

VIEWPOINT

Lesbian, Gay, and Bisexual Adolescents Population Estimate and Prevalence of Health Behaviors

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Stigma and discrimination experienced during adolescence can have lifelong health consequences.¹ In addition, risky health behaviors are often established during adolescence and can be particularly prevalent among those aged 13 to 18 years experiencing stigma. Lesbian, gay, and bisexual (LGB) adolescents are at higher risk for stigma and discrimination than their heterosexual (straight) counterparts.¹ If LGB adolescents are also more likely to develop risky health behaviors, they will also be at higher risk of adverse health consequences than straight adolescents. However, the prevalence of risk behaviors among LGB adolescents has not been previously estimated in national surveys.

Few nationally representative surveys have provided information about the number of LGB persons in any age group, leading the Institute of Medicine to recommend these data be collected in federally funded surveys and electronic health records.² Since 1995, as part of the US Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System, state and local agencies have been conducting Youth Risk Behavior Surveys (YRBS) that include questions measuring 2 elements of sexual orientation: sexual identity and sex of sexual contacts (**Box**). By 2015, support for these questions was such that they were added to the national YRBS questionnaire and to 53 local and state YRBS questionnaires. A new report provides the first

that 273 000 high school students have had sexual contact with only the same sex and 739 000 have had sexual contact with both sexes. Lesbian, gay, and bisexual students and students with same-sex sexual contacts were identified in similar proportions in the national, state, and large urban school district surveys and are as racially, ethnically, and geographically diverse as their straight peers.

Discordance between sexual identity and sex of sexual contacts was also identified. Among students with same-sex only or both-sex sexual contacts, 25.0% identify as straight and 13.6% are unsure of their sexual identity; 2.8% of students with opposite-sex-only sexual contacts identify as gay, lesbian, or bisexual. The data also indicate that overall a substantial proportion (3.2%) of students are not sure of their sexual identity.

Compared with their straight peers, LGB students reported a significantly higher prevalence of being bullied at school (34.2% vs 18.8%), experiencing electronic bullying (28.0% vs 14.2%), being forced to have sexual intercourse (17.8% vs 5.4%), experiencing physical dating violence (17.5% vs 8.3%), and experiencing sexual dating violence (22.7% vs 9.1%). Students who were not sure of their sexual identity also reported higher rates of all of these behaviors than their straight peers.

Lesbian, gay, and bisexual students also reported significantly higher rates than their straight peers of current use of common drugs such as cigarettes (19.2% vs 9.8%), alcohol (40.5% vs 32.1%), and marijuana (32.0% vs 20.7%). Lesbian, gay, and bisexual students and not sure students also were significantly more likely to report having ever used the following drugs that are much less commonly used by straight adolescents: hallucinogens (LGB, 11.5%; not sure, 15.7%; straight, 5.5%), heroin (LGB, 6.0%; not sure, 9.3%; straight, 1.3%), methamphetamines (LGB, 8.2%; not sure, 10.8%; straight, 2.1%), and prescription drugs not prescribed by a physician (LGB, 27.5%; not sure, 24.3%; straight, 15.5%).

The YRBS data also provide evidence of adverse outcomes such as hopelessness and suicide-related behaviors. Lesbian, gay, and bisexual and not sure students reported being significantly more likely to have felt sad or hopeless than their straight peers (LGB, 60.4%; not sure, 46.5%; straight, 26.4%). Lesbian, gay, and bisexual and not sure students also reported higher prevalence of the following suicide-related behaviors than straight students: (1) seriously considered suicide (LGB, 42.8%; not sure, 31.9%; straight, 14.8%), (2) made a suicide plan (LGB, 38.2%; not sure, 27.9%; straight, 11.9%),

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US estimates of the number of LGB high school students, and national prevalence estimates of their health risk behaviors, plus survey results from 25 states and 19 large urban school districts with weighted data.³

The 2015 YRBS used a nationally representative sample of 15 713 public and private high school students (grades 9-12), of which 15 624 provided a completed questionnaire that met quality control standards. Data on the prevalence of 118 risk behaviors for the total population and stratified by grade, race/ethnicity, and sex were previously published.⁴ This new study indicates that, based on prevalence rates from the 2015 national YRBS, an estimated 321 000 high school students are gay or lesbian, 964 000 are bisexual, and 514 000 are not sure of their sexual identity. In addition, it is estimated

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Box. Questions Used on the 2015 Youth Risk Behavior Survey Questionnaire to Ascertain Sexual Identity and Sex of Sexual Contacts

During your life, with whom have you had sexual contact?

- A. I have never had sexual contact
- B. Females
- C. Males
- D. Females and males

Which of the following best describes you?

- A. Heterosexual (straight)
- B. Gay or lesbian
- C. Bisexual
- D. Not sure

The full questionnaires, report, and data files can be found at <http://www.cdc.gov/yrbbs>.

(3) attempted suicide (LGB, 29.4%; not sure, 13.7%; straight, 6.4%), and (4) had a suicide attempt that resulted in an injury, poisoning, or overdose that required medical treatment (LGB, 9.4%; not sure, 4.7%; straight, 2.0%).

These data, similar to all YRBS data collected since 1991, are reported by adolescents themselves. They provide a compelling view into the different experiences reported by LGB, not sure, and straight adolescents. Although the YRBS cannot establish causality, the effects of stigma and discrimination are reflected in the survey findings. First, discordance between sexual identity and same-sex sexual contact and students continuing to be unsure of their sexual identity reflect that development of sexual identity is occurring during adolescence and is not necessarily linear. But these findings might also suggest that some students are unwilling to declare their sexual identity in the face of stigma and discrimination.¹ Second, higher reported experience of bullying and other violence-related behaviors is suggestive of societal prejudice against LGB populations.¹ Third, maladaptive risk behaviors such as drug use could possibly represent an attempt at coping with the stress associated with prejudice

and stigma.¹ Fourth, adverse health outcomes such as self-reported suicidal behavior might represent the cumulative effect of these stressors over time.¹

These data indicate a need to continue to address health risk behaviors among adolescents, including LGB adolescents, that can result in serious adverse health effects. However, these data also indicate the need to directly address the social influences that drive these behaviors and health outcomes—namely, stigma, marginalization, discrimination, and violence. These interventions should give priority to those adolescents who experience multiple minority identities and therefore even greater stress,¹ such as members of racial or ethnic minorities or transgender adolescents. The effect of interventions aimed only at changing health risk behaviors will always be limited if the context of people's lives is not changed.

No amount of sexual health education, substance use prevention, antibullying enforcement, or suicide hotline availability will eliminate these preventable health problems if LGB students are feared, hated, abandoned, and isolated by their families, peers, and communities. Efforts to address family, peer, organizational, and societal norms regarding LGB adolescents as well as those still developing their sexual identity are critical to change the context of these young people's lives. Current research suggests strategies that may shift the context for LGB adolescents such as parent engagement to foster resiliency and to protect against violence; skill building for nonviolent problem solving; school policies, practices, and enforcement regarding bullying and violence; and community policies supporting LGB rights.^{5,6}

The YRBS report is an important starting point for accelerating action to improve the health and well-being of the estimated 1.3 million LGB high school students in the United States. No simple solution exists to address the intersection of stigma, discrimination, and risk behaviors, but ongoing research points to a combination of social, environmental, and behavioral influences that can provide protection and resilience. Parents, educators, health care professionals, public health strategists, and communities can take action to ensure LGB adolescents survive and thrive.

ARTICLE INFORMATION

Published Online: August 11, 2016.
doi:10.1001/jama.2016.11683.

Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

Disclaimer: The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the US Centers for Disease Control and Prevention (CDC).

Additional Contributions: We acknowledge Stephen Banspach, PhD (CDC Division of Adolescent and School Health), for his assistance in reviewing drafts and ensuring the timely completion of the work. Dr Banspach was not compensated.

REFERENCES

1. Meyer IH, Frost DM. Minority stress and the health of sexual minorities. In: Patterson CJ, D'Augelli AR, eds. *Handbook of Psychology and Sexual Orientation*. New York, NY: Oxford University Press; 2013:252-266.
2. Institute of Medicine. *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: National Academies Press; 2011.
3. Kann L, Olsen EO, McManus T, et al. Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9-12—United States and selected sites, 2015. *MMWR Surveill Summ*. 2016;65(SS-9):1-202. http://www.cdc.gov/mmwr/volumes/65/ss/ss6509a1.htm?s_cid=ss6509a1_w.
4. Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance—United States, 2015. *MMWR Surveill Summ*. 2016;65(SS-6):1-174.
5. Mustanski B, Birkett M, Greene GJ, Hatzenbuehler ML, Newcomb ME. Envisioning an America without sexual orientation inequities in adolescent health. *Am J Public Health*. 2014;104(2):218-225.
6. Trust for America's Health. *Addressing the Social Determinants of Health Inequities Among Gay Men and Other Men Who Have Sex With Men in the United States*. Washington, DC: Trust for America's Health; 2014.