

# Health Care for the Homeless RESEARCH UPDATE

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Each quarter, research databases are searched for publications related to health care and homelessness. This issue of the **HCH RESEARCH UPDATE** includes a sample of summaries resulting from the search of publications from (approximately) January 2011 – March 2011. Summaries are categorized into themes which vary each quarter.

## COMMUNICATION

### **Title: Online Communities of Practice as a Communication Resource for Community Health Nurses working with Homeless Persons**

**Authors:** Valaitis RK, Akhtar-Danesh N, Brooks F, Binks S and Semogas D

**Source:** J Adv Nurs, 2011 [Epub 2011 Feb 11]

**Summary:** Aims. This study explored community health nurses' viewpoints about a Canadian online community of practice to support their practice with homeless or under-housed populations. Background. Community health nurses who specifically work with homeless and marginally housed populations often report feelings of isolation and stress in managing complex problems in resource constraints. To strengthen intra-professional ties and enhance information access, an online community of practice was designed, implemented and evaluated by and for them. Methods. Q-methodology was used. Sixty-six statements about the community of practice were collected from an online survey and focus groups, refined and reduced to 44 statements. In 2009, sixteen participants completed the Q-sort activity, rating each statement relative to the others. Scores for each participant were subjected to by-person factor analysis. Results. Respondents fell into two groups -tacit knowledge warriors and tacit knowledge communicators. Warriors strongly believed that the community of practice could combat stigma associated with homelessness and promote awareness of homelessness issues, and valued its potential to validate and improve practice. Communicators would have used the community of practice more with increased discussion, facilitation and prompt responses. Generally, nurses viewed the community of practice as a place to share stories, validate practice and adapt best practices to their work context. Conclusions. Online communities of practice can be valuable to nurses in

specialized fields with limited peer support and access to information resources. Tacit knowledge development is important to nurses working with homeless populations: this needs to be valued in conjunction with scientifically based knowledge.

## HEALTH CARE UTILIZATION & COST

### **Title: A 'Snap Shot' of the Health of Homeless People in Inner Sydney: St. Vincent's Hospital**

**Authors:** Chin CN, Sullivan K and Wilson SF

**Source:** Aust Health Rev, 35(1): 52-56, 2011

**Summary:** Objectives. The poor health profile of people who are homeless results in a disproportionate use of health resources by these people. An in-hospital count of demographic and health data of homeless patients was conducted on two occasions at St Vincent's Hospital in Sydney as an indicator of health resource utilisation for the Sydney region. Methods. Two in-hospital counts were conducted of homeless patients within the boundaries of St Vincent's Hospital to coincide with the inaugural City of Sydney homeless street counts in winter 2008 and summer 2009. Data collected included level of homelessness, principal diagnosis, triage category, bed occupancy and linkages to services post hospital discharge. Results. Homeless patients at St Vincent's utilised over four times the number of acute ward beds when compared with the state average. This corresponds to a high burden of mental health, substance use and physical health comorbidities in homeless people. There was high utilisation of mental health and drug and alcohol services by homeless people, and high levels of linkages with these services post-discharge. There were relatively low rates of linkage with general practitioner and ambulatory care services. Conclusion. Increasing knowledge of the health needs of the homeless community will assist in future planning and allocation of health services. What is known about the topic? The poor health status of people who are homeless has been previously noted in the USA, Canada and Scotland. What does this paper add? Homeless people living in Sydney also have a poor health profile and a disproportionate use of health resources when compared to people in the general population. What are the implications for practitioners? Health services for homeless people should be equipped to deal with mental health, substance use and physical health comorbidities.

**Title: Hospital Costs and Length of Stay among Homeless Patients admitted to Medical, Surgical, and Psychiatric Services**

**Authors:** Hwang SW, Weaver J, Aubry T and Hoch JS

**Source:** Med Care, 49(4): 350-354, 2011

**Summary:** BACKGROUND: Homeless individuals often suffer from serious health conditions and are frequently hospitalized. This study compares hospitalization costs for homeless and housed patients, with and without adjustment for patient and service characteristics. METHODS: Administrative data on 93,426 admissions at an academic teaching hospital in Toronto, Canada, were collected over a 5-year period. These data included an identifier for patients who were homeless. Each admission was allocated a cost in Canadian dollars based on Ontario Case Costing methodology. Associations between homeless status and cost were examined for the entire sample and stratified by medical, surgical, and psychiatric services. RESULTS: Data were analyzed for 90,345 housed patient admissions (mean cost, \$12,555) and 3081 homeless patient admissions (mean cost, \$13,516). After adjustment for age, gender, and resource intensity weight, homeless patient admissions cost \$2559 more than housed patient admissions (95% CI, \$2053, \$3066). For patients on medical and surgical services, much of this difference was explained by more alternate level of care days spent in the hospital, during which patients did not require the level of services provided in an acute care facility. Homeless patient admissions on the psychiatric service cost \$1058 more than housed patient admissions (95% CI, \$480, \$1635) even after adjustment for length of stay. CONCLUSIONS: Homeless patients on medical and surgical services remain hospitalized longer than housed patients, resulting in substantial excess costs. Homeless patients admitted for psychiatric conditions have higher costs not explained by prolonged length of stay. These observations may help guide development of community-based interventions for homeless individuals and reduce their use of inpatient care.

**Title: A Comparison of Treatment Outcomes among Chronically Homelessness Adults Receiving Comprehensive Housing and Health Care Services versus Usual Local Care**

**Authors:** Mares AS and Rosenheck RA

**Source:** Adm Policy Mental Health, 2011 [Epub 2011 Jan 25]

**Summary:** Service use and 2-year treatment outcomes were compared between chronically homelessness clients receiving comprehensive housing and healthcare services through the federal Collaborative Initiative on Chronic Homelessness (CICH) program (n = 281) a sample of similarly chronically homeless individuals receiving usual care (n = 104) in the same 5 communities. CICH clients were housed an average of 23 of 90 days (52%) more than comparison group subjects averaging over all assessments over a 2-year follow-up period. CICH clients were significantly more likely to report having a usual mental health/substance abuse treater (55% vs. 23%) or a primary case manager (26% vs. 9%) and to receive community case management visits (64% vs. 14%). They reported receiving more outpatient visits for medical (2.3 vs. 1.7), mental health (2.8 vs. 1.0), substance abuse treatment (6.4 vs. 3.6), and all healthcare services (11.6 vs. 6.1) than comparison subjects. Total quarterly

healthcare costs were significantly higher for CICH clients than comparison subjects (\$4,544 vs. \$3,326) due to increased use of outpatient mental health and substance abuse services. Although CICH clients were also more likely to receive public assistance income (80% vs. 75%), and to have a mental health/substance provider at all, they expressed slightly less satisfaction with their primary mental health/substance abuse provider (satisfaction score of 5.0 vs. 5.4). No significant differences were found between the groups on measures of substance use, community adjustment, or health status. These findings suggest that access to a well funded, comprehensive array of permanent housing, intensive case management, and healthcare services is associated with improved housing outcomes, but not substance use, health status or community adjustment outcomes, among chronically homeless adults.

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## HOUSING

**Title: The Role of Housing: A Comparison of Front-Line Provider Views in Housing First and Traditional Programs**

**Authors:** Henwood BF, Stanhope V and Padgett DK

**Source:** Adm Policy Ment Health, 38(2): 77-85, 2011

**Summary:** PURPOSE: Within the mental health system, there are two distinct service models for adults who have severe mental illness and are homeless: one prioritizes treatment before accessing permanent housing (Treatment First) while the other provides permanent housing upfront followed by clinical support (Housing First). Investigating front-line providers working within these two models affords an opportunity to learn more about their implementation from an insider perspective, thus shedding light on whether actual practice is consistent with or contrary to these program models' contrasting philosophical values. METHODS: Forty-one providers were recruited from four agencies as part of a NIMH funded qualitative study. Multiple, in-depth interviews lasting 30-45 min were conducted with providers that explored working within these agencies. Thematic analysis was utilized to compare the views of 20 providers working in Housing First versus the 21 providers working in Treatment First programs. RESULTS: Providers viewed housing as a priority but differences emerged between Treatment First and Housing First providers along three major themes: the centrality of housing, engaging consumers through housing, and (limits to...) a right to housing. CONCLUSION: Ironically, this study revealed that providers working within Treatment First programs were consumed with the pursuit of housing, whereas Housing First providers focused more on clinical concerns since consumers already had housing. Clearly, how programs position permanent housing has very different implications for how providers understand their work, the pressures they encounter, and how they prioritize client goals.

**Title: Impact of Prison Status on HIV-related Risk Behaviors**

**Authors:** Hudson AL, Nyamathi A, Bhattacharya D, Marlow E, Shoptaw S, Marfisee M and Leake B

**Source:** AIDS Behav, 15(2): 340-346, 2011

**Summary:** Baseline data were collected to evaluate the effectiveness of interventions on completion of the hepatitis A and B vaccine series among 664 sheltered and street-based homeless adults who were: (a) homeless; (b) recently (<1 year) discharged from prison; (c) discharged 1 year or more; and (d) never incarcerated. Group differences at baseline were assessed for socio-demographic characteristics, drug and alcohol use, sexual activity, mental health and public assistance. More than one-third of homeless persons (38%) reported prison time and 16% of the sample had been recently discharged from prison. Almost half of persons who were discharged from prison at least 1 year ago reported daily use of drugs and alcohol over the past 6 months compared to about 1 in 5 among those who were recently released from prison. As risk for HCV and HIV co-infection continues among homeless ex-offenders, HIV/HCV prevention efforts are needed for this population.

**Title: Active Tuberculosis among Homeless Persons, Toronto, Ontario, Canada, 1998-2007**

**Authors:** Khan K, Rea E, McDermaid C, Stuart R, Chambers C, Wang J, Chan A, Gardam M, Jamieson F, Yang J and Hwang SW

**Source:** Emerg Infect Dis, 17(3): 357-365, 2011

**Summary:** While tuberculosis (TB) in Canadian cities is increasingly affecting foreign-born persons, homeless persons remain at high risk. To assess trends in TB, we studied all homeless persons in Toronto who had a diagnosis of active TB during 1998-2007. We compared Canada-born and foreign-born homeless persons and assessed changes over time. We identified 91 homeless persons with active TB; they typically had highly contagious, advanced disease, and 19% died within 12 months of diagnosis. The proportion of homeless persons who were foreign-born increased from 24% in 1998-2002 to 39% in 2003-2007. Among foreign-born homeless persons with TB, 56% of infections were caused by strains not known to circulate among homeless persons in Toronto. Only 2% of infections were resistant to first-line TB medications. The rise in foreign-born homeless persons with TB strains likely acquired overseas suggests that the risk for drug-resistant strains entering the homeless shelter system may be escalating.

**Title: Homelessness and Adherence to Antiretroviral Therapy among a Cohort of HIV-Infected Injection Drug Users**

**Authors:** Palepu A, Milloy MJ, Kerr T, Zhang R and Wood E

**Source:** J Urban Health, 2011 [Epub 2011 March 17]

**Summary:** Homelessness is prevalent among HIV-infected injection drug users (IDU) and may adversely affect access and adherence to antiretroviral therapy (ART). There are limited descriptions of the effect of homelessness on adherence to ART in long-term cohorts of HIV-infected IDU. We used data from a community-recruited prospective cohort of HIV-infected IDU, including comprehensive

ART dispensation records, in a setting where HIV care is free. We examined the relationship between the homelessness measured longitudinally, and the odds of  $\geq 95\%$  adherence to ART using generalized estimating equations logistic regression modeling adjusting for sociodemographics, drug use, and clinical variables. Between May 1996 and September 2008, 545 HIV-infected IDU were recruited and eligible for the present study. The median follow-up duration was 23.8 months (IQR 8.5-91.6 months) contributing 2,197 person-years of follow-up. At baseline, homeless participants were slightly younger (35.8 vs. 37.9 years,  $p = 0.01$ ) and more likely to inject heroin at least daily (37.1% vs. 24.6%,  $p = 0.004$ ) than participants who had housing. The multivariate model revealed that homelessness (adjusted odds ratio [AOR] 0.66; 95% CI: 0.53-0.84) and frequent heroin use (AOR 0.40; 95% CI: 0.30-0.53) were significantly and negatively associated with ART adherence, whereas methadone maintenance was positively associated (AOR 2.33; 95% CI: 1.86-2.92). Sub-optimal ART adherence was associated with homelessness and daily injection heroin use among HIV-infected IDU. Given the survival benefit of ART, it is critical to develop and evaluate innovative strategies such as supportive housing and methadone maintenance to address these risk factors to improve adherence.

**Title: Tuberculosis Infection among Homeless Persons and Caregivers in High-Tuberculosis-Prevalence area in Japan: A Cross-Sectional Study**

**Authors:** Tabuchi T, Takatorige T, Hirayama Y, Nakata N, Harihara S, Shimouchi A, Fujita K, Yoshida H, Tamura Y, Nagai T, Matsumoto T, Takashima T and Iso H

**Source:** BMC Infect Dis, 2011 [Epub 2011 Jan 25]

**Summary:** BACKGROUND: Tuberculosis (TB) is a major public health problem. The Airin district of Osaka City has a large population of homeless persons and caregivers and is estimated to be the largest TB-endemic area in the intermediate-prevalence country, Japan. However, there have been few studies of homeless persons and caregivers. The objective of this study is to detect active TB and to assess the prevalence and risk factors for latent TB infection among homeless persons and caregivers.

**METHODS:** We conducted a cross-sectional study for screening TB infection (active and latent TB infections) using questionnaire, chest X-ray (CXR), newly available assay for latent TB infection (QuantiFERON-TB Gold In-Tube; QFT) and clinical evaluation by physicians at the Osaka Socio-Medical Center Hospital between July 2007 and March 2008. Homeless persons and caregivers, aged 30-74 years old, who had not received CXR examination within one year, were recruited. As for risk factors of latent TB infection, the odds ratios (OR) and 95% confidence intervals (95% CI) for QFT-positivity were calculated using logistic regression model.

**RESULTS:** Complete responses were available from 436 individuals (263 homeless persons and 173 caregivers). Four active TB cases (1.5%) among homeless persons were found, while there were no cases among caregivers. Out of these four, three had positive QFT results. One hundred and thirty-three (50.6%) homeless persons and 42 (24.3%) caregivers had positive QFT results. In multivariate analysis, QFT-positivity was independently associated with a long time spent in the Airin district:  $\geq 10$  years

versus <10 years for homeless (OR = 2.53; 95% CI, 1.39-4.61) and for caregivers (OR = 2.32; 95% CI, 1.05-5.13), and the past exposure to TB patients for caregivers (OR = 3.21; 95% CI, 1.30-7.91) but not for homeless persons (OR = 1.51; 95% CI, 0.71-3.21). **CONCLUSIONS:** Although no active TB was found for caregivers, one-quarter of them had latent TB infection. In addition to homeless persons, caregivers need examinations for latent TB infection as well as active TB and careful follow-up, especially when they have spent a long time in a TB-endemic area and/or have been exposed to TB patients.

**Title: Identification of Factors for Tuberculosis Transmission via an Integrated Multidisciplinary Approach**

**Authors:** Talarico S, Ijaz K, Zhang X, Mukasa LN, Zhang L, Marrs CF, Cave MD, Bates JH and Yang Z

**Source:** Tuberculosis (Edinb), 2011 [Epub 2011 March 04]

**Summary:** It was reported previously that the major fraction of the recent decrease of tuberculosis incident cases in Arkansas had been due to a decrease in the reactivated infections. Preventing transmission of Mycobacterium tuberculosis is the key to a continued decline in tuberculosis cases. In this study, we integrated epidemiological data analysis and comparative genomics to identify host and microbial factors important to tuberculosis transmission. A significantly higher proportion of cases in large clusters (containing >10 cases) were non-Hispanic black, homeless, less than 65 years old, male sex, smear-positive sputum, excessive use of alcohol, and HIV sero-positive, compared to cases in small clusters (containing 2-5 cases) diagnosed within one year. However, being non-Hispanic black and homeless within the past year were the only two host characteristics that were identified as independent risk factors for being in large clusters. This finding suggests that social behavioral factors have a more important role in transmission of tuberculosis than does the infectiousness of the source. Comparing the genomic content of one of the large cluster strains to that of a non-clustered strain from the same community identified 25 genes that differed between the two strains, potentially contributing to the observed differences in transmission.

**MENTAL HEALTH & SUBSTANCE ABUSE**

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**Title: The Jail Inreach Project: Linking Homeless Inmates who have Mental Illness with Community Health Services**

**Authors:** Buck DS, Brown CA and Hickey JS

**Source:** Psychiatr Serv, 62(2): 120-122, 2011

**Summary:** The Jail Inreach Project is a health care-based intensive case management "inreach" program that engages incarcerated persons from the homeless population who have behavioral health disorders (mental illness, substance use disorder, or both) in establishing a plan for specific postrelease services. The Jail Inreach Project aims to provide continuity of care and integrate this highly marginalized subpopulation of homeless persons into primary and behavioral health care systems by establishing patient-centered health homes. The use of integrated primary and behavioral health models in conjunction with provisions for immediate access to and continuity of care upon release is

emerging as a best practice in combating the rapid cycling of this vulnerable population between streets and shelters, emergency centers, and the county jail. Preliminary results indicate that more than half of the persons referred to the program remained successfully linked with services postrelease, whereas slightly less than one-third who engaged in services while incarcerated did not retain linkage on release.

**Title: Needle Exchange as a Safe Haven in an Unsafe World**

**Authors:** MacNeil J and Pauly B

**Source:** Drug Alcohol Rev, 30(1): 26-32, 2011

**Summary:** **INTRODUCTION AND AIMS:** The purpose of this paper is to describe the meaning of needle exchange programs from the perspectives of users who access such programs. **DESIGN AND METHODS:** We conducted observations, 33 semistructured interviews and two focus groups with users at four needle exchange sites. Qualitative description was used to analyse the data. **RESULTS:** Participants described experiences of trauma, abuse, violence and physical injuries that had damaged their lives and led to the use of drugs to numb the pain. Respect for persons and the development of trust with outreach staff for clients who use injecting drugs supported clients to feel safe in what for many was an unsafe world. Participants described the important role that needle exchange services play in reducing and countering negative stigma, as well as in providing access to clean supplies and to other services. **DISCUSSION AND CONCLUSIONS:** The findings attest to the benefits of having trusted, safe needle exchange services that not only reduce risk behaviours that prevent infections, such as HIV and hepatitis C, but also open the door to other services. This finding is particularly important given that the majority of those interviewed were homeless and living in poverty. The need for both fixed sites and the integration of harm reduction services as part of a broader network of primary health-care services was reinforced.

**Title: Predictors of Substance Abuse Treatment Need and Receipt among Homeless Women**

**Authors:** Tucker JS, Wenzel SL, Golinelli D, Zhou A and Green HD Jr.

**Source:** J Subst Abuse Treat, 40(3): 287-294, 2011

**Summary:** Many homeless women do not receive needed treatment for substance abuse. This study identified social network and other predisposing factors associated with perceived need for and receipt of substance abuse treatment among 273 homeless women who screened positive for past-year substance abuse. Perceived treatment need was more likely among women with drug-using sex partners, a denser network, and an arrest history but less likely for those with a minor child and a longer history of homelessness. Receiving treatment was more likely among women who received informational support from their sex partners and who had an arrest history but less likely among those who had a more street-based social network, had a minor child, considered themselves homeless, and recently needed mental health treatment. Treatment services researchers should attend more closely to social contextual factors, as well as the more traditional individual factors, to understand access and barriers to treatment.



## MODELS OF CARE

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### Title: **Integration of Collaborative Medication Therapy Management in a Safety Net Patient-Centered Medical Home**

Authors: Moczygemba LR, Goode JV, Gatewood SB, Osborn RD, Alexander AJ, Kennedy AK, Stevens LP and Matzke GR

Source: J Am Pharm Assoc, 51(2): 167-172, 2011

Summary: Objective: To describe the integration of collaborative medication therapy management (CMTM) into a safety net patient-centered medical home (PCMH). Setting: Federally qualified Health Care for the Homeless clinic in Richmond, VA, from October 2008 to June 2010. Practice description: A CMTM model was developed by pharmacists, physicians, nurse practitioners, and social workers and integrated with a PCMH. CMTM, as delivered, consisted of (1) medication assessment, (2) development of care plan, and (3) follow-up. Practice innovation: CMTM is integrated with the medical and mental health clinics of PCMH in a safety net setting that serves homeless individuals. Main outcome measures: Number of patients having a CMTM encounter, number and type of medication-related problems identified for a subset of patients in the mental health and medical clinics, pharmacist recommendations, and acceptance rate of pharmacist recommendations. Results: Since October 2008, 695 patients have had a CMTM encounter. An analysis of 209 patients in the mental health clinic indicated that 425 medication-related problems were identified (2.0/patient). Pharmacists made 452 recommendations to resolve problems, and 384 (85%) pharmacist recommendations were accepted by providers and/or patients. For 40 patients in the medical clinic, 205 medication-related problems were identified (5.1/patient). Pharmacists made 217 recommendations to resolve the problems, and 194 (89%) recommendations were accepted. Conclusion: Integrating CMTM with a safety net PCMH was a valuable patient-centered strategy for addressing medication-related problems among homeless individuals. The high acceptance rate of pharmacist recommendations demonstrates the successful integration of pharmacist services.

## MORBIDITY & MORTALITY

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### Title: **Morbidity Trends in the Population of a Specialised Homeless Primary Care Service**

Authors: Hewett N, Hiley A and Gray J

Source: Br J Gen Pract, 61(584): 200-202, 2011

Summary: An increasing body of research demonstrates that homelessness is an independent risk factor for morbidity and premature death. This paper compares the frequency of diagnoses between 2003 and 2009 in the computerised records of a specialist practice for homeless people. The changing morbidity trends revealed offer a basis for comparison with other services and suggest benefits from collaborative working, particularly around substance misuse and mental health.

### Title: **Addressing the Health Needs of the Homeless**

Authors: John W and Law K

Source: Br J Community Nurs, 16(3): 134-139, 2011

Summary: Several authors have alluded to the complex health needs of the homeless population in the UK. The correlation between homelessness and a wide range of health problems has been explored in the literature. This paper presents a literature review exploring the biological, psychosocial and sexual health needs of single homeless people. The relationship between health and homelessness is analysed in relation to theories of health inequalities, which suggest that being homeless may be both a cause and a consequence of ill health. The contemporary nurse can play a vital role in helping to overcome the barriers that homeless people face when accessing health services. This paper explores the skills and approaches that nurses in a wide variety of settings can employ in addressing the health issues of homeless clients.

### Title: **A Population-based Assessment of the Health of Homeless Families in New York City, 2001-2003**

Authors: Kerker BD, Bainbridge J, Kennedy J, Bennani Y, Agerton T, Marder D, Forgione L, Faciano A and Thorpe LE

Source: Am J Public Health, 101(3): 546-553, 2011

Summary: OBJECTIVES: We compared estimated population-based health outcomes for New York City (NYC) homeless families with NYC residents overall and in low-income neighborhoods. METHODS: We matched a NYC family shelter user registry to mortality, tuberculosis, HIV/AIDS, and blood lead test registries maintained by the NYC Department of Health and Mental Hygiene (2001-2003). RESULTS: Overall adult age-adjusted death rates were similar among the 3 populations. HIV/AIDS and substance-use deaths were 3 and 5 times higher for homeless adults than for the general population; only substance-use deaths were higher than for low-income adults. Children who experienced homelessness appeared to be at an elevated risk of mortality (41.3 vs 22.5 per 100,000;  $P < .05$ ). Seven in 10 adult and child deaths occurred outside shelter. Adult HIV/AIDS diagnosis rates were more than twice citywide rates but comparable with low-income rates, whereas tuberculosis rates were 3 times higher than in both populations. Homeless children had lower blood lead testing rates and a higher proportion of lead levels over 10 micrograms per deciliter than did both comparison populations. CONCLUSIONS: Morbidity and mortality levels were comparable between homeless and low-income adults; homeless children's slightly higher risk on some measures possibly reflects the impact of poverty and poor-quality, unstable housing.

## NUTRITION

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### **Title: Food Insufficiency and Health Services Utilization in a National Sample of Homeless Adults**

**Authors:** Baggett TP, Singer DE, Rao SR, O'Connell JJ, Bharel M and Rigotti NA

**Source:** J Gen Intern Med, 2011 [Epub 2011 Feb 01]

**Summary:** BACKGROUND: Homeless people have high rates of hospitalization and emergency department (ED) use. Obtaining adequate food is a common concern among homeless people and may influence health care utilization. OBJECTIVE: We tested the hypothesis that food insufficiency is related to higher rates of hospitalization and ED use in a national sample of homeless adults. DESIGN: We analyzed data from the 2003 Health Care for the Homeless (HCH) User Survey. PARTICIPANTS: Participants were 966 adults surveyed at 79 HCH clinic sites throughout the US. The study sample was representative of over 436,000 HCH clinic users nationally. MEASURES: We determined the prevalence and characteristics of food insufficiency among respondents. Using multivariable logistic regression, we examined the association between food insufficiency and four past-year acute health services utilization outcomes: (1) hospitalization for any reason, (2) psychiatric hospitalization, (3) any ED use, and (4) high ED use ( $\geq 4$  visits). RESULTS: Overall, 25% of respondents reported food insufficiency. Among them, 68% went a whole day without eating in the past month. Chronically homeless ( $p = 0.01$ ) and traumatically victimized ( $p = 0.001$ ) respondents were more likely to be food insufficient. In multivariable analyses, food insufficiency was associated with significantly greater odds of hospitalization for any reason (AOR 1.59, 95% CI 1.07, 2.36), psychiatric hospitalization (AOR 3.12, 95% CI 1.73, 5.62), and high ED utilization (AOR 2.83, 95% CI 1.32, 6.08). CONCLUSIONS: One-fourth of homeless adults in this national survey were food insufficient, and this was associated with increased odds of acute health services utilization. Addressing the adverse health services utilization patterns of homeless adults will require attention to the social circumstances that may contribute to this issue.

## WOMEN'S HEALTH

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### **Title: Making the Invisible Visible: A Photovoice Exploration of Homeless Women's Health and Lives in Central Auckland**

**Authors:** Bukowski K and Buetow S

**Source:** Soc Sci Med, 72(5): 739-746, 2011

**Summary:** Women and the concept of homelessness are weakly connected in the international discourses on health and housing. This PhotoVoice study gave a sample of homeless women in central Auckland a camera with which to photograph their lives in order to voice their felt health needs as advocates and agents for positive change. Interviews explored the meanings given to street lives captured in the photographs and reveal threats to the women's mental health and worsening addictions. Their tight-knit, resilient community, including dogs, was seen as 'family' who

provide support and protection. The women perceived social services as helping them survive and support their health, but not ending their homelessness. Barriers to them getting and staying off the street included a shortage of affordable, secure housing, which has also tended to become overcrowded. They identified their own leaders who could link with state housing services to implement and evaluate new homelessness programmes, such as Housing First.

### **Title: Unprotected Anal Intercourse and Sexually Transmitted Diseases in High-Risk Heterosexual Women**

**Authors:** Jenness SM, Begier EM, Neaigus A, Murrill CS, Wendel T and Hagan H

**Source:** Am J Public Health, 101(4): 745-750, 2011

**Summary:** OBJECTIVES: We examined the association between unprotected anal intercourse and sexually transmitted diseases (STDs) among heterosexual women. METHODS: In 2006 through 2007, women were recruited from high-risk areas in New York City through respondent-driven sampling as part of the National HIV Behavioral Surveillance study. We used multiple logistic regression to determine the relationship between unprotected anal intercourse and HIV infection and past-year STD diagnosis. RESULTS: Of the 436 women studied, 38% had unprotected anal intercourse in the past year. Unprotected anal intercourse was more likely among those who were aged 30 to 39 years, were homeless, were frequent drug or binge alcohol users, had an incarcerated sexual partner, had sexual partners with whom they exchanged sex for money or drugs, or had more than 5 sexual partners in the past year. In the logistic regression, women who had unprotected anal intercourse were 2.6 times as likely as women who had only unprotected vaginal intercourse and 4.2 times as likely as women who had neither unprotected anal nor unprotected vaginal intercourse to report an STD diagnosis. We found no significant association between unprotected anal intercourse and HIV infection. CONCLUSIONS: Increased screening for history of unprotected anal intercourse and, for those who report recent unprotected anal intercourse, counseling and testing for HIV and STDs would likely reduce STD infections.

### **Title: A Comparison of Individual and Social Vulnerabilities, Health, and Quality of Life among Canadian Women with Mental Diagnoses and Young Children**

**Authors:** Montgomery P, Brown S and Forchuk C

**Source:** Womens Health Issues, 21(1): 48-56, 2011

**Summary:** PURPOSE: this study examined whether differences exist among women with mental health issues who had either young, adult, or no children in relation to their individual and social vulnerabilities, health, and quality of life. METHODS: the design of this study was a secondary quantitative analysis of data extracted from a larger Canadian 5-year study focused on mental health and housing. This study's sample included 234 female psychiatric consumer/survivors: 108 (46%) women reported having no children, 68 (29%) had at least one child younger than 18 years of age, and 58 (25%) had children 18 years of age or older. The women completed structured interviews between 2004

and 2006. FINDINGS: seventy-nine percent of mothers were separated from their young children. In comparison with women with older children and those without children, women with young children were more often homeless, had fewer strengths/resources, greater physical but lower cognitive/intellectual functioning, and a low perception of quality of life regarding their financial situation. In addition, women with young children reported the greatest problem with substance use and poorest quality of life regarding daily activities, health, and overall quality of life. These results, however, were mediated by the confounding effects of housing. No differences were identified between groups regarding utilization of health and social services. CONCLUSION: these findings support the need for early integrated health and social interventions that assist women achieve their well-being.

**Title: Maternal Health Behaviors and Infant Health Outcomes among Homeless Mothers: U.S. Special Supplemental Nutrition program for Women, Infants, and Children (WIC) 2000-2007**

**Authors:** Richards R, Merrill RM, Baksh L and McGarry J

**Source:** Prev Med, 52(1): 87-94, 2011

**Summary:** OBJECTIVE: To determine whether participation in the Women, Infants, and Children Program is associated with improved maternal and infant health outcomes among homeless women in the Pregnancy Risk Assessment Monitoring System. METHOD: Analyses were based on Pregnancy Risk Assessment Monitoring System participants from 31 states/cities in the United States, 2000-2007 (n=272,859). Overall, 4% of women completing the Pregnancy Risk Assessment Monitoring System survey were homeless, with 76% participating in the Women, Infants, and Children Program, a federally-funded supplemental nutrition program for low-income women and children less than 5 years old. RESULTS: Among women in the Pregnancy Risk Assessment Monitoring System survey who reported using the Women, Infants, and Children Program, those experiencing homelessness were older, less educated, less likely to have private health insurance, and more likely to receive government assistance. Homeless women in the Women, Infants, and Children Program compared with those not in the program were significantly more likely to have a higher body mass index, to initiate breastfeeding after delivery, have prenatal care visits, have a longer gestational age, and have a greater infant birth weight. CONCLUSION: Characteristics of homeless pregnant women choosing to participate in the Women, Infants, and Children Program are consistent with the requirements for program participation for women in general. Homeless women accessing the Women, Infants, and Children Program had better maternal and infant health outcomes.

## YOUTH

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**Title: Interventions to Modify Sexual Risk Behaviours for Preventing HIV in Homeless Youth**

**Authors:** Naranbhai V, Abdool Karim Q and Meyer-Weitz A

**Source:** Cochrane Database Syst Rev, 2011 [Epub 2011 Jan 21]

**Summary:** BACKGROUND: Homeless youth are at high risk for HIV infection as a consequence of risky sexual behaviour. Interventions for homeless youth are challenging. Assessment of the effectiveness of interventions to modify sexual risk behaviours for preventing HIV in homeless youth is needed. OBJECTIVES: To evaluate and summarize the effectiveness of interventions for modifying sexual risk behaviours and preventing transmission of HIV among homeless youth. SEARCH STRATEGY: We searched electronic databases (CENTRAL, MEDLINE, EMBASE, AIDSearch, Gateway, PsycInfo, LILACS), reference lists of eligible articles, international health agency publication lists, and clinical trial registries. The search was updated January 2010. We contacted authors of published reports and other key role players. SELECTION CRITERIA: Randomised studies of interventions to modify sexual risk behaviour (biological, self-reporting of sexual-risk behaviour or health-seeking behaviour) in homeless youth (12-24 years). DATA COLLECTION AND ANALYSIS: Data from eligible studies were extracted by two reviewers. We assessed risk of bias per the Cochrane Collaborations tool. None of the eligible studies reported any primary biological outcomes for this review. Reports of self-reporting sexual risk behaviour outcomes varied across studies precluding calculation of summary measures of effect; we present the outcomes descriptively for each study. We contacted authors for missing or ambiguous data. MAIN RESULTS: We identified three eligible studies after screening a total of 255 unique records. All three were performed in the United States of America and recruited substance-abusing male and female adolescents (total N=615) through homeless shelters into randomised controlled trials of independent and non-overlapping behavioural interventions. The three trials differed in theoretical background, delivery method, dosage (number of sessions,) content and outcome assessments. Overall, the variability in delivery and outcomes precluded estimation of summary of effect measures. We assessed the risk of bias to be high for each of the studies. Whilst some effect of the interventions on outcome measures were reported, heterogeneity and lack of robustness in these studies necessitate caution in interpreting the effectiveness of these interventions. AUTHORS' CONCLUSIONS: The body of evidence does not permit conclusions on the impact of interventions to modify sexual risk behaviour in homeless youth; more research is required. While the psychosocial and contextual factors that fuel sexual risk behaviours among homeless youth challenge stringent methodologies of RCT's, novel ways for program delivery and trial retention are in need of development. Future trials should comply with rigorous methodology in design, delivery, outcome measurement and reporting.

**Title: Online Social Networking Technologies, HIV Knowledge, and Sexual Risk and Testing Behaviors among Homeless Youth**

**Authors:** Young SD and Rice E

**Source:** AIDS Behav, 15(2): 253-260, 2011

**Summary:** This study evaluates associations between online social networking and sexual health behaviors among homeless youth in Los Angeles. We analyzed survey data from 201 homeless youth accessing services at a Los Angeles agency. Multivariate (regression and logistic) models assessed whether use of (and topics discussed on) online social networking technologies affect HIV knowledge, sexual risk behaviors, and testing for sexually transmitted infections (STIs). One set of results suggests that using online social networks for partner seeking (compared to not using the networks for seeking partners) is associated with increased sexual risk behaviors. Supporting data suggest that (1) using online social networks to talk about safe sex is associated with an increased likelihood of having met a recent sex partner online, and (2) having online sex partners and talking to friends on online social networks about drugs and partying is associated with increased exchange sex. However, results also suggest that online social network usage is associated with increased knowledge and HIV/STI prevention among homeless youth: (1) using online social networks to talk about love and safe sex is associated with increased knowledge about HIV, (2) using the networks to talk about love is associated with decreased exchange sex, and (3) merely being a member of an online social network is associated with increased likelihood of having previously tested for STIs. Taken together, this study suggests that online social networking and the topics discussed on these networks can potentially increase and decrease sexual risk behaviors depending on how the networks are used. Developing sexual health services and interventions on online social networks could reduce sexual risk behaviors.