

Appendix A -- Rationale for Program 1308 Approaches

Exemplary Sexual Health Education (ESHE)

Just as schools are critical to preparing students academically and socially, they are also vital partners in helping young people take responsibility for their health and adopt health-enhancing attitudes and behaviors that can last a lifetime. Health education is integral to the primary mission of schools, and provides young people with the knowledge and skills they need to become successful learners and healthy and productive adults. Increasing the number of schools that provide health education on key health problems, such as HIV, other sexually transmitted diseases (STD), and pregnancy, is a critical objective for improving our nation's health (1, 2).

Thirty-three states currently mandate HIV education; of those, 20 mandate additional sexual education (e.g., programs that describe sexual development, provide skills to establish healthy relationships and prevent behaviors that increase the risk of HIV, other STD, and unintended pregnancy) (3). Regardless of the emphasis in content, sexual health education programs should be medically accurate; consistent with scientific evidence; tailored to students' contexts and the needs and educational practices of communities; and should use effective classroom instructional methods. Sexual health education should allow students to develop and demonstrate developmentally appropriate sexual risk avoidance and reduction-related knowledge, attitudes, skills, and practices.

Independent reviews of the scientific evidence show that well-designed and well-implemented HIV/STD prevention programs are effective in decreasing sexual risk behaviors among youth (4-7).

Specific outcomes include:

- Delaying first sexual intercourse (8-11)
- Reducing the number of sex partners (11-14)

- Decreasing the number of times students have unprotected sex (15-17)
- Increasing condom use (15, 18, 19)

Notably, the HIV prevention programs were not shown to hasten initiation of sexual intercourse among adolescents, even when those curricula encouraged sexually active young people to use condoms (6, 7). In addition, effective HIV/STD prevention programs can be cost-effective. An economic analysis of one school-based sexual risk reduction program found that for every dollar invested in the program, \$2.65 was saved in medical costs and lost productivity (20). Other studies have found similar savings for HIV prevention programs focusing on youth who are at disproportionate risk for HIV, including young gay and bisexual men (21, 22) and urban African American male adolescents (23).

Key Sexual Health Services (SHS)

In 2010, young people aged 13–24 accounted for 26% of all new HIV infections in the United States (24), and nearly half of the 19 million new STD reported each year are among young people ages 15–24 (25). Many adolescents engage in sexual risk behaviors that can result in such unintended health outcomes. For example, among U.S. high school students surveyed in 2011, almost half reported ever having had sex. Of those sexually active in the previous 3 months, about a third did not use a condom (26).

Preventive services provided by medical providers can have a significant impact on reducing risk behavior and the testing and treatment of infections to help stop the spread of STD and HIV. Several official and national guidelines for adolescent preventive care specifically include recommendations for the provision of sexual and reproductive health services for adolescents to attend to these health problems and to provide preventive services (27-30) including HIV testing beginning at age 13 except in those areas with lowest prevalence and gonorrhea and Chlamydia screening of sexually active females

ages 25 and younger. Guidelines for HIV and STD testing emphasize adolescents because of the increased burden among this age group and the importance of establishing a pattern of routine testing early in life (31-33).

Despite support for the provision of clinical preventive services for adolescents, only 38% of adolescents have had a preventive care visit in the previous 12 months and less than one-third of providers routinely discuss sensitive sexual health topics at these visits (34). Schools in the United States have a critical role to play in facilitating delivery of such needed preventive services for adolescents; schools have direct daily contact with almost 15 million students attending grades 9-12 (35) and are an appropriate venue for HIV, STD, and teen pregnancy prevention programs (36). Many U.S. schools already have healthcare service infrastructure in place and can play an important role in providing adolescents access to sexual health services. A recent census report indicated that 73,697 registered nurses work in schools (37) and approximately 2,000 school-based health centers (SBHCs) serve at least one grade of adolescents (sixth grade or higher) (38). There is evidence that such resources have some impact on increasing adolescent use of sexual health services. For instance, adolescents in a school with a school-linked clinic and on-campus counselors had a lower pregnancy rate than students in a comparison school (36). There is also evidence that a school-based referral program helped school nurses connect students to adolescent-friendly community providers and increased adolescent use of reproductive health services (contraception, STD testing, counseling), especially among sexually active females (39).

These resources, however, may be constrained by budgets, local policies on service provision, limited staff, and other issues. A 2008 survey of school nurses found that less than half of schools have a full-time registered nurse on staff, and most nurses serve multiple schools. In addition, students with exceptional medical needs—whose numbers have been increasing—take up a major proportion of

nurses' time. The average number of total students served per nurse is 1,151 (40). SBHCs are somewhat limited in number and geographic location, and not all are permitted to provide on-site testing and treatment for STDs (68%) or HIV testing (64%); about one third (60%) are prohibited from providing contraceptive services (40).

One way to help schools meet the physical health needs of students within these constraints is to strengthen schools' ability to provide services or to connect students to community resources. For these reasons, one of DASH's key programmatic strategies is to improve schools' capacity to increase adolescents' access to key preventive sexual health services via either direct provision of on-site services or referrals to adolescent-friendly community-based health service providers.

Safe and Supportive Environments for All Students and Staff (SSE)

Two aspects of the school environment—climate and safety—are particularly important for HIV, STD and pregnancy prevention (41). Research shows that a positive school climate and school safety are associated with improved education and health outcomes for students (42, 43), including students at disproportionate risk for HIV infection and other STD (44, 45). Promoting and providing a learning environment in which all students and staff feel safe and supported is an essential function of schools (46). Moreover, schools can implement policies, practices, and programs that target specific elements of safety and the psycho-social climate and improve the overall school environment (47).

Three specific domains associated with safety and/or climate are the focus of the SSE approach: (1) bullying and sexual harassment, including electronic aggression; (2) school connectedness; (3) and parent* engagement in schools.

* Those adults who serve as the primary caregivers of a child's basic needs. They include biological parents and others who serve in this role including biological relatives such as grandparents, aunts, uncles, and siblings; and non-biologically related adults such as adoptive, foster, or step parents.

- (1) Bullying and sexual harassment are highly prevalent in schools. About 20% of high school students report being bullied in the previous year, and 15% report being bullied electronically (48). Eight in 10 students (81%) experience some form of sexual harassment during their school lives (49). However, bullying and sexual harassment prevention, such as anti-bullying policies and staff training related to sexual harassment, are associated with improvements in school safety (50, 51).
- (2) Programs that promote students' sense of belonging to school, or school connectedness, are considered promising ways to improve adolescent health outcomes (52). Students who experience a high level of school connectedness generally also report a positive school climate (53).
- (3) Increasing parent engagement in schools can help foster positive health behaviors and outcomes among students (54). Such effects may result from improvements in school safety or climate. For example, parental involvement may increase the effectiveness of school-based bullying prevention (55).

In addition to increasing safety and improving psycho-social climate at the school level, we know that these specific domains also are associated with individual-level sexual risk and HIV, other STD, and pregnancy among adolescents.

- (1) Perpetrators and victims of bullying may be more likely to have casual sex, sex under the influence of drugs/alcohol, and sex with four or more partners compared to those students not involved in bullying (56). Sexual harassment of female students in middle and high school has been associated with lower self-esteem, mental health, physical health, and life satisfaction, and higher levels of substance abuse compared to their peers who had not been sexually

harassed (57). Bullying perpetration is also associated with sexual violence perpetration over time (58).

(2) School connectedness has been identified as a protective factor for adolescent sexual and reproductive health (59). For example adolescents who feel connected to their school are less likely to initiate sexual activity (60) or initiate sexual activity at an early age (59).

(3) Parental factors, including the quality of parents' communication and overall relationship with their adolescents, parenting styles, expectations, and level of supervision are associated with their adolescent's likelihood of engaging in risk behaviors, such as early sexual initiation, and health outcomes, including STI acquisition (59, 61). Parent engagement in school may include parent participation in school-based programs that promote positive parenting practices and reduce adolescent sexual risk (62).

Finally, in addition having direct effects of adolescent sexual risk, a safe and supportive school environment can decrease the likelihood that student become involved in substance abuse, violence, and other problem behaviors (42, 63, 64) that are associated with HIV and STD risk (65, 66). Given both direct and indirect effects of the school environment on adolescent sexual risk, addressing the school environments holds promise as a school-based HIV/STD prevention approach.

Youth at Disproportionate Risk (YDR)

Young people who share certain demographic characteristics are disproportionately affected by HIV infection and other STD. Black and Latino young men who have sex with men (YMSM), homeless youth, and youth enrolled in alternative schools are affected at particularly high rates.

Regardless of income level, black and Latino adolescents are disproportionately affected by HIV infection and other STD and have higher rates of pregnancy than white adolescents. Although blacks

accounted for 15% of all adolescents aged 13–19 in the United States in 2010, they received 69% of all diagnoses of HIV infection among adolescents. Also in 2010, more Hispanic/Latino adolescents were diagnosed with HIV infection than white adolescents even though there are nearly three times as many white adolescents as Hispanic/Latino adolescents living in the United States (67).

Among adolescent males aged 13–19 years, approximately 91% of diagnosed HIV infections in 2010 were among YMSM (68). Youth who identify as lesbian, gay, bisexual, or transgender (LGBT) are more likely than their heterosexual peers to engage in sexual risk-taking behaviors, including earlier age at first sexual intercourse, more lifetime and recent sex partners, and drinking alcohol or using other drugs prior to last sexual intercourse; and are less likely to use a condom during intercourse (69, 70). Additionally, LGBT students are frequently bullied and harassed and are more likely than heterosexual students to experience a higher prevalence of dating violence and forced sexual intercourse (71). LGBT youth are more likely to have suicidal thoughts or attempts, personal safety issues, and lower academic achievement than their heterosexual peers (69, 72).

Homeless youth are a vulnerable population with high rates of sexual risk-taking behaviors, substance use, and mental health problems. It is estimated that 1.5 to 2 million youths per year are homeless or have run away from home (73). Homeless youth are highly likely to experience early sexual debut, have multiple sex partners, engage in unprotected sexual intercourse, and use alcohol or other drugs prior to sex, resulting in a high risk of acquiring HIV (74, 75). Further, homeless youth are disproportionately likely to be sexual minority youth. Although there are no national data available on HIV among homeless youth, community studies have demonstrated a higher sero-prevalence among homeless youth than among the general US youth population (76). Some homeless youth may be at additional risk because of a history of childhood sexual abuse and a lack of connectedness to trusted adults and family (75).

Students in alternative school settings are more likely than students in mainstream schools to engage in sexual risk-taking behaviors. Students in alternative high schools are nearly twice as likely to report ever having sexual intercourse, compared with students in mainstream high schools, and are three times as likely to report having four or more sexual partners during their lifetime (15, 77). Among students who are sexually active, alternative school students are less likely to have used a condom during sexual intercourse and are nearly twice as likely to use alcohol or drugs prior to sexual intercourse compared to mainstream high school students (78). This pattern of sexual behavior contributes to a greater risk for HIV infection, other STD, and unintended pregnancy.

Given the disproportionate risk faced by these subpopulations of youth, DASH has asked sites to develop or strengthen efforts for addressing the needs of LGBT youth, homeless youth, or youth in alternative school settings in one of the FOA strategy areas. YDR may belong to several groups associated with heightened risk, and school policies, programs, and practices tailored to them help to assure that every student has access to education, skills-building, services, and environments that reduce their sexual risk. Such access helps to reduce stigma and may increase the likelihood that otherwise marginalized youth stay in school. Sites should choose specific evidence-informed practices on the basis of their particular needs, but might include strategies such as identifying LGBT-friendly health providers; developing guidance to link homeless students to necessary health and social services; and implementing evidence-based interventions that have been designed for use in alternative school settings, such as *All4You!* (15).

References

[1] The White House Office of National AIDS Policy. National HIV/AIDS Strategy for the United States. Washington, DC: 2010.

[2] U.S. Department of Health and Human Services. Healthy People 2020. Available at: <http://www.healthypeople.gov/2020/default.aspx>. Accessed August 14, 2014.

- [3] Guttmacher Institute. State Policies in Brief: Sex and HIV Education. New York, NY: Guttmacher Institute, 2012.
- [4] Chin HB, Sipe TA, Elder R, Mercer SL, Chattopadhyay SK, Jacob V, et al. The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, Human Immunodeficiency Virus, and sexually transmitted infections: Two systematic reviews for the Guide to Community Preventive Services. *American Journal of Preventive Medicine* 2012;42:272-294.
- [5] Mathematica Policy Research and Child Trends. Identifying Programs that Impact Teen Pregnancy, Sexually Transmitted Infections, and Associated Risk Behaviors: Review Protocol 2.0. Washington, DC: Department of Health and Human Services, 2012.
- [6] Kirby D. Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases. Washington, DC: The National Campaign to Prevent Teen Pregnancy, 2007.
- [7] Kirby DB. The impact of abstinence and comprehensive sex and STD/HIV education programs on adolescent sexual behavior. *Sexuality Research & Social Policy* 2008;5:18-27.
- [8] Coyle KK, Kirby DB, Marin BV, Gomez CA, Gregorich SE. Draw the Line/Respect the Line: A randomized trial of a middle school intervention to reduce sexual risk behaviors. *American Journal of Public Health* 2004;94:843-851.
- [9] Jemmott III JB, Jemmott LS, Fong GT. Efficacy of a theory-based abstinence-only intervention over 24 months: A randomized controlled trial with young adolescents. *JAMA* 2010;164:152-159.
- [10] Sikkema KJ, Anderson ES, Kelly JA, Winett RA, Gore-Felton C, Roffman RA, et al. Outcomes of a randomized, controlled community-level HIV prevention intervention for adolescents in low-income housing developments. *AIDS* 2005;19:1509-1516.
- [11] Tortolero SR, Markham CM, Peskin MF, Shegog R, Addy RC, Escobar-Chaves SL, Baumler ER. It's Your Game: Keep It Real: Delaying sexual behavior with an effective middle school program. *Journal of Adolescent Health* 2010;46:169-179.
- [12] Koniak-Griffin D, Lesser J, Nyamathi A, Uman G, Stein JA, Cumberland WG. Project CHARM: An HIV prevention program for adolescent mothers. *Family & Community Health* 2003;26:94-107.
- [13] Shrier LA, Ancheta R, Godman E, Chiou VM, Lyden MR, Emans SJ. Randomized controlled trial of a safer sex intervention for high-risk adolescent girls. *Archives of Pediatrics & Adolescent Medicine* 2001;155:73-79.
- [14] Villarruel AM, Jemmott III JB, Jemmott LS. A randomized controlled trial testing an HIV prevention intervention for Latino youth. *Archives of Pediatrics & Adolescent Medicine* 2006;160:772-777.
- [15] Coyle KK, Kirby DB, Robin LE, Banspach SW, Baumler E, Glassman JR. All4You! A randomized trial of an HIV, other STDs, and pregnancy prevention intervention for alternative school students. *AIDS Education and Prevention* 2006;18:187-203.

- [16] Jemmott JB, Jemmott LS, Braverman PK, Fong GT. HIV/STD risk reduction interventions for African American and Latino adolescent girls at an adolescent medicine clinic: A randomized control trial. *Archives of Pediatric & Adolescent Medicine* 2005;159:440-449.
- [17] Markham CM, Tortolero SR, Peskin MF, Shegog R, Thiel M, Baumler ER, et al. Sexual risk avoidance and sexual risk reduction interventions for middle school youth: A randomized controlled trial. *Journal of Adolescent Health* 2012;50:279-288.
- [18] DiClemente RJ, Wingood GM, Harrington KF, Lang DI, Davies SL, Hook III EW, et al. Efficacy of an HIV prevention intervention for African American adolescent girls: A randomized controlled trial. *JAMA* 2004;292:171-179.
- [19] DiClemente RJ, Wingood GM, Rose ES, Sales JM, Lang DL, Caliendo AM, et al. Efficacy of sexually transmitted disease/Human Immunodeficiency Virus sexual risk–reduction intervention for African American adolescent females seeking sexual health services: A randomized controlled trial. *Archives of Pediatrics & Adolescent Medicine* 2009;163:1112-1121.
- [20] Wang LY, Davis M, Robin L, Collins J, Coyle K, Baumler E. Economic Evaluation of Safer Choices: A school-based Human Immunodeficiency Virus, other sexually transmitted diseases, and pregnancy prevention program. *Archives of Pediatrics & Adolescent Medicine* 2002;154:1017-1024.
- [21] Kahn J, Kegeles S, Hays R, Beltzer N. Cost-effectiveness of the Mpowerment project, a community-level intervention for young gay men. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 2001;27:482-491.
- [22] Tao G, Remafedi G. Economic evaluation of an HIV prevention intervention for gay and bisexual male adolescents. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998;17:83-90.
- [23] Pinter-ton S, Holtgrave D, Jemmott J. Economic evaluation of HIV risk reduction intervention in African-American male adolescents. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 2000;25:164-172.
- [24] Centers for Disease Control and Prevention. Vital Signs: HIV infection, testing, and risk behaviors among youths -- United States. *MMWR* 2012;61:971-976.
- [25] Weinstock H, Berman S, Cates W. Sexually transmitted diseases among American youth: Incidence and prevalence estimates, 2000. *Perspectives on Sexual and Reproductive Health* 2004;36:6-10.
- [26] Eaton DK, Kann L, Kinchen S, Shanklin S, Flint KH, Hawkins J, et al. Youth risk behavioral surveillance -- United States, 2011. *MMWR* 2012;61:SS-4.
- [27] Elster AB, Kuznets NJ (Eds.) *AMA Guidelines for Adolescent Preventive Services (GAPS): Recommendations and Rationale*. Baltimore, MD: Williams & Wilkins, 1994.
- [28] Green M, Palfrey JS (Eds.) *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*. 2nd Edition. Arlington, VA: National Center for Education in Maternal and Child Health, 2000.

- [29] U.S. Preventive Services Task Force. Guide to Clinical Preventive Services. 2nd Edition. Alexandria VA: International Medical Publishing, 1996.
- [30] U.S. Public Health Service. Clinician's Handbook of Preventive Services: Put Prevention into Practice. 2nd Edition. Alexandria, VA: International Medical Publishing, 1998.
- [31] Centers for Disease Control and Prevention. Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings. MMWR 2006;55:1-17.
- [32] U.S. Preventive Services Task Force. Screening for Chlamydial Infection. Available at: <http://www.uspreventiveservicestaskforce.org/uspstf/uspschlm.htm>. Accessed June 15, 2014.
- [33] U.S. Preventive Services Task Force. Screening for Gonorrhea. Available at: <http://www.uspreventiveservicestaskforce.org/uspstf/uspsgono.htm>. Accessed June 15, 2014.
- [34] Ralph LJ, Brindis CD. Access to reproductive healthcare for adolescents: Establishing healthy behaviors at a critical juncture in the lifecourse. Current Opinion in Obstetrics & Gynecology 2010;22:369-374.
- [35] U.S. Census Bureau. School Enrollment. Available at: <http://www.census.gov/hhes/school/>. Accessed June 15, 2014.
- [36] Zabin LS, Hirsch MB, Smith EA, Strett R, Hardy JB. Evaluation of a pregnancy prevention program for urban teenagers. Family Planning Perspectives 1986;18:119-126.
- [37] U.S. Department of Health and Human Services, Health Resources and Services Administration. The Registered Nurse Population: Initial Findings from the 2008 National Sample Survey of Registered Nurses. Rockville, MD: 2010.
- [38] National Assembly on School Based Health Care. School-Based Health Centers: National Census School Year 2007-2008. Washington DC: National Assembly on School Based Health Care, 2010.
- [39] Dittus PJ, De Rosa CJ, Jeffries RA, Afifi AA, Cumberland WG, Chung EQ, et al. The Project Connect Health Systems Intervention: Linking sexually experienced youth to sexual and reproductive health care. Journal of Adolescent Health 2014: doi: 10.1016/j.jadohealth.2014.04.005.
- [40] National Association of School Nurses. School Nursing in the United States: Quantitative Study. Silver Springs, MA: 2007.
- [41] Lohrmann DK. A complementary ecological model of the coordinated school health program. Public Health Reports 2008;123:695-703.
- [42] Hawkins DJ, Catalano RF, Kosterman R, Abbott R, Hill KG. Preventing adolescent health-risk behaviors by strengthening protection during childhood. Archives of Pediatrics & Adolescent Medicine 1999;153:226-234.
- [43] Lonczak HS, Abbott RD, Hawkins JD, Kosterman R, Catalano RF. Effects of the Seattle Social Development Project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. Archives of Pediatrics & Adolescent Medicine 2002;156:438-447.

- [44] Hatzenbuehler ML, Birkett M, Van Wagenen A, Meyer IH. Protective school climates and reduced risk for suicide ideation in sexual minority youths. *American Journal of Public Health* 2014;104:279-286.
- [45] McGuire JK, Anderson CR, Toomey RB, Russell ST. School climate for transgender youth: A mixed method investigation of student experiences and school responses. *Journal of Youth and Adolescence* 2010;39:1175-1188.
- [46] American Institutes of Research. Find Youth Info Website-- Safe Supportive Learning. Available at: <http://safesupportivelearning.ed.gov/>. Accessed June 15, 2014.
- [47] Roeser RW, Urdan TC, Stephens JM. School as a context of student motivation and achievement. In: Wentzel K, Wigfield A (Eds.). *Handbook of Motivation at School*. New York, NY: Routledge, 2009. Pp. 381-410.
- [48] Kann L, Kinchen S, Shanklin SL, Flint KH, Kawkins J, Harris WA, et al. Youth risk behavior surveillance -- United States, 2013. *MMWR Surveillance Summaries* 2014;63(S4):1-168.
- [49] American Association of University Women Educational Foundation. *Hostile Hallways: Bullying, Teasing, and Sexual Harassment in School*. Washington, DC: 2001.
- [50] Glew GM, Fan MY, Katon W, Rivara FP. Bullying and school safety. *Journal of Pediatrics* 2008;152:123-128.
- [51] Goodenow C, Szalacha L, Westheimer K. School support groups, other school factors, and the safety of sexual minority adolescents. *Psychology in the Schools* 2006;43:573-589.
- [52] Viner RM, Ozer EM, Denny S, Marmot M, Resnick M, Fatusi A, Currie C. Adolescence and the social determinants of health. *Lancet* 2012;379:1641-1652.
- [53] Wilson D. The interface of school climate and school connectedness and relationships with aggression and victimization. *Journal of School Health* 2004;74:293-299.
- [54] Epstein JL. *School, Family, and Community Partnerships: Preparing Educators and Improving Schools*. Boulder, CO: Westview Press, 2011.
- [55] Stevens V, De Bourdeaudhuij I, Van Oost P. Anti-bullying interventions at school: Aspects of programme adaptation and critical issues for further programme development. *Health Promotion International* 2001;16:155-167.
- [56] Holt MK, Matjasko JL, Espelage D, Reid G, Koenig B. Sexual risk taking and bullying among adolescents. *Pediatrics* 2013;132:e1481-1487.
- [57] Gruber JE, Fineran S. The impact of bullying and sexual harassment on middle and high school girls. *Violence Against Women* 2007;13:627-643.
- [58] Espelage DL, Basile KC, Hamburger ME. Bullying perpetration and subsequent sexual violence perpetration among middle school students. *Journal of Adolescent Health* 2012;50:60-65.
- [59] Markham CM, Lormand D, Gloppen KM, Peskin MF, Flores B, Low BJ, House D. Connectedness as a predictor of sexual and reproductive health outcomes for youth. *Journal of Adolescent Health* 2010;46:S23-41.

- [60] McNeely C, Falci C. School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health* 2004;74:284-292.
- [61] DeVore ER, Ginsburg KR. The protective effects of good parenting on adolescents. *Current Opinion in Pediatrics* 2005;17:460-465.
- [62] Guilamo-Ramos V, Jaccard J, Dittus P, Gonzales B, Bouris A. A comparative study of interventions for delaying the initiation of sexual intercourse among Latino and black youth. *Perspectives on Sexual and Reproductive Health* 2011;43:247–254.
- [63] Battistich V, Hom A. The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health* 1997;87:1997-2001.
- [64] Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, et al. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA* 1997;278:823-832.
- [65] Maman S, Campbell J, Sweat MD, Gielen AC. The intersections of HIV and violence: Directions for future research and interventions. *Social Science & Medicine* 2000;50:459-478.
- [66] Van Tieu H, Koblin BA. The intersections of HIV and violence: Directions for future research and interventions. *Current Opinion in HIV/AIDS* 2009;4:314-318.
- [67] Centers for Disease Control and Prevention. HIV Surveillance in Adolescents and Young Adults (through 2011). Atlanta, GA: 2014. Available at http://www.cdc.gov/hiv/pdf/statistics_surveillance_Adolescents.pdf. Accessed August 14, 2014.
- [68] Centers for Disease Control and Prevention. Diagnoses of HIV infection and AIDS among adolescents and young adults in the United States and 5 U.S. dependent areas, 2006-2009. *HIV Surveillance Supplemental Report* 2012;17(2). Available at: <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>. Accessed August 14, 2014.
- [69] Blake SM, Ledsky R, Lehman T, Goodenow C, Sawyer R, Hack T. Preventing sexual risk behaviors among gay, lesbian, and bisexual adolescents: The benefits of gay-sensitive HIV instruction in schools. *American Journal of Public Health* 2001;91:940-946.
- [70] Garofalo R, Deleon J, Osmer E, Doll M, Harper GW. Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *Journal of Adolescent Health* 2006;38:230-236.
- [71] Centers for Disease Control and Prevention. Sexual identity, sex of sexual contacts, and health-risk behaviors among students in grades 9-12 -- youth risk behavior surveillance, selected sites, United States, 2001-2009. *MMWR Early Release* 2011;60:1-133.
- [72] Kosciw JG, Greytak EA, Diaz EM, Bartkiewicz MJ. The 2009 National School Climate Survey. New York, NY: GLSEN, 2010.

- [73] Naranbhai V, Abdool Karim Q, Meyer-Weitz A. Interventions to modify sexual risk behaviors for preventing HIV in homeless youth. *Cochrane Database of Systematic Reviews* 2011. Issue 1. Art. No.: CD007501. DOI: 10.1002/14651858.CD007501.pub2.
- [74] Gangamma R, Slesnick N, Toviessi P, Serovich J. Comparison of HIV risks among gay, lesbian, bisexual and heterosexual homeless youth. *Journal of Youth and Adolescence* 2008;37:456-464.
- [75] Solorio MR, Rosenthal D, Milburn NG, Weiss RE, Batterham PJ, Gandara M, Rotheram-Borus MJ. Predictors of sexual risk behaviors among newly homeless youth: A longitudinal study. *Journal of Adolescent Health* 2008;42:401-409.
- [76] Beech BM. Human immunodeficiency syndrome and hepatitis B and C infections among homeless adolescents. *Seminars in Pediatric Infectious Diseases* 2003;14:12.
- [77] Markham CM, Tortolero SR, Escobar-Chaves SL, Parcel GS, Harrist R, Addy RC. Family connectedness and sexual risk-taking among urban youth attending alternative high schools. *Perspectives on Sexual and Reproductive Health* 2003;35:174-179
- [78] Tortolero SR, Markham CM, Addy RC, Baumler ER, Escobar-Chaves SL, Basen-Engquist KM, et al. Safer Choices 2: Rationale, design issues, and baseline results in evaluating school-based health promotion for alternative school students. *Contemporary Clinical Trials* 2008;29:70-82.