic civil rights issues (employment, recognition of relationships, etc.).

THE ROAD AHEAD

More work is needed to improve data, resources, and public policy on sexual and gender minority health. Advocacy for better prevention, care and treatment, and the elimination of health disparities among LGBT populations needs to be supported by

well-designed studies. Accordingly, it is essential that large national data sets that measure the health status of Americans include measures of sexual attraction, identity, and behavior and that more information is gathered on how to ask questions that best measure these constructs. Furthermore, it is important to learn how to collect this information confidentially, to ensure the safety and privacy of respondents. As larger data sets become available, new resources to support innovative ways to study sexual and gender minority populations will be essential. It will be particularly important to understand the issues for people who may have multiple identities, such as LGBT people who are from racial or ethnic minority groups or who have disabilities.

Culturally appropriate programs need to be developed and refined to improve disparities in smoking, alcohol use, mental health, healthy weight, cancer prevention activities, and sexually transmitted infections. Federal agencies and public health organizations must disseminate the best practices of successful programs. Future national public health planning documents, such as *Healthy People 2020*, should incorporate new findings gathered on the health care needs of sexual and gender minority populations. As we learn more about health disparities and effective programs to address them, medical care providers, public health workers, and other human services workers who interact on a daily basis with LGBT persons will need training. Without such training, sexual and gender minorities will continue to interact with a health care system that is unaware, insensitive, and unprepared to meet their needs. ■

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