



**Health Care for the Homeless**  
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**Bibliography #26**

**Health Care Issues for  
Adolescents Who are Homeless**

**July 2004**

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**Policy Research Associates, Inc. • 345 Delaware Avenue, Delmar, New York 12054**  
Under contract to the Health Resources and Services Administration, Bureau of Primary Health Care

## 2004

Stewart AJ, Steiman M, Cauce AM, Cochran BN, Whitbeck LB, Hoyt DR. **Victimization and posttraumatic stress disorder among homeless adolescents.** *J Am Acad Child Adolesc Psychiatry* 43(3):325-31, 2004.

**OBJECTIVE:** To examine street victimization and posttraumatic stress symptoms among urban homeless adolescents and to test whether emotional numbing and avoidance represent distinct posttraumatic stress disorder (PTSD) symptom clusters. **METHOD:** Structured, private interviews were conducted with homeless adolescents in the Seattle metropolitan area from 1995 to 1998. **RESULTS:** Eighty-three percent of street youths were physically and/or sexually victimized after leaving home. Approximately 18% of these youths met research criteria for PTSD. Results from a confirmatory factor analysis suggest that disaggregating symptoms of avoidance from symptoms of emotional numbing provides a better fit of the data than the current DSM-IV model in which these symptoms are combined in one factor. **CONCLUSIONS:** Sexual and physical victimization are serious threats for homeless adolescents, and those who are victimized are at risk for PTSD. Results challenge the belief that symptoms of avoidance and numbing represent one unified cluster in this population.

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Taylor-Seehafer MA. **Positive youth development: Reducing the health risks of homeless youth.** *MCN Am J Matern Child Nurs* 29(1):36-40, 2004.

This article outlines several preventive health strategies for reducing the health risks of homeless youth related to emotional distress, alcohol and other drug use/abuse, risky sex, and victimization, all of which are well documented as major health risks for homeless youth living on the street. These health risks interrupt normal adolescent development and are primary obstacles to exiting the street culture and lifestyle. Research indicates that risk exposures among adolescents can be moderated and/or buffered by a focus on individual strengths and environmental protective factors such as community support and mentoring.

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Van Leeuwen JM, Hopfer C, Hooks S, White R, Petersen J, Pirkopf J. **A snapshot of substance abuse among homeless and runaway youth in Denver, Colorado.** *J Community Health* 29(3):217-29, 2004.

We report on results of a one-day survey measuring rates of substance use and HIV risk behaviors among the homeless youth population of Denver, Colorado. On March 15, 2001, staff of Urban Peak, conducted a single-day survey of homeless and runaway youth in the Denver metropolitan region, going to locations known to be frequented by this population. All youth encountered were asked to fill out a brief survey asking about past nine month use of the following substances: alcohol, marijuana, cocaine, methamphetamine, heroin, hallucinogens, ecstasy and ketamine, and HIV risk behaviors. Chi-square analyses of the association of substance used and gender, age, living situation, and ethnicity were conducted. In addition, the use of any club drug was examined. One-hundred-eighty-six homeless or runaway youth were surveyed; 74 percent were between 16 and 25. Rates of use over the last nine months were as follows: alcohol, 69 percent; marijuana, 75 percent; methamphetamine, 18 percent; cocaine, 19 percent; heroin, 12 percent; hallucinogens, 30 percent; ecstasy, 25 percent; and ketamine, 13 percent. Eleven percent reported trading sex for drugs, money, food, or shelter; and 13 percent reported sharing needles. There were significant associations between living situation and use of marijuana, cocaine and hallucinogens. Prevalence rates of club drugs show 75 percent, 77 percent and 77 percent of homeless or runaway youth having used ecstasy, ketamine and hallucinogens one to three

times per month over the last nine months, respectively. Prevalence rates of substance use among homeless youth in the Denver metropolitan area are similar to rates reported in other larger metropolitan areas. Routine screening for every substance needs to be part of the assessment for all homeless youth. Initial data points to a need for more research exploring protective factors among this population and to better understand the prevalence of club drug use.

## 2003

Baer JS, Ginzler JA, Peterson PL. **DSM-IV alcohol and substance abuse and dependence in homeless youth.** *J Stud Alcohol* 64(1):5-14, 2003.

**OBJECTIVE:** The purpose of this study is to describe endorsement rates of substance use criteria among homeless adolescents and to evaluate the reliability of diagnostic formulations among a group of adolescents who use more frequently and more heavily than other samples of adolescents. **METHOD:** Substance use rates and DSM-IV abuse and dependence criteria were assessed among 198 homeless youths between the ages of 13 and 19, as part of a larger study. Endorsement rates and reliability analyses were completed for diagnostic criteria assessed for alcohol, marijuana, amphetamines and heroin. **RESULTS:** Consistent with other studies of homeless youth, data revealed high rates of substance use and high rates of substance dependence. Both dependence and abuse diagnoses were associated with greater rates of use. DSM-IV criteria showed acceptable internal reliability, although variability was observed when applied to different substances. Of the drugs assessed, problems with heroin use appeared to be best, and marijuana use least, represented by dependence criteria. Criteria pertaining to continued use despite interference with role obligations and the experience of craving were consistently related to other dependence criteria. **CONCLUSIONS:** DSM-IV substance dependence criteria appear to have good internal reliability within a sample of adolescents who use at extremely high rates. Continued development of diagnostic systems for adolescent substance use should consider the social context of use, differential patterns of symptoms across different substances and the inclusion of additional criteria found reliable among adolescent samples.

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Barkin SL, Balkrishnan R, Manuel J, Andersen RM, Gelberg L. **Health care utilization among homeless adolescents and young adults.** *Journal of Adolescent Health* 32(4): 253-256, 2003.

In this study, a probability sample of Californian homeless females was examined for health service utilization, comparing adolescents to older women. Adolescent homeless women reported higher outpatient visit use. Possessing public health insurance increased the odds of outpatient visits. Future research might use the outpatient setting to aid adolescents in exiting homelessness (authors).

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Beech BM, Myers L, Beech DJ, Kernick NS. **Human immunodeficiency syndrome and hepatitis B and C infections among homeless adolescents.** *Sem Ped Infect Dis* 14(1):12-9, 2003.

The lifestyle of homeless adolescents places them at high risk for contracting a variety of serious illnesses. The purpose of this cross-sectional study was to determine the predictors of human immunodeficiency virus (HIV) and hepatitis infections among homeless youth. Anonymous and confidential interviewer-administered psychosocial surveys were conducted with 150 homeless youth. Venous blood samples were collected as well. Most respondents had engaged in sexual intercourse, with 13 years as the median age at first coitus.

Approximately 36 percent indicated they had exchanged sex for food, shelter, or drugs. Although youth reported a high rate of consistent condom use, 16 percent of the sample tested positive for HIV, 17 percent tested positive for hepatitis B (HBV), and 12 percent tested positive for hepatitis C (HCV). Homeless youth should be considered a high-risk group for contracting HIV, HBV, and HCV infections. The positive rates for HIV, HBV, and HCV observed in this study are higher than those of many previous reports among street youth. Because HIV prevention and hepatitis B vaccination programs have been targeted at school-based youth, most homeless youth are missed by these efforts. Targeted programs are needed to reach this high-risk group. Suggested guidelines for clinicians involved in the provision of medical care to homeless children and adolescents are provided.

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Bell DN, Martinez J, Botwinick G, Shaw K, Walker LE, Dodds S, Sell RL, Johnson RL, Friedman LB, Sotheran JL, Siciliano C. **Case finding for HIV-positive youth: A special type of hidden population.** *J Adolesc Health* 33(2):10-22, 2003.

**PURPOSE:** To describe the HIV case finding strategies used by the Special Projects of National Significance (SPNS), Adolescent HIV Outreach and Treatment programs, the populations of youth they were able to reach, and the populations of HIV-positive youth they were able to identify. **METHODS:** Program specifications from five programs located in four major metropolitan centers were contrasted. Four of the programs also provided outcome data for HIV counseling and testing outcome numbers, demographic and risk profile data for youth who underwent HIV testing, and mode of infection of HIV-positive youth. **RESULTS:** The program outcomes were discussed in terms of similarities and differences in outreach methods, geographic settings, individual characteristics and youth subcultures. **CONCLUSIONS:** Because HIV-positive adolescents will constitutionally remain a "hidden population," a great deal of time and effort will continue to need to go into the front end of outreach, counseling and testing. Specific guidance and recommendations for locating HIV-positive youth were provided to program designers for each type of outreach strategy.

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Ebner DL, Laviage MM. **The parallel universe of homeless and HIV-positive youth.** *Semin Pediatr Infect Dis* 14(1):32-7, 2003.

The HIV/AIDS crisis among teens in this country is alarming, but the rates are even more staggering when these youth are homeless. They tend to live in a world typically considered by those trying to care for them—family, friends, and healthcare providers—as unreachable and hopeless. This article seeks to present "their world" to health professionals in attempts to depict it not as inaccessible, but as a sensitive one that takes great care and support in order for contact to be successful. Their words and those of individuals who have tried to make this connection are used to facilitate the presentation.

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English A, Morreale MC, Larsen J. **Access to health care for youth leaving foster care: Medicaid and SCHIP.** *J Adolesc Health* 32(6 Suppl):53-69, 2003.

**PURPOSE:** To examine how Medicaid and the State Children's Health Insurance Program (SCHIP) could improve health care access for youth aging out of foster care, a vulnerable population with multiple health concerns. **METHODS:** On the basis of an analysis of state and federal laws, state plans and amendments, and a telephone survey of state officials, this article identifies options in Medicaid and SCHIP for states to provide health insurance coverage for these youth, examines states' use of available options, and highlights other relevant federal health care programs. **RESULTS:** Numerous Medicaid and SCHIP eligibility categories could

provide coverage for older adolescents leaving foster care. The federal Foster Care Independence Act of 1999 (FCIA) created a new Medicaid expansion option for this group and other opportunities for states to address their health care needs. Numerous other federal programs also finance health care that could serve this population. **CONCLUSIONS:** The potential exists through Medicaid or SCHIP to ensure that nearly all former foster youth have health insurance as they leave state custody, but Medicaid and SCHIP cannot alone meet all health care needs of these youth. Financing available through other public programs is essential. A few states have adopted the new FCIA Medicaid expansion option for former foster youth, and a larger number have implemented other relevant Medicaid options. Additional states have used other innovative approaches to facilitate health care access. Most states could do much more. A major challenge is to find approaches that can be implemented during times of severe budgetary limitations.

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Ensign J. **Ethical issues in qualitative health research with homeless youths.** *Journal of Advanced Nursing* 43(1): 43-50, 2003.

In this paper, the author provides an overview of the main ethical challenges of conducting qualitative research with homeless youths and proposes possible solutions to these challenges. The article was based on a review of professional guidelines for the ethical conduct of adolescent health research, national (US) and international bioethics, bibliographical searches, and personal experience with qualitative research with homeless youths. The authors assert that the main ethical challenges of conducting qualitative research with homeless youths include establishing and maintaining healthy researcher roles and boundaries, addressing the risks of researcher burn-out and safety issues, assuring optimal confidentiality, and avoiding sensationalism and voyeurism. The authors suggest that it is important for qualitative researchers who work with vulnerable populations to ensure that research is conducted in the most ethical way possible (authors).

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Feldmann J, Middleman AB. **Homeless adolescents: Common clinical concerns.** *Semin Pediatr Infect Dis* 14(1):6-11, 2003.

Homeless youth are at alarmingly high risk for a myriad of physical and psychological problems as a result of both the circumstances that predated their homelessness, and as a direct consequence of life on the streets. Sexually transmitted infections (STIs), pregnancy, trauma, tuberculosis, uncontrolled asthma, and dermatologic infestations are a few of the health problems with which these youth commonly present. These somatic problems are compounded by high rates of drug and alcohol abuse as well as depression and suicide. Despite the obvious need for medical services, homeless youth often do not receive appropriate medical care due to numerous individual and systems barriers impeding health care access by this population. In addition to the barriers experienced by the adult homeless population, homeless adolescents confront further hurdles stemming from their age and developmental stage. Some of these impediments include a lack of knowledge of clinic sites, fear of not being taken seriously, concerns about confidentiality, and fears of police or social services involvement. Improved access to appropriate health care is necessary if we are to better support and care for this population of young people. To effectively manage and treat homeless youth, individual providers must be aware of the diagnoses associated with homelessness, as well as the community resources available to these youth. Finally, providers need to be the voices advocating for improved services for this disadvantaged and silent population.

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Ginzler JA, Cochran BN, Domenech-Rodriguez M, Cauce AM, Whitbeck LB. **Sequential progression of substance use among homeless youth: An empirical investigation of the gateway theory.** *Subst Use Misuse* 38(3-6):725-58, 2003.

We examined the sequence of substance-use initiation in 375 street youth (age 13-21) who were interviewed from 1994-99 in Seattle, Washington. Based on the "gateway theory," participants were categorized into six profiles to describe the order in which they initiated use of various substances (i.e., alcohol, marijuana, other drugs), or classified as nonprogressors if they had not tried all three classes of drugs. Youth progressing in the hypothesized gateway order initiated their use at an earlier age than youth who had not progressed through all three substance classes. However, there was no relationship between a substance initiation profile and current substance-use. Implications include the recognition that street youth may follow different patterns of use than normative groups, and that interventions geared toward youth who use substances heavily must include contextual factors, in addition to substance-use history.

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Homes for the Homeless. **Children having children: Teen pregnancy and homelessness in New York City.** New York, NY: Homes for the Homeless, 2003.

This report describes the rising teenage birth rate in the homeless population. In this study, almost half of homeless heads of household in New York City shelters were teenage mothers. These young mothers appear to be least equipped to deal with the everyday challenges of parenting, childcare, education, and employment, let alone finding and keeping a permanent home. Unlike other homeless families who at least have a foundation for advancement, they usually grew up in unstable environments and are deprived of opportunities by the early burden of parenthood (authors). Available From: Homes for the Homeless, The Institute for Children and Poverty, 36 Cooper Square, 6th Floor, New York, NY 10003, (212) 529-5252, info@homesforthehomeless.com, www.homesforthehomeless.com/pdf%20files/pregnancy.pdf

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Rew L. **A theory of taking care of oneself grounded in experiences of homeless youth.** *Nursing Research* 52(4): 234-241, 2003.

Homeless adolescents are vulnerable to poor health outcomes owing to the dangerous and stressful environments in which they live. Despite their vulnerability, many of them are motivated to engage in self-care behaviors. The specific aim of this study was to explore self-care attitudes and behaviors of homeless adolescents. Individual interviews were conducted with 15 homeless adolescents. Interviews were audiotaped, transcribed verbatim, and analyzed using the constant comparative method of grounded theory. Findings revealed a basic social process of taking care of oneself in a high-risk environment. This basic social process was supported by three categories: Becoming Aware of Oneself, Staying Alive With Limited Resources, and Handling One's Own Health, each including two processes. Findings support Orem's conceptualizations of self-care and self-care agency and suggest the need for programs to support further healthy growth and development among homeless adolescents (author).

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Rosenthal D, Mallett S. **Involuntary sex experienced by homeless young people: A public health problem.** *Psychological Reports* 93(3): 1195-1196, 2003.

This article discusses the incidence of involuntary sex among homeless young people. The authors assert that this risk is considerably higher than in the general population, and that the most common reason for unwanted sex is being drunk or high at the time. The article states that there is a need for programs that provide homeless young people with knowledge and decision-making skills to enable them to avoid unwanted sex and thus exposure to adverse sexual health outcomes (authors).

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Rotheram-Borus MJ, Song J, Gwadz M, Lee M, Van Rossem R, Koopman C. **Reductions in HIV risk among runaway youth.** *Prev Sci* 4(3):173-87, 2003.

Runaway youth are 6-12 times more likely to become infected with HIV than other youth. Using a quasi-experimental design, the efficacy of an HIV prevention program was evaluated over 2 years among 2 groups of runaways: (1) those at 2 shelters who received Street Smart, an intensive HIV intervention program, and (2) youth at 2 control shelters. Street Smart provided youth with access to health care and condoms and delivered a 10-session skill-focused prevention program based on social learning theory to youth. Prior to analysis of the intervention's outcomes, propensity scores were used to identify comparable subgroups of youth in the intervention and control conditions. Compared to females in the control condition, females in the intervention condition significantly reduced their unprotected sexual acts at 2 years and alcohol use, marijuana use, and the number of drugs used over 12 months. Male adolescents in the intervention condition showed significant reductions in marijuana use over 6 months compared to control youth. Adolescent HIV prevention programs must proactively identify mechanisms for maintaining behavior change over the long-term, and innovative research designs are needed to allow examination of agency-level interventions.

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Saewyc EM. **Influential life contexts and environments for out-of-home pregnant adolescents.** *J Holist Nurs* 21(4):343-67, 2003.

This focused ethnography explored influential life experiences and environmental contexts associated with pregnancy among "out-of-home" pregnant adolescent women in Seattle. Methods adapted from feminist anthropology guided ethnographic interviewing and participant observation. Key informants included 5 White, 1 American Indian, and 2 African American women 17-19 years, plus expectant fathers and street friends. Narrative and domain analysis focused on life events and current experiences that participants linked to their pregnancy decisions. Participants organized their narratives primarily around relationships: conflict-laden family relationships, violence and sexual abuse in childhood, mental health and substance abuse problems, and life-long patterns of housing instability. Economic challenges, disconnection to school, and spiritual change were important in their current circumstances. For most, out-of-home status preceded pregnancy, and during pregnancy, housing options improved slightly. For others, pregnancy occurred within a relationship that offered them relatively more stable housing arrangements.

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Steele RW, Ramgoolam A, Evans J Jr. **Health services for homeless adolescents.** *Semin Pediatr Infect Dis* 14(1):38-42, 2003.

This prospective review was designed to determine the effectiveness of a broad-spectrum health intervention program for homeless and runaway youth. Diagnosis, treatment, and counseling for drug use, sexually transmitted diseases (STDs), and other health issues were provided to all new admissions to a residential care facility during a 7-year enrollment. Education was continued during a minimum follow-up period of 9 months based on the program entitled Bright Futures, previously developed and published by the National Center for Education in Maternal and Child Health. Fifty-four percent of the study residents had STDs on admission, and 9% developed new STDs after completing therapy and undergoing counseling. Drug dependence was reduced from 47% to 4%, and 46% achieved full-time or part-time employment. Sixty-three percent completed hepatitis B immunization with the 3-dose series. This experience suggests that an organized program of interventions in a residential care facility for homeless teenagers can significantly reduce drug dependence and STDs.

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Votta E, Manion I. **Factors in the psychological adjustment of homeless adolescent males: The role of coping style.** *Journal of American Academy of Child and Adolescent Psychiatry* 42(7): 778-785, 2003.

This cross-sectional study explored differences in and the association of self-reported coping style, negative life events, self-esteem, and perceived social support with the psychological adjustment of adolescent males who were homeless and nonhomeless. Data was collected from 100 youths accessing an emergency shelter and two comparison groups of nonhomeless youths: 70 youths accessing local community drop-in centers and 54 high school youths who had never accessed a shelter or drop-in. Data were collected from January 2000 to January 2001 in Ottawa. Homeless youths reported a higher prevalence of family dysfunction, school difficulties, suicide attempts, legal problems, and substance use than nonhomeless youths. Youths who were homeless differed from youths who were nonhomeless for each outcome measure, reporting a greater use of the disengagement coping style, higher negative life events index, less perceived parental support, and higher levels of depressive symptoms and internalizing and externalizing behavior problems. Hierarchical regression analyses indicated that disengagement coping and self-worth accounted for significant amounts of variance in depressive symptomatology, and both internalizing and externalizing behavior problems in homeless youths. Findings reflect the merit of considering coping style as a factor in the prevalence of psychological maladjustment among homeless youths (authors).

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| <b>2002</b> |
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Barry PJ, Ensign J, Lippek SH. **Embracing street culture: Fitting health care into the lives of street youth.** *J Transcult Nurs* 13(2):145-52, 2002.

The purpose of this article is to describe a unique model for the provision of comprehensive primary health care for homeless youth in Seattle, Washington. Through the description of our program, we argue for the use of youth-centric instead of youth-friendly programs. This means a change from using the friendly health program as the central focus to having the young people be the starting point and adapting the health service to meet their needs. We describe how our model of care optimizes chances for homeless youth to establish positive connections with caring adults. We also show how homeless youth have their own street culture, which is of primary importance to them and which has a powerful impact on how they use and view health care.

Beech BM, Meyers L, Beech DJ. **Hepatitis B and C infections among homeless adolescents.** Family and Community Health 25 (2): 28-36, 2002.

The lifestyle of homeless adolescents places them at high risk for contracting serious illnesses. This study sought to determine the hepatitis status and predictors of hepatitis infection among 150 homeless adolescents. Each participant took a psychosocial survey and provided a venous blood sample. Most respondents had engaged in sexual intercourse; approximately 36% indicated they had exchanged sex for food, shelter or drugs. Youth reported a high rate of consistent condom use, however 22% tested positive for hepatitis B or C. Homeless youth should be considered a high-risk group for hepatitis B or C virus infection. As hepatitis B vaccination programs have been targeted at school-based youth, most homeless youth are missed by these efforts. Targeted programs are needed to immunize this high-risk group (authors).

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Ensign J, Panke A. **Barriers and bridges to care: Voices of homeless female adolescent youth in Seattle, Washington.** Journal of Advanced Nursing 37(2): 166-172, 2002.

The purpose of this study was to conduct an assessment of reproductive health-seeking behaviors, sources of advice, and access to care issues among a sample of clinic-based homeless adolescent women. Adolescent women are among the most vulnerable and medically underserved subgroups within the homeless population in the United States. Homeless youth are rarely invited to participate in research aimed at improving their access to appropriate health care. Also, the culture in which they live and the personal experience of being homeless are often not addressed. The women said that they seek health advice from other women, including their mothers even while they are homeless. They reported first trying self-care interventions, and going to clinics when self-care actions no longer worked. They stated that the main barriers to health care were lack of insurance, confusion over consent, transportation problems, and lack of respect and judgementalism from providers. Using the concept of cultural competency, the results provide insights into how to improve communication and health care services for these women (authors).

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Liverpool J, McGhee M, Lollis C, Beckford M, Levine D. **Knowledge, attitudes, and behavior of homeless African-American adolescents: Implications for HIV/AIDS prevention.** Journal of the National Medical Association 94(4): 257-263, 2002.

This study describes the knowledge of HIV/AIDS, attitudes about condom use, and the sexual behavior of African American adolescents who reside in a children's emergency homeless shelter. Of the 37 African-American male and female adolescents questioned, HIV/AIDS knowledge and attitudes about condoms were comparable to those of other adolescents described in the literature. The authors conclude that the knowledge, attitudes, and sexual behavior of homeless, African-American adolescents should be examined to develop and implement appropriate programs to address the specific needs of this population (authors).

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McMorris BJ, Tyler KA, Whitbeck LB, Hoyt DR. **Familial and "on-the-street" risk factors associated with alcohol use among homeless and runaway adolescents.** Jnl of Stud on Alcoh 63(1): 34-43, 2002.

This study investigated factors associated with alcohol use among homeless and runaway adolescents, using a risk-amplification model. Homeless and runaway adolescents were recruited and interviewed by outreach workers directly on the streets, in shelters, and in drop-in centers in four Midwestern states. The average age was 16 years, ages ranged from 12-22. This study sheds light on the nature of alcohol use in a high-risk

population. Family background and "on-the-street" factors must be taken into consideration when treating alcohol misuse in street youth. The alternative is a vicious cycle whereby homeless youth may become homeless adults (authors).

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Rew L. **Characteristics and health care needs of homeless adolescents.** *Nursing Clinics of North America* 37(3): 423-431, 2002.

This article discusses the significant and growing number of adolescents who separate early from their families and become homeless. These youths are heterogeneous in terms of gender, race, ethnicity, and socioeconomic status, but the majority come from families that have been disruptive or dysfunctional in some way. Homeless adolescents are vulnerable to a variety of physical and psychological problems related not only to their family histories but to the stressful environments in which they try to survive. Although numerous federal, state, and local programs have been developed to meet their needs for shelter, health care, and education, much remains to be done to ensure their healthy development and to prepare them for responsible life in the larger society (author).

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Rew L, Chambers KB, Kulkarni S. **Planning a sexual health promotion intervention with homeless adolescents.** *Nurs Res* 51(3):168-74, 2002.

This study, part of a larger study of the sexual health practices of homeless adolescents, explores participants' perceived need for more knowledge about sexual health and their ideas about developing a brief intervention to promote positive sexual health practices that would reflect their perspective. **METHODS:** Four focus groups with five to six participants each were conducted with 22 youth aged 16-20 years, randomly selected from the study sample of 425 homeless youth. Most participants were White, one was American Indian, two were Hispanic, and one did not indicate ethnicity. **RESULTS:** Participants were knowledgeable about symptoms, transmission, prevention, and treatment of STDs, but perceived the need for more knowledge about types of hepatitis, cancer, and long-term sequelae of untreated STDs. Participants identified barriers to seeking diagnosis and treatment for symptoms of STDs including cost, not knowing where to go, and lack of services specifically for females. They suggested developing a sexual health intervention based on respect that would provide concrete examples of how to promote their sexual health. **CONCLUSIONS:** Homeless adolescents were generally knowledgeable about symptoms and prevention of STDs and thought that street outreach interventions should be (a) brief, (b) gender-specific, (c) focused on the unique vulnerabilities and strengths of homeless youth, and (d) accessible.

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Rew L, Fouladi RT, Yockey RD. **Sexual health practices of homeless youth.** *Journal of Nursing Scholarships* 34(2): 139-145, 2002.

This article describes a study done with 414 homeless young men, and women, ages 16-20 on the sexual health practices of homeless adolescents, and examines the relationships among the variables in a conceptual model of sexual health practices. The authors also determine the direct and indirect effects of population characteristics, cognitive-perceptual factors, and behavioral factors on the sexual health practices of homeless adolescents. The authors assert that the respondents reported a high incidence of sexual abuse and homosexual and bisexual orientation, and that their safe-sex behaviors were surprisingly similar to those of university students (authors).

Snell CL. **Help-seeking and risk-taking behavior among Black street youth: implications for HIV/AIDS prevention and social policy.** J Health Soc Policy 16(1-2):21-32, 2002.

This article explores and analyzes the help-seeking and risk-taking behavior of Black urban street youth in Washington, DC, USA and Cape Town, South Africa. The target population of 100 youths came from the streets of Washington, DC and Cape Town, South Africa. Structured face-to-face interviews and direct observation of informal and formal settings where youths congregated were used to gather data. Major findings indicate that the majority received high levels of support from families and friends. In terms of formal systems, social and mental health services are viewed as much less accessible or useful. Youths were knowledgeable about HIV/AIDS but did not translate this into safer sexual practices. Implications for health and social policy are outlined.

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Van Leeuwen JM, Rietmeijer CA, LeRoux T, White R, Petersen J. **Reaching homeless youths for Chlamydia trachomatis and Neisseria gonorrhoeae screening in Denver, Colorado.** Sex Transm Infect 78(5):357-9, 2002.

**BACKGROUND AND RATIONALE:** The availability of urine based testing for Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (GC) provides a unique opportunity to screen for these pathogens outside traditional clinical settings. The researchers investigated the feasibility of street based CT/GC screening in the context of an outreach program among street/homeless adolescents in Denver. **OBJECTIVES:** To describe the integration of urine based CT/GC screening into an existing outreach program among street/homeless youths and the yield of CT/GC testing in this setting. **METHODS:** The Denver Department of Public Health (DPH) collaborated with outreach staff from Urban Peak to offer urine based CT/GC testing to males and females in street settings. Tests were conducted on the street in areas where street/homeless youths congregate. **RESULTS:** Urban Peak outreach staff were trained by DPH staff to conduct CT testing, process urine specimens, and provide test results to participating youths. DPH remained responsible for treatment of people with CT or GC infection as well as CT/GC case reporting. Throughout April 2002 a total of 414 CT and 302 GC tests were conducted, respectively 11.6% and 2.7% of which were positive. Among first testers, 13.0% were positive for CT and 3.7% for GC. **CONCLUSIONS:** CT/GC urine testing can be incorporated into existing outreach program without considerable extra effort. Overall CT rates were high and suggest the need for ongoing screening in this manner.

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Whitbeck LB, Hoyt DR, Johnson KD, Berdahl TA, Whiteford SW. **Midwest longitudinal study of homeless adolescents: Baseline summary report.** Lincoln, NE: University of Nebraska, 2002.

This report summarizes findings from the Midwest Longitudinal Study of Homeless Adolescents (MLSHA), a four state study of runaway adolescents. The project is in its second year and this is its first report. The report contains detailed information from interviews that the survey outreach workers conduct every three months with runaways who agree to stay in touch over the three-year period, typically from age 16 to 19. About 65 percent of the initial group of 455 teens have stayed in touch with interviewers, who are in many cases one of the few adults who express interest in their lives. During the interviews, new insights are gained about the lives of these teens. For example, there are different gradients of runaways, from "couch surfers" who leave home and sleep on the sofas of friends and relatives before going back home, to hard-core runaways with their own subculture. The study is important for a number of reasons, including troubling signs that runaway teens are poorly equipped for adult life (authors). Available From: University of Nebraska, 739 Oldfather Hall, Lincoln, NE 68588, (402) 472-5562, [www.endhomelessness.org/pub/MidwestStudy.pdf](http://www.endhomelessness.org/pub/MidwestStudy.pdf).

## 2001

Britto, MT, Klostermann, BK, Bonny AE, Altum, SA, Hornung RW. **Impact of a school-based intervention on access to healthcare for underserved youth.** *Journal of Adolescent Health* 29(2): 116-124, 2001.

Purpose: To determine whether a multidimensional school-based intervention, which included physical and mental health services, increased adolescents' use of needed medical care and preventive care and decreased emergency room use. Methods: A total of 2832 seventh through twelfth grade students in six public urban intervention schools and 2036 students in six demographically matched comparison schools completed a previously validated survey regarding health status and healthcare utilization in spring 1998 and 1999. Bivariate analyses examined the association between intervention status and Year 1/Year 2 outcomes. The multifaceted intervention included programs such as anger management groups, substance abuse prevention, tutoring, home visits, and enhanced school health services. Stepwise multivariate logistic models tested differences between the intervention and comparison groups across years, controlling for potential confounding variables. The interaction term for Group X Year was used to test the effect of the intervention. Multivariable modeling was also used to determine student factors independently associated with healthcare utilization. Results: Respondents had a median age of 15 years, 56% were female, 51% were white, 42% were black, and 34% reported chronic health problems. In both years, over 45% of students in both groups reported not seeking medical care they believed they needed. The proportion with missed care in the intervention schools did not change, whereas the proportion with missed care in the comparison schools increased. Emergency room use decreased slightly in the intervention schools and increased slightly in the comparison schools between Year 1 and Year 2. There were no major changes in healthcare delivery in this area during the year, demonstrating the volatility of adolescents' perceived access to care. Among the student factors, health status, having a chronic condition, and being in a higher grade were independently associated with students' report of not seeking care they believed they needed. Conclusion: These results confirm that many adolescents have unmet healthcare needs. Those with poor health status are most likely to report underutilization and unmet needs. These findings underscore the need for comparison groups when evaluating interventions and suggest the need for better understanding of community level changes in perceived healthcare access and use (authors).

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De Rosa CJ, Montgomery SB, Hyde J, Iverson E, Kipke, MD. **HIV risk behavior and HIV testing: A comparison of rates and associated factors among homeless and runaway adolescents in two cities.** *AIDS Education and Prevention* 13(2), 131-148, 2001.

This study examined differences in self-reported rates and predictors of HIV testing between homeless and runaway youths in San Diego and Los Angeles. Youths aged 13 - 23 were recruited from agency and street sites using a stratified probability sampling design. Interviewers administered a structured survey instrument lasting 20 minutes, which assessed youths' involvement in HIV risk-related sexual and drug-use behaviors, contact with outreach workers, and other variables. Significantly more Los Angeles youths reported testing than did San Diego youths. Multivariable analyses controlling for risk behaviors, knowing someone with HIV, and contact with outreach workers indicated that the higher rates of these factors in Los Angeles did not account for the difference in testing rates between the cities. Youths in Los Angeles were still 1.85 times as likely to be tested as San Diego youths, possibly a result of differing normative behavior and accessibility of testing services. (authors)

Ensign J. **The health of shelter-based foster youth.** Public Health Nurs 18(1):19-23, 2001.

There is a lack of information on the health needs of foster care adolescents in emergency shelters or group homes. The purpose of this study was to conduct an assessment of access to health care among shelter-based foster care adolescents in Baltimore, Maryland. The health passports of all the foster care youth staying at two emergency shelters had data extracted to a standardized chart audit tool. In addition, semistructured interviews were conducted with 15 of the adolescents and five shelter staff. Of the 84 passports, only nine had documented up-to-date immunizations, and only one had documented purified protein derivative (PPD) application and reading. A total of 11 met the criteria for significant delay in recommended follow-up to care. Major themes of the interviews revealed that shelter staff and youth were unaware of specific health care recommendations, or were unable to obtain needed health care due to insurance problems or prolonged waiting for appointment times. The results of this health passport audit indicate that shelter-based foster care youth suffer from worse access to health care than do comparable nonshelter-based foster care youth from the same city. Specific public health nursing recommendations are made for improving health supervision for these vulnerable youth.

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Harrison PA., Beebe T J, Park E. **The adolescent health review: A brief, multidimensional screening instrument.** Journal of Adolescent Health 29(2): 131-139, 2001.

Purpose: To develop a brief, multidimensional screening instrument for adolescents that addresses psychosocial domains critical to adolescent preventive health care services. Methods: Secondary analyses were conducted on survey data obtained in 1995 from a school sample of 76,159 students in grades 9 and 12, as well as 893 adolescents from juvenile correctional facilities, 500 adolescents from chemical dependency treatment programs, and 575 adolescents from residential behavioral treatment programs. A comprehensive set of 300 survey items was used in a series of discriminate analyses to determine which items best distinguished males and females in each clinical sample from their counterparts in the school sample. Results: The item selection for the Adolescent Health Review was guided both by empirical analyses and clinical judgment. The final screen is comprised of 33 Demographic and clinical items that address a variety of psychosocial domains. The computerized, self-administered screen can be completed in about 3 minutes. The screen is scored automatically and produces an easy-to-read risk-assessment profile. Because screening items were drawn from a large epidemiologic survey, normative profiles are available for each age and gender subgroup. Conclusions: A brief, empirically derived screening instrument, designed to address a range of adolescent risks, offers an opportunity for information gathering that otherwise might not be incorporated into routine clinic visits.

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Hovell MF, Blumberg EJ, Liles S, Powell L, Morrison TC, Duran G, Sipan CL, Burkham S, Kelley N. **Training AIDS and anger prevention social skills in at-risk adolescents.** Journal of Counseling and Development 79: 347-355, 2001.

Youth in alternative schools often engage in high rates of risk behaviors for AIDS and violence. This study included 42 youth, ages 13 to 18, from alternative schools in San Diego, CA and tested the effectiveness of behavioral skills training based on the Behavioral-Ecological Model. Two interventions were evaluated: one teaching condom use skills and the other teaching anger management skills. Changes in most skills were significant at postintervention but were not maintained at 6 months. Few risk-related attitudes or behaviors improved at 6 months for either group.

Lifson AR, Halcon LL. **Substance abuse and high-risk needle-related behaviors among homeless youth in Minneapolis: Implications for prevention.** J Urban Health 78(4):690-8, 2001.

Homeless and runaway youth face a variety of health risks, including those related to substance abuse and use of unsterile needles. During 1998-1999, we recruited 201 Minneapolis homeless youths aged 15-22 years; these youths were interviewed by experienced street outreach workers from settings where street youth were known to congregate. Respondents spent a median of 6 months in the previous year living on the streets or "couch hopping." There were 37% who reported having 15 or more alcoholic drinks per week, 41% smoked 1 pack or more of cigarettes per day, and 37% used marijuana 3 or more times a week; 15% reported lifetime injection drug use, including 6% who used injection drugs within the previous month. Twenty percent had received a tattoo, and 18% body piercing with a needle that had not been sterilized or had been used by someone else. There were 68% who had been tested for human immunodeficiency virus (HIV), 52% for hepatitis B, and 25% for hepatitis C. There were 44% who said they did not have enough information about hepatitis B and C. Less than half received hepatitis B vaccine; however, 51% of unvaccinated youths indicated that they would receive vaccination if offered. These Midwestern homeless youths face multiple health risks, including those related to substance use and exposure to unsterile needles. Despite unsafe behaviors, many of these youths were interested in methods to protect their health, including education, knowing their HIV or viral hepatitis serostatus, and obtaining hepatitis B immunization.

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Moon MW, Binson D, Page-Shafer K, Diaz R. **Correlates of HIV risk in a random sample of street youths in San Francisco.** J Assoc Nurses AIDS Care 12(6):18-27, 2001.

In a random sample of 203 street youths recruited in the Haight-Ashbury neighborhood of San Francisco, the authors found significant differences between those who reported that they could go home if they wanted to compared to those who perceived that they could not go back home. Those who could not go home were significantly more likely to report having been away from home for more than 3 years, having run away before age 13, having been kicked out of their home, and not being in touch with their parents compared to the other group. Those who could not go home reported significantly more injection drug use, which puts them at high risk for HIV. Health care providers can identify street youths at highest risk by asking the question "Could you go back home today if you wanted to do so?"

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Noell J, Rohde P, Seeley J, Ochs L. **Childhood sexual abuse, adolescent sexual coercion and sexually transmitted infection acquisition among homeless female adolescents.** Chld Ab Negl 25(1):137-48, 2001.

**OBJECTIVE:** To examine the relationship between childhood experiences of sexual abuse, sexual coercion during adolescence, and the acquisition of sexually transmitted infections (STIs) in a population of homeless adolescents. **METHOD:** Homeless adolescent females from a northwestern United States city were recruited by street outreach workers for a longitudinal study of STI epidemiology. Baseline data on childhood abuse and recent history of sexual coercion were used to predict physiologically confirmed STI acquisition over the subsequent 6 months. **RESULTS:** About 38% of all girls reported a history of childhood sexual abuse (CSA). Girls with a history of CSA were more likely to report recent sexual coercion. In turn, sexual coercion in the last three months was significantly associated with a higher number of sexual partners. Number of sexual partners significantly predicted the future acquisition of an STI within 6 months. **CONCLUSIONS:** Interventions to reduce risky sexual behaviors in homeless adolescent females may need to consider the impact of CSA, particularly on the number of sexual partners during adolescence. However, it also should be noted that engagement in intercourse often results from coercion and is not voluntary in this population.

Noell J, Rohde P, Ochs L, Yovanoff P, Alter MJ, Schmid S, Bullard J, Black C. **Incidence and prevalence of chlamydia, herpes, and viral hepatitis in a homeless adolescent population.** Sex Transm Dis 28(1):4-10, 2001.

**BACKGROUND:** High rates of unprotected intercourse and illegal drug use have been reported among homeless adolescents. As a transient population with the potential to act as disease vectors from one location to another, incidence and prevalence of sexually transmitted infections in this population are of particular concern. **GOAL:** To assess a homeless adolescent population for incidence and prevalence of Chlamydia trachomatis, herpes simplex virus type 2, hepatitis B virus, hepatitis C virus, HIV, and psychosocial correlates of the acquisition of sexually transmitted infections. **RESULTS:** Baseline prevalence of C trachomatis was 4.17% for males and 6.30% for females. Prevalence of herpes simplex virus type 2 was 5.73% for males and 12.50% for females. Hepatitis B virus and hepatitis C virus prevalences were 3.60% and 5.0%, respectively. HIV seroprevalence was 0.3%. The incidence of sexually transmitted infections was significantly higher among females than among males and was associated with inconsistent condom use and, for females, number of partners and sex with older partners. Incident hepatitis B virus and hepatitis C virus infection rates were 3.44% and 6.61%, respectively; both were associated with injection drug use. **CONCLUSIONS:** Among females, the incidence of herpes simplex virus type 2 and C trachomatis was relatively high. Inconsistent condom use was the primary factor associated with a significantly greater risk of incident sexually transmitted infections. This was especially true for females with multiple partners. Homeless adolescents also are at high risk for hepatitis B and C virus infection, primarily associated with self-reported injection drug use.

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Noell JW, Ochs LM. **Relationship of sexual orientation to substance use, suicidal ideation, suicide attempts, and other factors in a population of homeless adolescents.** Jnl of Adol Health 29(1): 1-6, 2001.

The purpose of this study was to explore the relationship of sexual orientation and gender to four sets of factors: family history, incarceration, substance use, and depression and suicide, in a population of homeless adolescents. A sample of homeless adolescents was recruited in Portland, Oregon and assessed using semi-structured interviews at baseline, three months and six months. A total of 532 youths provided data on sexual orientation and other variables. Heterosexual and non-heterosexual youths were compared on all sets of factors, primarily using logistic regressions. Results indicated that 44.9% of females identified as lesbian or bisexual, while only 13.9% of males identified as gay or bisexual. Gay, lesbian, bisexual, and "unsure" (GLBU) youths were less likely to have been in foster care or arrested, but were more likely to have spent time in a locked mental health treatment facility. More than one-third of all participants reported use of injection drugs. GLBU youths were more likely to have recently used amphetamines and to have injected drugs, however, gay-bisexual males were less likely to have recently used marijuana. GLBU status was associated with recent measures of depression and suicidal ideation, but not with lifetime measures. Associations of sexual orientation with several lifetime measures were different than with prospective measures, demonstrating the limitations of using lifetime measures rather than recent or prospective measures.

This population of homeless adolescents appears to be higher in its high rate of injection drug use and the large proportion of females who identify as lesbian or bisexual than found in other studies. The high rates of depression and suicidal ideation, especially among GLBU youth, are of great concern (authors).

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Rew L, Taylor-Seehafer M, Fitzgerald ML. **Sexual abuse, alcohol and other drug use, and suicidal behaviors in homeless adolescents.** *Issues in Comprehensive Pediatric Nursing* 24(4): 225-40, 2001.

Previous research has shown that homeless youth have high rates of suicidal ideation, sexual abuse, and abuse of alcohol and other drugs. However, little is known about how these rates differ by gender and ethnicity. Our objective was to describe patterns of sexual abuse, alcohol and other drug use, and indicators of suicidal behaviors in homeless adolescents and to determine gender and ethnic differences in these factors. We used secondary data analysis of data from surveys completed by 96 homeless youth whose average age was 17.9 years. Over 60% of the sample reported a history of sexual abuse; the majority were under the age of 12 years when they first tried alcohol, marijuana, and cocaine; 56.3% had injected drugs, and 46.9% had tried inhalants. During the past 12 months, 35.1% had seriously considered suicide and 12.3% had actually attempted suicide at least once. Significantly more Hispanics than Whites had considered suicide. A disproportionate number of Hispanics reported a history of sexual abuse. Participants with a history of sexual abuse were significantly more likely than those who did not have a history of sexual abuse to have used alcohol and/or marijuana and to have considered suicide in the past 12 months. We found that sexual abuse history is greater in this sample than in the general population and is particularly prevalent among Hispanic/Latino subjects. As in other studies, sexual abuse was more common among females than among males. High prevalence of sexual abuse, alcohol and other drug use, and suicidal behaviors in this sample of homeless youth underscores the need to develop and test community-based interventions to improve their health status.

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Rohde P, Noell J, Ochs L, Seeley JR. **Depression, suicidal ideation, and STD-related risk in homeless older adolescents.** *Journal of Adolescence* 24(4): 447-460, 2001.

This study's goals were to examine the frequency of depression and related constructs of suicidal ideation and hopelessness in a sample of homeless older adolescents and their associations with behaviors that may increase the risk of sexually transmitted disease (STD). Diagnostic interviews and blood/urine samples were obtained from 523 homeless adolescents. Overall, approximately 12 percent had a current DSM-IV diagnosis of major depression and 6.5 percent had dysthymia, with higher rates for female and older participants. Depression appeared to precede rather than follow homelessness and was associated with biologically verified STDs (in older participants), infrequent condom use, a non-heterosexual orientation, and lifetime homosexual experience. Unlike depression, suicidal ideation and hopelessness were associated with higher rates of intravenous drug use but lower rates of multiple sex partners and, in young homeless women, less sexual coercion. Depression is frequent in homeless older adolescents and has a complex association with STD-related behaviors (authors).

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Slesnick N, Meade M. **System youth: A subgroup of substance-abusing homeless adolescents.** *Journal of Substance Abuse* 13(3): 367-384, 2001.

This study examined shelter residents and compared the experiences of system and non-system youth. While many youths residing at homeless shelters will return home, many are placed in group or foster homes. Few researchers have examined the experiences of adolescents with a history of these out-of-home placements. Although longitudinal research is needed, findings argue that without intervention efforts targeted at identified problem behaviors, youth are at risk to continue their system involvement into adulthood (authors).

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Steele RW, O'Keefe MA. **A program description of health care interventions for homeless teenagers.** Clin Pediatr 40(5):259-63, 2001.

This prospective review was designed to determine the effectiveness of a broad-spectrum health intervention program for homeless and runaway youth. Diagnosis, treatment, and counseling for drug use, sexually transmitted diseases (STDs), and other health issues were provided all new admissions to a residential care facility during a 2-month enrollment. Education was continued during a 9-month follow-up period based on the program entitled Bright Futures, previously developed and published by the National Center for Education in Maternal and Child Health. Sixty percent of the 106 study residents had STDs on admission and 7% developed new STDs after completing therapy and undergoing counseling. Drug dependence was reduced from 41% to 3%, and 42% achieved full-time or part-time employment. Fifty-nine percent completed hepatitis B immunization with the 3-dose series. This experience suggests that an organized program of interventions in a residential care facility for homeless teenagers can significantly reduce drug dependence and STDs.

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Wagner LS, Carlin PL, Cauce AM, Tenner A. **A snapshot of homeless youth in Seattle: Their characteristics, behaviors and beliefs about HIV protective strategies.** J Com Health 26(3):219-32, 2001.

The purpose of this study was to determine how initial HIV prevention efforts for homeless youth were received and to determine areas where homeless youth's beliefs and behaviors continue to put them at risk for HIV infection. Interviews were conducted with 289 Seattle homeless youth. Youth reported using condoms with casual partners during vaginal and anal sex and with clients during oral, anal and vaginal sex. Condoms are often not used during vaginal sex with main partners or during oral sex with casual or main partners. Knowledge of HIV protective strategies differed according to youth's behavioral characteristics with heterosexual youth having the weakest knowledge of HIV protective strategies especially compared with young men who have sex with men. There is room for improvement in youth's knowledge and beliefs about HIV.

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Ensign J. **Reproductive health of homeless adolescent women in Seattle, Washington, USA.** Women and Health 31(2-3): 133-151, 2000.

This article examines the perspectives of adolescent females who are homeless on the topics of health issues, self-care and fertility control, as well as on lessons from being homeless. The research was descriptive, using semi-structured interviews and focus groups with a purposeful sample of 20 clinic-based female youth ages 15-23 years. The youth described female-specific health issues of being homeless, such as problems with hygiene, sexual exploitation, and survival sex. Most knew of female youth who were homeless who had tried self-induced abortions through drugs, herbs, or physical abuse. They spoke of fertility control practices of young women living on the streets. The women also spoke of lessons they had learned while being homeless, including the development of self-sufficiency. The authors conclude that health care providers should receive increased training in how to ask about sensitive subjects such as survival sex and the practice of self-induced abortions (authors).

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Klein JD, Woods AH, Wilson KM, Prospero M, Greene J, Ringwalt C. **Homeless and runaway youths'**

**access to health care.** *J Adolesc Health* 27(5):331-9, 2000.

**PURPOSE:** To describe use of health services and self-reported access to regular and emergency care by homeless adolescents and street youth. **METHODS:** Interviewer-administered surveys addressed use of health services, availability of sources of care for emergencies, and types of care sources used. An abbreviated version of the questionnaire used for youth in shelters was used for street youth. A nationally representative sample of 640 sheltered youth and a purposive sample of 600 street youth aged 12-21 years were interviewed. All data were collected in 1992. **RESULTS:** Half of street youth and 36% of sheltered youth did not have a regular source of health care. One-fourth of street youth and 18% of sheltered youth also reported serious health problems within the past year. Street youth were more likely than sheltered youth to have used emergency treatment and alcohol- or drug-related emergency treatment. Sheltered youth with a regular source of care were more likely to use nonemergency sites than those without a source of primary care. Few sheltered or street youth perceived shelter clinics, clinics for runaway youth, or free youth clinics to be available to meet their emergency care needs. **CONCLUSIONS:** Significant numbers of homeless youth did not have a regular source of health care. Those who had a regular source of care were more likely to have continuity between routine and emergency care. Integration of health services with other agencies serving youth in shelters or on the street may improve access to care for those without a routine source of care and provide better continuity for these high-risk youth.

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MacKellar DA, Valleroy LA, Hoffmann JP, Glebatis D, LaLota M, McFarland W, Westerholm, J, Jansenn RS. **Gender differences in sexual behaviors and factors associated with nonuse of condoms among homeless and runaway youths.** *AIDS Education and Prevention* 12(6): 477-491, 2000.

This article evaluates gender-specific factors associated with nonuse of condoms among homeless and runaway youths (HRYs) and explores gender differences in background experiences, psychosocial functioning, and risk behaviors among HRYs from four U.S. metropolitan areas. Of 879 sexually active HRYs sampled, approximately 70% reported unprotected sexual intercourse during a six-month period, and nearly a quarter reported never using condoms in the same period. Among males and females, having only one sex partner in the previous six months had the strongest association with nonuse of condoms. Among males, nonuse was also associated with having ever caused pregnancy, frequent marijuana use, prior physical victimization, and low self-control and sociability. Among females, nonuse was associated with knowledge of HIV status, prior sexual victimization, low social support, and infrequent marijuana use. These findings highlight the ongoing need for HIV prevention services for HRYs. Implications for the scope and content of these services are discussed (authors).

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Murphy DA, Rotheram-Borus MJ, Joshi V. **HIV-infected adolescent and adult perceptions of tuberculosis testing, knowledge and medication adherence in the USA.** *Aids Care Journal* 12(1): 59-63, 2000.

HIV-infected adolescent and adult perceptions of tuberculosis (TB) infection rates and physician TB behaviour, and patient knowledge of TB transmission and treatment adherence were assessed. HIV-infected youth from adolescent clinical care sites in three cities and HIV-infected adults in New York were interviewed. Adolescent self-report was compared to medical chart review. Adolescents reported they were significantly less likely to be tested, although testing rates were high for both samples. Approximately 9% of both samples reported infection with TB; the majority of whom reported receiving medication, and consistent medication adherence. The overall mean knowledge score was 66%, with significant age differences: adolescents were less knowledgeable than adults, and young males tended to be less knowledgeable than

young females. Age, gender and experience with TB (self-perception of TB, testing history and clinic choice) significantly predicted accuracy of knowledge about TB. Results suggest that if HIV-infected individuals--a population at very high risk and often among the least able to afford health care resources--receive the education and support they need from their community health care sources they may substantially reduce their chances of contracting and spreading TB. (authors).

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Pastor Bolnick J, Tina S. **Living at the edge of the world: A teenager's survival in the tunnels of Grand Central Station.** New York, NY: St. Martin's Press, 2000.

Tina S. spent four years as a teenage homeless drug addict, living in the tunnels of Grand Central Station, stealing, panhandling, hustling, and bingeing on crack cocaine. Tina was introduced to life at the station by April, a rootless teenager who helped Tina escape her dysfunctional family. Their friendship bound them in a spiral of escalating drug use, crime, and violence until April committed suicide at the age of 19. Tina struggled with grief and guilt at April's death, as well as her own addiction, in an effort to pull herself out of a cycle of arrest and homelessness. In this first-person account, Tina interweaves her story and April's. She recounts harrowing memories of the slow deterioration of friends and acquaintances, and her own struggles in and out of rehabilitation programs. With the help of coauthor Bolnick and others, Tina eventually began the slow process of drug rehabilitation, reconciliation with her family, and adoption of a more normal lifestyle. This is a raw and riveting account of drug addiction and homelessness (authors).

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Tyler KA, Whitbeck LB, Hoyt DR, Yoder KA. **Predictors of self-reported sexually transmitted diseases among homeless and runaway adolescents.** Journal of Sex Research 37(4): 369-377, 2000.

This article investigates factors associated with self-reported sexually transmitted diseases among 569 homeless and runaway adolescents in four Midwestern states. Youth were interviewed by outreach workers directly on the streets, in shelters, and in drop-in centers. Results indicated that family abuse was positively related to substance use, affiliation with friends who sold sex, and time on own. Early family abuse indirectly increased the likelihood of self-reported sexually transmitted diseases through time on own, substance use, friends selling sex, and risky sexual behaviors. Finally, substance use and affiliation with friends who sold sex was positively associated with risky sexual behaviors, which in turn was related to self-reported sexually transmitted diseases (authors).

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University of Iowa Video Center. **Sucker punched.** Iowa City, IA: University of Iowa Video Center, 2000.

In this award winning video Native American, Delaney Apple of Rapid City, SD, describes his incredibly challenging life while growing up on the Pine Ridge Reservation. Gangs, violence, death, alcohol and drugs became a way of life at a very young age until a particularly horrific incident -- inflamed by alcohol, drugs and violence -- stopped his young life, literally, in its tracks. He then tells how his very existence was transformed and re-created through traditional Lakota spirituality (authors). Available From: The University of Iowa Video Center, 105 Seashore Hall Center, Iowa City, IA 52242, (319) 335-2645, <http://camera.video.uiowa.edu/newhome.htm>. (COST: \$30.00)

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Whitbeck LB, Hoyt DR, Bao WN. **Depressive symptoms and co-occurring depressive symptoms,**

**substance abuse, and conduct problems among runaway and homeless adolescents.** *Child Development* 71(3): 721-732, 2000.

This article examines factors that contribute to depressive symptoms and to co-occurring depression, substance abuse, and conduct problems among 602 runaway and homeless adolescents. The respondents were interviewed in shelters, drop-in centers, and directly on the streets in four Midwestern states. Results indicate that although family-of-origin factors contribute to depressive symptoms and comorbidity among runaway and homeless adolescents, experiences and behaviors when the adolescents are on their own also have powerful effects. The authors discuss the findings from a life-course perspective focusing on mechanisms through which street experiences accentuate or amplify already high levels of psychological distress and behavioral problems among this population of young people (authors).

## 1999

Baron SW. **Street youths and substance use: The role of background, street lifestyle, and economic factors.** *Youth and Society* 31(1): 3-26, 1999.

This article examines the role that various background, labor market, and street lifestyle factors play in street youths' drug and alcohol use. Using a sample of 200 homeless male street youths, the author found that exposure to parental substance abuse increases street youths' risk of alcohol and hard-drug use. Further, histories of physical abuse are related to the use of psychedelic drugs. The data also indicate that long-term homelessness influences hard-drug use, whereas drug- and alcohol-using peers influence the use of alcohol, marijuana, and psychedelic drugs. Participation in property crime increases street youths' use of all types of drugs and alcohol, whereas drug distribution is linked to greater soft drug use. Finally, job histories and depression are linked to alcohol and hard-drug use, whereas self-blame for unemployment increases alcohol use (author).

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Booth RE, Zhang Y, Kwiatkowski, CF. **The challenge of changing drug and sex risk behaviors of runaway and homeless adolescents.** *Child Abuse and Neglect* 23(12): 1295-1306, 1999.

This article assesses HIV-related drug and sex risk behaviors and evaluates factors associated with change in risk behaviors among runaway and homeless adolescents. To conduct the study, 244 street youth were recruited from a community drop-in center serving high-risk youth. Approximately half of the participants received training in a peer-based intervention, while the remaining subjects received no intervention. Subjects were interviewed at baseline, immediately following the intervention, and three months later. Runaways receiving the intervention significantly increased their knowledge about HIV. Knowledge and greater perceived chance for HIV were associated with high risk behavior. However, lower concern about HIV infection was also associated with high risk behavior. Despite the interventions success in increasing knowledge of HIV and AIDS, the association between knowledge, perceived likelihood of infection and high risk behaviors suggest that, without other alternatives, runaways will maintain their risks.

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Clatts MC, Davis WR. **A demographic and behavioral profile of homeless youth in New York City:**

**Implications for AIDS outreach and prevention.** *Medical Anthropology Quarterly* 13(3): 365-374, 1999.

In this article, the authors construct a demographic and behavioral profile of the homeless youth population in New York City, particularly as behavioral patterns relate to risk associated with HIV infection. Structured survey interviews were conducted with 929 street youths between the ages of 12 and 23. Data show that street youths are involved in multiple high-risk behaviors, including chronic, high-risk drug abuse, as well as high-risk sexual behavior. The authors conclude that existing resources for prevention services targeted to this population are woefully inadequate relative to the scope of the population and the complexity of these youths' needs. The authors state that there is a urgent need to expand and integrate street outreach, shelter, drug treatment, and primary health services, and to do so within a unified service-delivery model.

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Costello EJ, Erkanli A, Federman E, Angold A. **Development of psychiatric comorbidity with substance abuse in adolescents: Effects of timing and sex.** *Journal of Clin Child Psych* 28(3): 298-311, 1999.

This article examines the impact of childhood psychiatric disorders on the prevalence and timing of substance use and abuse and tests for sex differences. A representative sample of 1,420 children, ages 9, 11, and 13 at intake, were interviewed annually. By age 16 more than half the sample reported substance use and 6% had abuse or dependence. Alcohol use began by age 9, and smoking in the 13th year. The mean onset of dependence was 14.8 years, and mean onset of abuse was 15.1 years. Substance use began earlier in boys, but not girls, who later developed abuse or dependence. Disruptive behavior disorders and depression were associated with a higher rate and earlier onset of substance use and abuse in both sexes. Family drug problems were the strongest correlate of early onset. Despite differences in prevalence of psychopathology, boys and girls showed more similarities than differences in the course of early substance abuse, and its associations with psychopathology (authors).

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De Rosa CJ, Montgomery SB, Kipke MD, Iverson E, Ma JL, Unger JB. **Service utilization among homeless and runaway youth in Los Angeles, California: Rates and reasons.** *J Adolesc Health* 24(6):449-58, 1999.

**PURPOSE:** To describe the service utilization patterns of homeless and runaway youth in a "service-rich" area of Los Angeles, California; identify demographic and other correlates of utilization; and contextualize the findings with qualitative data. **METHOD:** During Phase 1 of this study, survey data were collected from an ethnically diverse sample of 296 youth aged 13-23 years, recruited from both service and natural "hang-out" sites using systematic sampling methods. During Phase 2, qualitative data were collected from 46 youth of varying ethnicities and lengths of time homeless. **RESULTS:** Drop-in centers and shelters were the most commonly used services. Other services were used less frequently. Utilization rates differed by ethnicity, length of time in Los Angeles, and city of first homeless episode. Shelter use was strongly associated with use of all other services. Despite youths' generally positive reactions to services, barriers were described including rules perceived to be restrictive, and concerns youth had about confidentiality and mandated reporting. Youth suggested improvements including more targeted services, more long-term services, revised age restrictions, and more and/or better job training and transitional services to get them off the streets. **CONCLUSIONS:** Because shelters and drop-in centers act as gateways to other services and offer intervention potential for these hard-to-reach youth, it is vital that we understand the perceived barriers to service utilization.

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Ennett ST, Bailey SL, Federman EB. **Social network characteristics associated with risky behaviors**

**among runaway and homeless youth.** Journal of Health and Social Behavior 40(1): 63-78, 1999.

This article describes the personal social networks of runaway and homeless youth and examines network characteristic associated with substance abuse and unsafe sexual behavior. A purposive sample of youth aged 14 to 21 who were living in Washington, DC, and were identified on the streets or through shelters or other service agencies was interviewed in 1995 and 1996. The authors found that although most youth reported current social relationships, a significant minority did not. Youth without a social network were significantly more likely to report current illicit drug use, multiple sex partners, and survival sex than youth with a network. For youth with a network, the networks were small, strong in affective and supportive qualities, comprised primarily of friends, typically included an alcohol or illicit drug user, and usually were not a source of pressure for risky behavior (authors).

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MacLean MG, Paradise MJ, Cauce AM. **Substance use and psychological adjustment in homeless adolescents: A test of three models.** American Journal of Community Psychology 27(3): 405-425, 1999.

In this article, three models of adolescent substance use, the deviance-prone, affect-regulation, and normative development models, are assessed regarding their ability to predict the substance use of a high-risk homeless adolescent sample with high rates of deviance, depression, and substance use. Hierarchical multiple regression analyses that included tests for curvilinear and gender interaction effects were performed. Results supported the deviance-prone model most strongly, with delinquency but not aggressive behavior predicting substance use. The affect-regulation model received support for females but not for males. With respect to the normative development model, results did not indicate that moderate substance users were better off than abstainers in terms of negative affect or interpersonal relationships (authors).

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Martinez J. **Adolescents and HIV infection.** Posit Aware 10(3):34-6, 1999.

HIV studies reveal that adolescents, especially females, are becoming HIV infected at increasingly higher rates, and in some regions, at higher rates than adults. Delays in treatment and delivery of needed health care and services reduces the survival of adolescents living with HIV/AIDS. Following statistics on the epidemiology and seroprevalence surrounding adolescent HIV/AIDS, a subpopulation profile is presented of youth recognized within the cohort of identified HIV-infected adolescents and young adult population in the US. These subsets include minorities, immigrants/non-citizens, gender, gays and bisexuals, and homeless and runaway youths. In addition, infections with STDs increases these groups' risk of contracting HIV.

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Maternal and Child Health Bureau. **Child health USA 1999.** DHHS, HRSA, 1999.

This book is a compilation of secondary data for 54 health status indicators. It provides both graphical and textual summaries of data and addresses long-term trends where applicable. Providing the most current data available for public health professionals and others, data is presented for the target populations of Title V funding: infants, children, adolescents and women of childbearing age. In addition to health status, the book addresses health service utilization and population characteristics. This information provides the reader with multi-dimensional perspective of the health of children in the U.S. Available From: National Maternal and Child Health Clearinghouse, 2070 Chain Bridge Road, Suite 450, Vienna, VA, 22182-2536, Phone: (703) 821-8955, Fax: (703) 821-2098, Web site: <http://www.mchb.hrsa.gov>. NO COST.

Walters AS. **HIV prevention in street youth.** J Adolesc Health 25(3):187-98, 1999.

Homeless adolescents have remained an underserved population throughout the human immunodeficiency/acquired immune deficiency syndrome epidemic. This article reviews the recent literature investigating human immunodeficiency virus (HIV) risk behavior among street youth. Prevalence rates of both adolescent homelessness and HIV seropositivity are unknown. However, data from a number of samples document a high prevalence of HIV risk behavior, sexually transmitted diseases, and alcohol/drug use among homeless adolescents. A number of individual and social factors, often associated with street survival, propel adolescents toward high-risk behavior. For some adolescents, testing HIV positive is perceived as advantageous in the procurement of basic needs such as food and shelter. HIV risk-reduction interventions must take into consideration the cause of homelessness, access to and participation in shelter services, and individual factors (such as the effects of sexual orientation and ethnicity) that frequently have not been systematically included in previous research. HIV risk for many homeless adolescents stems directly from their state of homelessness. National policies and funding are needed to address the health needs of these youth.

## 1998

Bailey SL, Camlin CS, Ennett ST. **Substance use and risky sexual behavior among homeless and runaway youth.** Journal of Adolescent Health 23(6): 378-388, 1998.

This article examines the relationships between substance use and risky sexual behavior in a sample of 327 homeless youth in Washington, DC. The aim was to characterize HIV-related risk behaviors of homeless youth, determine whether substance use is associated with risky sexual behavior in this population, and, if so, to explore explanations for this relationship. The results indicated that sexual activity with many partners, "survival" sex, and substance use were common. However, needle use was rare, and consistent condom use was evident in half the sample. Lack of motivation to use condoms, longer histories of sexual activity and homelessness, symptoms of drug dependency, not discussing HIV risks with a partner, and being female were associated with nonuse of condoms. The authors conclude homeless youth do use condoms, even within the context of substance use and casual sex. Results suggest that prevention and targeted intervention have had some positive effect on this population, but young homeless women are in need of targeted prevention (authors).

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Baron SW, Kennedy LW. **Deterrence and homeless male street youths.** Canadian Journal of Criminology 40(1): 27-60, 1998.

This article examines the effects of the threat of formal punishment on the criminal behavior of homeless male street youths. The article focuses on how these threats are shaped by the living conditions of the youths and other factors in their lifestyles. The results reveal that while many street youths fear legal sanctions, more serious offenders do not. Instead, the fear of punishment is reduced by their poverty, drug use, association with criminal peers, and missing normative constraints. The authors conclude the findings suggest that traditional models of deterrence must be reexamined when dealing with extremely "at risk" groups (authors).

Breuner CC, Barry PJ, Kemper KJ. **Alternative medicine use by homeless youth.** Arch Pediatr Adolesc

Med 152(11):1071-5, 1998.

**OBJECTIVE:** To evaluate the use of complementary and alternative medicine (CAM) by homeless youth who use our free clinic. **DESIGN:** Self-administered cross-sectional survey. **SUBJECTS AND METHODS:** Subjects included homeless youth between the ages of 14 and 21 years receiving care at the 45th Street Clinic Youth Program in Seattle, Wash, between January 29, 1998, and March 5, 1998. The self-administered survey included items on demographics, health issues, use frequency of different therapists or therapies, referral sources, and perceived effectiveness of treatment. **RESULTS:** The response rate by patients was 96.3% with an average respondent age of 18.5 years. Complementary and alternative medicine was used by 70.1% of the subjects. Referrals most often came from friends. The most common reason for using CAM was because it was "natural". Most of those who used alternative therapies believed they had been helped "some" or "a lot." Given a choice of providers to visit when they were ill, 51.7% would seek care from a physician, 36.9% from a CAM provider, and 11.4% would treat themselves. **CONCLUSIONS:** Care with CAM is frequently used and accepted by homeless youth. Cost-effectiveness and contributions to overall health care require additional evaluation. Integrating CAM into allopathic health centers may serve as an incentive to entice youth into mainstream health care.

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Clatts MC, Davis WR, Sotheran JL, Atillasoy A. **Correlates and distribution of HIV risk behaviors among homeless youths in New York City: Implications for prevention and policy.** Child Welfare 77(2):195-207, 1998.

Homeless youths are at high risk for poor health outcomes, including repeated exposure to STDs and high rates of unplanned pregnancies, untreated TB, HIV infection, and accelerated immune dysfunction associated with AIDS. This article examines the nature and distribution of HIV-risk behavior in a broad, street-based sample of homeless and runaway youths in New York City. Although street youths in general are shown at high risk, the highest risks nest within older age segments of the male street youth population. Paradoxically, these youths are least likely to be in contact with prevention services. The data demonstrate the need to reconsider the use of chronological age as a determinant for service eligibility and to reconfigure funding streams so as to more effectively and consistently target older and more vulnerable youths.

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Ensign J, Gittelsohn J. **Health and access to care: Perspectives of homeless youth in Baltimore City, U.S.A.** Social Science and Medicine 47(12): 2087-2099, 1998.

In this article, a combination of qualitative techniques from participatory rural appraisal and rapid assessment procedures was used to investigate the perceptions of health needs of shelter-based youth in Baltimore. The most common youth-identified health problems included STDs, HIV/AIDS, pregnancy, depression, drug use and injuries. The youth also spoke of environmental safety threats of violence and victimization by adults, as well as racism and sexism in their lives. Youth reported that trusted adult figures such as grandmothers are important sources of health advice. Many homeless youth will less that ideal family situations remain in contact with and continue to seek advice from parents and other family members. The authors state health interventions with urban street youth need to acknowledge the primacy of the social context for these youth, as well as the reality of violence as a daily health threat (authors).

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Ensign J, Santelli J. **Health status and service use. Comparison of adolescents at a school-based health**

**clinic with homeless adolescents.** Arch Pediatr Adolesc Med 152(1):20-4, 1998.

**OBJECTIVE:** To examine the health status, risk-taking behaviors, and access-to-care issues of shelter-based homeless adolescents compared with a domiciled adolescent population from the same large US city. **SUBJECTS:** The samples consisted of 109 youth in emergency shelters and 1010 youth using school-based inner-city clinics. **INTERVENTIONS:** Adolescents completed a health history, which was followed by a physical examination. **RESULTS:** Homeless youth began sexual activity at an earlier age, were less likely to have used birth control at their first sexual experience, and were twice as likely to have ever been pregnant. Oral and anal sex, same-sex activities, multiple sex partners in the past 30 days, depression, and substance use behaviors were reported more often by the homeless sample. The homeless youth were twice as likely to have visited an emergency department in the past 12 months. After adjustment for other risk factors, homelessness was an independent predictor of depression, emergency department use in the past 12 months, and history of pregnancy in the final logistic regression models. **CONCLUSION:** This study confirms and extends past research indicating that homeless youth exhibit more risk-taking behaviors and suffer from poorer overall health than do nonhomeless youth.

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Fothergill K, Ballard E. **The school-linked health center: A promising model of community-based care for adolescents.** J Adolesc Health 23(1):29-38, 1998.

**PURPOSE:** To examine the nature of the linkages between school-linked health centers (SLHCs) and schools; the centers' services, staffing, financing, and other operational details; and the advantages of this model of care. **METHOD:** Twenty-one SLHCs completed a written survey on a range of operational issues, including types of services provided, staffing patterns, budgets, and populations served in 1995. The researchers conducted on-site interviews with six centers and telephone interviews with 14 centers to obtain more detailed information. **RESULTS:** In general, SLHCs provide comprehensive medical, reproductive health, mental health, and health education services designed for adolescents. Staffed with a minimum of an administrator, a primary care provider, a nurse, and an administrative assistant, SLHCs serve students from more than one school as well as out-of-school youth. SLHCs develop formal and/or informal linkages with schools to improve outreach and follow-up services. **CONCLUSIONS:** The report describes a community-based model of care that is designed to provide affordable, age-appropriate, confidential, convenient care to adolescents, a population that traditionally has been very hard to reach. The SLHCs ability to provide reproductive health care makes it an attractive option for communities trying to prevent pregnancy and sexually transmitted diseases among adolescents. To firmly conclude that the SLHC is an effective model for improving adolescent access to services, more research is needed on adolescents' use and nonuse of SLHCs and other models of care; the cost of SLHCs compared to other models of care; and how SLHCs can sustain themselves financially, particularly in a managed care environment.

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Gleghorn AA, Marx R, Vittinghoff E, Katz MH. **Association between drug use patterns and HIV risks among homeless, runaway, and street youth in northern California.** Drg Alcoh Dep 51(3):219-27, 1998.

We examined relationships between drug use patterns and HIV risk behaviors among 1121 street-recruited homeless, runaway, and 'street youth' in Northern California. Comparisons demonstrated that youth using any heroin, methamphetamine, or cocaine exhibited more sexual risks than non-users, while primary stimulant and combined heroin/stimulant users showed greatest sexual risk. Combined heroin/stimulant injectors showed higher risk injection practices than primary heroin or primary stimulant injectors, including frequent injections and backloading syringes. Interventions for street youth should be tailored to current drug use

patterns since those using combinations of heroin and stimulants may require more comprehensive prevention, support and treatment services.

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Greene JM, Ennett ST, Ringwalt CL. **Prevalence and correlates of survival sex among runaway and homeless youth.** American Journal of Public Health 89(9): 1406-1409, 1999.

This article examines the prevalence and correlates of survival sex among runaway and homeless youths. A nationally representative sample of shelter youths and a multi-city sample of street youths were interviewed. Approximately 28% of street youths and 10% of shelter youths reported having participated in survival sex, which was associated with age, days away from home, victimization, criminal behaviors, substance use, suicide attempts, sexually transmitted disease, and pregnancy. The authors conclude that intensive and ongoing services are needed to provide resources and residential assistance to enable runaways and homeless youths to avoid survival sex, which is associated with many problem behaviors (authors).

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Greene JM, Ringwalt CL. **Pregnancy among three national samples of runaway and homeless youth.** Journal of Adolescent Health 23(6): 370-377, 1998.

This article compares estimates of the prevalence of pregnancy among runaway and homeless youth between the ages of 14 and 17 years in various settings with each other and with youth in the general population. The comparisons used three surveys of youth: (1) the first nationally representative survey of runaway and homeless youth residing in federally and nonfederally funded shelters; (2) a multicity survey of street youth; and (3) a nationally representative household survey of youth with and without recent runaway and homeless experiences. Youth living on the streets had the highest lifetime rates of pregnancy, followed by youth residing in shelters, and household youth. The authors conclude that shelter and street youth need comprehensive services, including pregnancy prevention, family planning, and prenatal and parenting services.

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Hagedorn S, Young ML. **Street youth and staff perceptions of health and healthcare.** Denver, CO: University of Colorado, In press.

Adolescent homelessness is a major problem in the United States, as are barriers to adolescent healthcare. The authors interviewed 16 homeless youth and 5 staff connected with Urban Peak, Inc., an agency that serves homeless youth. Guided by Community-as-Partner and Primary Caring theoretical frameworks, participants were asked to describe their experiences with health and healthcare. Perceptions were categorized into precursors to adolescent homelessness, experience of adolescent homelessness, barriers to health and health care, assets that promote health, health issues, and healthcare resources. Precursors to homelessness included substance abuse, sexually transmitted infections, unintended pregnancy and depression compromised their health. Assets that protected participants were connection with peers and multiservice organizations that serve youth without judgment. Access to healthcare was limited to free clinics, which often had irregular hours and providers. Access to medications, mental health services, and consistency of care was, as well, limited.

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Lin YG, Melchiono MW, Huba GJ, Woods ER. **Evaluation of a linked service model of care for HIV-**

**positive, homeless, and at-risk youths.** *AIDS Patient Care STDS* (10):787-96, 1998.

Two instruments were used to evaluate an agency's type and availability of services for HIV-positive and at-risk adolescents, and to assess opinions concerning healthcare referral patterns. These instruments were administered to representatives of 22 agencies from 10 categories of healthcare services. We found that no agencies offered youth services for inpatient adolescent-specific mental health treatment or short-term residential drug treatment; however, few offered long-term residential substance abuse detoxification services, outpatient drug maintenance, HIV-specific inpatient services, intensive day treatment for substance abusers, HIV home care, HIV hospice care, inpatient medical services, short-term shelters, long-term housing, HIV-specific clinical trials, and dental services. Barriers to expanding care included lack of funding, transportation, and lack of awareness among youths about services. A multidimensional scaling analysis identified a tight service cluster of two community health centers and the largest public hospital serving poor communities of color, as well as a relatively tight cluster of three service agencies located on the Boston Common serving homeless youths. A third service cluster consisted of two university-affiliated medical centers and one community health center. In conclusion, we found that many critical services for HIV-positive youths are relatively scarce. Multidimensional scaling provides a visual presentation of the relationships of network sites. This evaluation of services indicates a need for increased, accessible youth-oriented HIV services and suggests that linkages across the three distinct clusters of service providers should be solidified. These methodologies can be used to develop a generic model describing the stages of linkage formation in HIV care service networks.

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Martinez TE, Gleghorn A, Marx R, Clements K, Bowman M, Katz MH. **Psychosocial histories, social environment, and HIV risk behaviors of injection and noninjection drug using homeless youths.** *Journal of Psychoactive Drugs* 30(1): 1-10, 1998.

This article examines a study on the prevalence of HIV high-risk sexual and drug use behavior in a population of homeless youth. The authors recruited 186 homeless, runaway, and street youth in three northern California cities using systematic street-based sampling methods, and assessed psychosocial histories, currently daily activities, and sexual and drug-related risk behaviors using qualitative and quantitative techniques. Youths reported high lifetime rates of injection drug use, recent drug and alcohol abuse, and current homelessness. Injection drug using youths were more likely than noninjection drug using youth to report traumatic psychosocial histories, including parental substance use and forced institutionalization, use of alcohol and other noninjection drugs, a history of survival sex, and the use of squats or abandoned buildings as shelter. The authors state that these findings underscore the need for multifaceted service and prevention programs to address the varied needs of these high-risk youth (authors).

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Ringwalt CL, Greene JM, Robertson M, McPheeters M. **The prevalence of homelessness among adolescents in the United States.** *American Journal of Public Health* 88(9): 1325-1329, 1998.

This article reports on the 12-month prevalence of homeless episodes among adolescents in the United States. Personal, audiotaped interviews were conducted in 1992 and 1993 with a representative household sample of 6,496 adolescents aged 12 to 17 as part of the Youth Risk Behavior Survey. Respondents reported whether they had spent the night in any of a variety of locations other than home during the previous 12 months. Altogether, 7.6% of the youths questioned reported that they had spent at least one night in a youth or adult shelter, a public place, an abandoned building, outside, underground, or with a stranger. Boys were much more likely than girls to report having experienced a homeless episode. The study suggests that homelessness

among adolescents is not simply an urban problem and that prevention programs targeting homeless youths should be implemented nationwide (authors).

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Tenner AD, Trevithick LA, Wagner V, Burch R. **Seattle Youth Care's Prevention, Intervention, and Education Program: A model of care for HIV-positive, homeless, and at-risk youth.** *Journal of Adolescent Health* 23(2S): 96-106, 1998.

YouthCare's project for homeless and runaway youth who are HIV-positive or at high risk for becoming HIV-positive is one of 10 supported by the Special Projects of National Significance. The five major elements of the model include: (1) youth-specific HIV antibody test counseling; (2) outreach; (3) intensive case management for HIV-positive youth; (4) prevention services for youth at high risk for HIV infection; and (5) peer involvement. Quantitative evaluation aided in identifying youth served by the project and the sites at which services should be provided. Preliminary results from qualitative evaluations have stressed the importance of teamwork in designing clinical interventions and providing support to direct-service staff. This article's conclusion stresses that case management for this population, even though time and resource intensive, is effective, and that services need to be flexible and tailored to each client's needs.

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Weinreb L, Goldberg R, Bassuk E, Perloff J. **Determinants of health and service use patterns in homeless and low-income housed children.** *Pediatrics* 102(3):554-62, 1998.

**OBJECTIVE:** Previous studies of homeless children have described more health problems and service use than in housed children, but failed to control for potential confounding factors that may differ between these children. This observational study examines the relationship of homelessness and other determinants to health status and service use patterns in 627 homeless and low-income housed children. **METHODS:** Case-control study of 293 homeless and 334 low-income housed children aged 3 months to 17 years and their mothers conducted in Worcester, Massachusetts. Information was collected about mothers' housing history, income, education, emotional distress, and victimization history. Standardized instruments were administered to assess children's health. Health service use questions were adapted from national surveys. Main outcome measures included health status, acute illness morbidity, emergency department and outpatient medical visits. Multivariable regression analyses were used to examine the association of family and environmental determinants, including homelessness, with health status and service use outcomes. **RESULTS:** Mothers of homeless children were more likely to report their children as being in fair or poor health compared with their housed counterparts. Homeless children were reported to experience a higher number of acute illness symptoms, including fever, ear infection, diarrhea, and asthma. Emergency department and outpatient medical visits were higher among the homeless group. After controlling for potential explanatory factors, homeless children remained more likely to experience fair or poor health status, and a higher frequency of outpatient and emergency department visits. Mothers' emotional distress was independently associated with acute illness symptoms and frequent use of outpatient and emergency department settings. **CONCLUSIONS:** Homelessness is an independent predictor of poor health status and high service use among children. The present findings highlight the importance of preventive interventions and efforts to increase access to primary care among homeless children.

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Woods ER, Samples CL, Melchiono MW, Keenan PM, Fox DJ, Chase LH, Tierney S, Price VA, Paradise JE,

O'Brien RF, Mansfield CJ, Brooke RA, Allen D, Goodman E. **The Boston HAPPENS Program: A model of health care for HIV-positive, homeless, and at-risk youth.** *Journal of Adol Health* 23(2S): 37-48, 1998.

This article describes the Boston HAPPENS (HIV Adolescent Provider and Peer Education Network for Services) Program. Boston HAPPENS provides a citywide network of culturally and developmentally appropriate adolescent-specific care, including: (1) outreach and risk-education counseling through professional and adult-supervised peer staff; (2) access to appropriate HIV counseling and testing support services; (3) life management counseling; (4) health status screening and services needs assessment; (5) client-focused, comprehensive, multidisciplinary care and support; (6) follow-up and outreach to ensure continuing care; and (7) integrated care and communication among providers in the metropolitan Boston area. This innovative network of care offers a continuum from street outreach to referral and HIV specialty care that crosses institutional barriers (authors).

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