not a panacea because engagement practices vary widely and do not always result in more equitable or desirable outcomes.[7] Equity requirements should also be integrated into all the EPA's regulatory activities and environmental planning more broadly to ensure that powerful interests do not restrain those working for environmental justice with legal, bureaucratic, or political obstacles.

Third, efforts to curb PM air pollution should be redoubled, and innovative cross-cutting strategies are needed to simultaneously address the underlying causes of environmental disparities: income inequality and structural racism. These factors are associated with detrimental health outcomes and often constrain the residential choice of racial minorities and the poor to areas with a disproportionate air pollution burden and limited access to health care, education, and employment.[3] Grassroots environmental justice organizations across the nation understand that the fight for environmental justice cannot be separated from struggles for affordable housing, neighborhood quality, civil rights, and economic justice.

At this time when progress seems derailed at the federal level, those working within and outside the EPA for environmental justice should be heartened that many state and local governments have taken up the fight against greenhouse gas and associated PM emissions. We should support these efforts and work to ensure that they take a strong stand against persistent environmental injustice. AJPH

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Professional Development and Research to Improve School Practices and LGBTQ Health in US Schools

See also Demissie et al., p. 557.

In this issue of *AJPH*, Demissie et al. (p. 557) present findings from a representative study of US states to estimate the prevalence of and trends in school practices that support lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youths. Their study is among the first of its kind to assess the implementation of school policies and programs for LGBTQ youths on such a large scale.

The authors analyzed data from the Centers for Disease Control and Prevention's School Health Profiles, a unique surveillance system that monitors US schools' adoption of health-related practices, including LGBTQ-supportive practices. The supportive school practices examined in their study are especially important because previous research has shown that they are associated with improved health outcomes (e.g., with respect to suicidality[1] and alcohol use[2]) among LGBTQ youths. Overall, their study greatly improves our understanding of current and past adoption of LGBTQ-supportive school practices, documenting widely adopted practices and highlighting practices in need of greater diffusion.

LGBTQ HARASSMENT POLICY

The good news is that nearly all schools (a median of 90.3% in 2014) prohibit harassment based on students' perceived or actual sexual orientation or gender identity. This is critical because sexuality- and gender-based harassment contribute substantially to LGBTQ-related health disparities.[3,4] LGBTQ-supportive policies serve as an important lever to improve the health of LGBTQ youths.

LGBTQ PROFESSIONAL DEVELOMENT

Policy alone, however, is not enough to eradicate LGBTQ health disparities (e.g., in terms of suicide attempts[5]). Therefore, additional programming is needed to support, affirm, and protect LGBTQ youths, and this is evident in the findings of Demissie et al. For example, uptake of LGBTQ-related training by teachers was the lowest of all practices they assessed. In 2014, the median percentage of health teachers across schools who received professional development related to LGBTQ issues was 13% (with an across-state range of 5.3%–28.8%). Moreover, from 2008 to 2014, this percentage increased in only nine of 33 states. This is troubling particularly because LGBTQ students who have

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supportive, affirming, and protective teachers also have better educational and health outcomes.[3]

Despite the belief of many teachers that it is important to support LGBTQ students and to intervene against anti-LGBTQ remarks, one of the most frequently cited barriers by teachers to implementing such practices is simply their lack of training.[6] Although many local and national organizations offer training on LGBTQ issues, a number of these programs have not been rigorously evaluated through experimental study designs to ensure that they have their desired effects among both teachers and LGBTQ students. The most effective and efficient teacher training strategies (with respect to content and delivery methods) are unknown.

INCLUSIVE HIV, STD, AND PREGNANCY PREVENTION

Demissie et al. also note the tremendous lack of LGBTQ-relevant HIV, sexually transmitted disease (STD), and pregnancy prevention information available in schools. In 2014, this type of inclusive sexual health information was provided in a median of only 24.4% of schools (and this figure was indicative of a linear increasing trend in 13 states, suggesting lower rates in earlier years). These low rates of implementing LGBTQ-inclusive sexual health prevention information are alarming because men who have sex with men are the only group in the United States in which HIV is not decreasing.

In addition, pregnancy and STDs are disproportionately higher among LGBTQ youths.[3] Without infusion of LGBTQ-related concerns into sexual health programming, it remains unlikely that LGBTQ adolescents will acquire the appropriate knowledge, skills, and self-efficacy necessary to prevent HIV, STDs, and pregnancy during their adolescent years. The lack of LGBTQ-related topics integrated into health curricula probably has secondary detriments as well.

Ignoring discussions of same-gender attractions, behaviors, and sexual identities within sexual health education discussions may also further stigmatize LGBTQ relationships. Stigmatization is a primary driver of nearly all LGBTQ health disparities related to preventable causes.[3] Therefore, infusing LGBTQ-related topics into health curricula may have the dual effect of (1) providing LGBTQ youths with the necessary sexual health information to make healthy decisions and (2) destigmatizing LGBTQ identities as well as relationships among both LGBTQ youths and cisgender heterosexual students. This kind of information and destigmatization is critical during adolescence, a time rife with many social, emotional, and physical changes that predispose young people to engaging in risky behaviors.

BARRIERS AND FACILITATORS

Finally, we believe that implementation science can offer an improved understanding of how schools adopt LGBTQ-supportive policies and programming. At present, there is a lack of generalizable knowledge about barriers to and facilitators of adoption and maintenance of supportive policies and programs across US schools. However, we hypothesize that schools in regions with lower levels of structural stigma and schools with greater proportions of supportive staff will be more likely to adopt LGBTQ-supportive policies and programs.

Although the School Health Profiles system can provide ongoing surveillance on the prevalence of and trends in LGBTQ-supportive practices in schools, it does not collect information that might identify barriers to or facilitators of their adoption or maintenance. Nor is this system able to monitor the quality or comprehensiveness of LGBTQ-supportive policies and programming. For example, it remains unclear whether the school policies and practices identified are explicitly inclusive of the identities and needs of all sexual minorities as well as all gender minorities.

A more systematic and comprehensive study is needed to better understand the adoption processes and qualities of LGBTQ-supportive school policies and programs. Such a study will help researchers and practitioners implement future evidence-based practices to ensure that LGBTQ students are supported, affirmed, and protected, thereby fostering health equity for all sexual and gender minority youths. AJPH

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