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Interventions to improve the health and housing status of homeless people: Evidence and implications for public health

Review on which this evidence summary is based:
Fitzpatrick-Lewis, D., Ganann, R., Krishnaratne, S., Ciliska, D., Kouyoumdjian, F., & Hwang, S.W. (2011). **Effectiveness of interventions to improve the health and housing status of homeless people: A rapid systematic review**. *BMC Public Health, 11*:638

Update of: Hwang, S.W., Tolomiczenko, G., Kouyoumdjian, F.G., Garner, R.E. (2005). **Interventions to improve the health of the homeless - A systematic review**. *American Journal of Preventive Medicine, 29*(4), 311-319.

Review Focus

P	Marginally housed or homeless individuals/families, with or without substance abuse issues/mental illness
I	Any intervention aimed at improving health or housing status
C	Usual care/no intervention
O	Physical health; mental health (including psychiatric symptoms and psychological or cognitive function); substance use (alcohol, drugs, or tobacco); HIV risk behaviours; healthcare utilization; adherence to health care; and quality of life.

Review Quality Rating: 9 (strong) *Details on the methodological quality are available here.*

Considerations for Public Health Practice

Conclusions from Health Evidence	General Implications
This high quality review is based on primary studies of moderate methodological quality. Provision of housing for homeless or marginally housed populations leads to: • increased housing stability • small, but significant, decreases in substance/alcohol use • longer durations of abstinence • reduced emergency department/psychiatric inpatient use • improved quality of life Adding case management and/or day treatment services to housing provision for varying homeless populations leads to: • improved housing stability • less need for substance abuse treatment (in the long term) • improved antiretroviral adherence Interventions have a mixed effect on decreasing use of hospital-based services and seem most effective among homeless people with substance use issues, and homeless people with HIV. Studies of sufficient quality are not available to draw conclusions for interventions directed at homeless women, families, or children.	Public health programs should include and/or support: • the provision of housing with rent subsidy for homeless people with **mental illness** • housing, preferably abstinent contingent, for homeless people **with substance abuse issues** • individual counseling to reduce risk behaviours (e.g. drug use, unprotected sex) among homeless people with **HIV/AIDS** • weekly educational sessions covering life skills, mental health, and HIV/AIDS issues for homeless or runaway **youth** • the provision of housing and/or moderate-consistent case management for homeless people with **HIV/AIDS** In homeless populations with **concurrent** substance abuse and mental illness, non-abstinent contingent housing with case management is **not** recommended if decreased psychiatric symptoms and substance use are the primary goal, but is recommended if the primary goal is stable housing. Public health decision makers should be aware that for a number of interventions, very limited evidence (i.e. 1 study) is currently available to inform decision making.

Evidence and Implications	
What's the evidence?	**Implications for practice and policy**
1. Interventions for Homeless People with Mental Illness (1 RCT) • The provision of discharge support (i.e. assistance with finding housing and payment of first/last month's rent) led to significant improvements in housing status up to 6 months post-discharge, compared to individuals receiving usual care (i.e. social work referral) (p <.001).	**1. Interventions for Homeless People with Mental Illness** • Public health decision makers should be aware use of supportive housing and rental assistance to improve housing status of those discharged from psychiatric care is supported by very limited evidence (i.e. 1 study)
2. Interventions for Homeless People with Substance Abuse Issues (3 studies) • Provision of housing plus on-site case management led to a slight decrease risk of alcohol consumption up to 12 months (**RR 0.98**; 95% CI 0.96 – 0.99) (1 quasi-experimental study). • Behavioural day treatment plus abstinence-contingent housing and therapy **(DT+)** produced a greater proportion of days abstinent at 2 months (71% vs. 41%) and 6 months (41% vs. 15%) compared to behavioural day treatment alone **(DT)**. Also, relapse was lower in the **DT+** versus day treatment only group (55% vs. 81%). (1 RCT) • Abstinence-contingent housing led to a statistically significant difference in the number of mean consecutive weeks of abstinence (**7.32**) vs. the no-housing group (**5.28**) (p = .024), and vs. the non-abstinent-contingent group (**4.68)** (p = .0031)**.** Number of days housed increased for all groups (p < .0001) (1 RCT). • No impact on days housed in those receiving **DT+** compared to those receiving day treatment only; or, weeks of abstinence for the non-abstinent contingent housing **group compared to the no housing group (p = .51)**	**2. Interventions for Homeless People with Substance Abuse Issues** • Public health decision makers should promote and support the provision of housing, preferably abstinent-contingent with on-site case management, to reduce substance use among homeless people with substance abuse issues. DT+ can also be used to increase days abstinent and also reduce relapse among homeless people with substance abuse issues. • Public health should not promote or use DT+ if the sole purpose is to increase the number of days housed.
3. Interventions for Homeless People with Concurrent Disorders (1 RCT) • Study participants given independent apartments without requirement of abstinence/psychiatric care spent 66% fewer days homeless (p < .001), and had less need for substance abuse treatment at 36 months compared to participants receiving outreach/drop-in services plus group living (p = 0.05). The independent-living group however utilized health care services slightly more at 48 months post-intervention (p = 0.025). • No difference between groups in psychiatric symptoms and substance use.	**3. Interventions for Homeless People with Concurrent Disorders** • Public health decision makers may advocate non abstinence-contingent, independent housing as a way to improve housing stability and decrease need for substance abuse treatment for homeless individuals with concurrent disorders, while acknowledging the positive findings are limited to a single study. • Non-abstinent contingent housing should not be used to improve psychiatric symptoms, decrease substance use rates, or decrease healthcare utilization.
4. Interventions for Homeless People with HIV (4 studies) • The provision of rental assistance with case management led to improvements in self-reported physical/mental health, and housing status (88% intervention group stably housed at 18 months vs. 51% with no intervention, p =< .0001). (1 RCT) • Provision of three modules, each containing five 90-minute individual counselling sessions, led to a significant decrease in: # days alcohol/marijuana use (35.77 to 27.54, p = 0.002); # of risky sexual acts (5.03 to 1.75, p = 0.037); and, # days of hard drug use (27.76 to 24.00, p = 0.042), compared to no intervention. (1 RCT).	**4. Interventions for Homeless People with HIV** • Public health decision makers should support housing provision programs, preferably with moderate and consistent case management to improve the health and housing status of homeless people with HIV, and to reduce HIV-risk behaviours and risk of death and, • advocate the provision of case management support for homeless people with HIV, to promote adherence to anti-retroviral therapy and improve CD4+ cell counts. • Public health should not rely on multiple individual counselling sessions to achieve substance use

• *Moderate* case management use was associated with improved antiretroviral adherence (**β = 0.13**; 95% CI, 0.02-0.25) compared to those receiving none or minimal case management, while *consistent* and *moderate* case management use were associated with greater than 50% improvement in CD4+ cell count. (1 prospective cohort study) • Risk of death was 20% higher for those not receiving supportive housing post-HIV diagnosis (Relative Hazard 1.20; 95% CL 1.03, 1.41) (1 retrospective observational study). • No impact of multiple individual counselling sessions compared to no intervention on abstinence, or provision of rental assistance with case management on # of sexual partners, condom use, or sex trading.	abstinence. • Public health should not use rental subsidy with case management to impact # of sexual partners, condom use or sex trading
5. Interventions for Homeless or Runaway Youth (1 RCT) • 12 weekly sessions covering life skills and psychiatric issues plus HIV/AIDS education led to a greater reduction in substance use from baseline (37%) compared with usual care (17%) (time effect $p < 0.001$).	**5. Interventions for Homeless or Runaway Youth** • Public health decision makers should consider weekly education sessions covering life skills, mental health and HIV/AIDS education to reduce substance use among homeless youth, while acknowledging that positive findings are limited to a single study.
Legend: P – Population; I – Intervention; C – Comparison group; O – Outcomes; CI – Confidence Interval; OR – Odds Ratio; HR – Hazard Ratio; RR – Relative Risk ***For definitions see the healthevidence.org glossary http://www.healthevidence.org/glossary.aspx*	

Why this issue is of interest to public health in Canada

At present, there are no reliable national-level data available on the number of homeless individuals and families in Canada.[1] Based on data acquired at the local level, however, homelessness in many communities is on the rise.[1] Across Canada, there are about 17,000 shelter beds available on a regular basis, while Canadian Census data suggests more than 10,000 Canadians are homeless on any given night, and almost 400,000 people are "vulnerably housed" (i.e. had either been homeless at some point in the past year, or had moved at least twice).[2,3] In other words, on any given night in Canada, for every one person sleeping in a shelter, there are 23 more people living with housing vulnerability.[2] Based on a recent study of 1200 homeless or "vulnerably housed" Canadian adults, both groups were at increased risk[2,3] for serious physical and mental health problems (e.g. asthma, hepatitis C); hospitalization; assault; and going hungry. Approximately 40% of these individuals reported being unable to access the health care they needed.[2] Homelessness is not limited to a particular social group as it affects Canadians of all genders, age and ethnicities. Not surprisingly, this population's health and wellness needs are diverse. Defining the needs of those Canadians with inadequate housing is essential to the development of effective public awareness campaigns, policy planning and resource allotment.

1. Human Resources and Skill Development Canada. (July 2009). *Evaluation of the homelessness partnering strategy: Final report, July 2009*. Retrieved from http://www.hrsdc.gc.ca/eng/publications_resources/evaluation/2009/ehps/sp-ah-904-07-09e.pdf
2. Research Alliance for Canadian Homelessness, Housing and Health. (2010). *Housing vulnerability and health: Canada's hidden emergency. A report on the Reach[3] health and housing transition study*. Retrieved from http://www.stmichaelshospital.com/pdf/crich/housing-vulnerability-and-health.pdf
3. Canadian Institute for Health Information. (2007). *Improving the health of Canadians: Mental health and homelessness*. Retrieved from http://secure.cihi.ca/cihiweb/products/mental_health_report_aug22_2007_e.pdf

Other quality reviews on this topic are available on www.healthevidence.org

Suggested citation

McRae, L., DeCorby, K., & Dobbins, M. (2011). Interventions to improve the health and housing status of homeless people: Evidence and implications for public health**:** Evidence and implications for public health. Hamilton, ON: McMaster University. Retrieved from http://www.healthevidence.org/documents/byid/21957/Fitzpatrick-Lewis2011_EvidenceSummary_EN.pdf