What's New in Homeless Health Care?
An Annotated Bibliography of Selected Research Studies, 1/1/16 – 5/15/17

I. Health Status

Travis P. Baggett

The 2015 National Canadian Homeless Youth Survey: Mental Health and Addiction Findings

Kidd SA, Gaetz S, O'Grady B
Can J Psychiatry 2017 Jan 1:706743717702076

Summary: The authors conducted a survey of 1103 homeless youth (mean age 20 years) accessing services at any of 57 agencies in 42 communities across Canada in October-November 2015. Overall, 85% of respondents had high psychological distress, 42% had attempted suicide, and 35% had survived at least one drug overdose requiring hospitalization. The 28% of respondents who were gender or sexual minorities (lesbian, gay, bisexual, transgender, queer, and/or "2 spirit"; LGBTQ2S) had significantly lower quality of life, poorer mental health, higher rates of suicide attempt (70% vs. 39%), and a higher prevalence of substance use disorders (67% vs. 42%) than straight and cisgender participants.

Why we chose this paper: Homeless youth are less studied than homeless adults. This paper reinforces the alarming rates of mental health and substance use disorders noted in smaller studies of homeless youth and draws attention to the exceptionally high risk for adverse outcomes among gender and sexual minorities, who comprise a sizable proportion of homeless youth.

Related papers:
Kozloff N, Stergiopoulos V, Adair CE, Cheung AH, Misir V, Townley G, Bourque J, Krausz M, Goering P. The Unique Needs of Homeless Youths With Mental Illness: Baseline Findings From a Housing First Trial. *Psychiatr Serv* 2016 Oct 1;67(10):1083-1090.

Auerswald CL, Lin JS, Parriott A. Six-year mortality in a street-recruited cohort of homeless youth in San Francisco, California. *PeerJ* 2016 Apr 14;4:e1909.

Cheng T, Kerr T, Small W, Dong H, Montaner J, Wood E, DeBeck K. High Prevalence of Assisted Injection Among Street-Involved Youth in a Canadian Setting. *AIDS Behav* 2016 Feb;20(2):377-84.

Use of Activity Space in a Tuberculosis Outbreak: Bringing Homeless Persons Into Spatial Analyses

Worrell MC, Kramer M, Yamin A, Ray SM, Goswami ND
Open Forum Infect Dis 2017 Jan 9;4(1):ofw280.

Summary: The authors analyzed data from 198 cases of active tuberculosis (Tb) in Fulton County, Georgia. One-third were homeless. When using all reported addresses to geographically map Tb cases, 85% of Atlanta's homeless shelters fell within one of the highest-density areas for Tb activity. When mapping the "activity space" of each Tb case, homeless and non-homeless cases had similar activity space sizes, but homeless cases had substantially more geographical overlap with other homeless cases as well as with the overall activity space of all Tb cases as a whole.

Why we chose this paper: This study illustrates the ways in which novel geospatial analytics can be used to supplement traditional contact tracing methods to investigate infectious disease transmission in transient populations. Homeless Tb cases have distinct geospatial characteristics that might inform screening and prevention activities, surveillance systems, and targeted public health interventions.

Related papers:
Powell KM, VanderEnde DS, Holland DP, Haddad MB, Yarn B, Yamin AS, Mohamed O, Sales RF, DiMiceli LE, Burns-Grant G, Reaves EJ, Gardner TJ, Ray SM. Outbreak of Drug-Resistant Mycobacterium tuberculosis Among Homeless People in Atlanta, Georgia, 2008-2015. *Public Health Rep* 2017 Mar/Apr;132(2):231-240.

Longer duration of homelessness is associated with a lower likelihood of non-detectable plasma HIV-1 RNA viral load among people who use illicit drugs in a Canadian setting
Loh J, Kennedy MC, Wood E, Kerr T, Marshall B, Parashar S, Montaner J, Milloy MJ
AIDS Care 2016 Nov;28(11):1448-54.

Summary: The authors analyzed data from a longitudinal cohort of 922 HIV-positive people who use drugs in Vancouver, Canada. Twenty-two percent were homeless at baseline and 44% experienced homelessness at least once during a median follow-up of 3.5 years. In analyses that controlled for drug use patterns and other confounders, the odds of HIV viral suppression decreased by 29% for every 6 months that a person spent homeless.

Why we chose this paper: This study adds to a growing body of literature documenting the adverse associations between homelessness and HIV disease control, and it complements studies suggesting that housing interventions may have a favorable impact on HIV outcomes.

Related papers:
Marshall BD, Elston B, Dobrer S, Parashar S, Hogg RS, Montaner JS, Kerr T, Wood E, Milloy MJ. The population impact of eliminating homelessness on HIV viral suppression among people who use drugs. *AIDS* 2016 Mar 27;30(6):933-42.

Kennedy MC, Kerr T, McNeil R, Parashar S, Montaner J, Wood E, Milloy MJ. Residential Eviction and Risk of Detectable Plasma HIV-1 RNA Viral Load Among HIV-Positive People Who Use Drugs. *AIDS Behav* 2017 Mar;21(3):678-687.

Bowen EA, Canfield J, Moore S, Hines M, Hartke B, Rademacher C. Predictors of CD4 health and viral suppression outcomes for formerly homeless people living with HIV/AIDS in scattered site supportive housing. *AIDS Care* 2017 Mar 23:1-5.

Thakarar K, Morgan JR, Gaeta JM, Hohl C, Drainoni ML. Homelessness, HIV, and Incomplete Viral Suppression. *J Health Care Poor Underserved* 2016 Feb;27(1):145-156.

Aidala AA, Wilson MG, Shubert V, Gogolishvili D, Globerman J, Rueda S, Bozack AK, Caban M, Rourke SB. Housing Status, Medical Care, and Health Outcomes Among People Living With HIV/AIDS: A Systematic Review. *Am J Public Health* 2016 Jan;106(1):e1-e23.

Differential Impact of Homelessness on Glycemic Control in Veterans with Type 2 Diabetes Mellitus
Axon RN, Gebregziabher M, Dismuke CE, Hunt KJ, Yeager D, Ana EJ, Egede LE
J Gen Intern Med 2016 Nov;31(11):1331-1337.

Summary: The authors examined the impact of homelessness on glycemic control in a nationwide longitudinal cohort of 1,263,906 veterans with diabetes who used Veterans Health Administration services. Individuals with indicators of homelessness had a higher likelihood of poor glycemic control, regardless of whether defined as an HbA1c of >8% or >9%, even after controlling for comorbid conditions like mental illness and substance use. The adverse impact of homelessness on glycemic control was more prominent for Hispanics and non-Hispanic whites than for non-Hispanic blacks.

Why we chose this paper: This is the first longitudinal study to demonstrate what many HCH clinicians already know: homelessness poses many obstacles to achieving optimal glycemic control among patients with diabetes. Whether homeless-tailored health services may mitigate the risk for adverse diabetes outcomes like retinopathy is an intriguing question posed by the related paper below.

Related papers:
Davis JA, Tsui I, Gelberg L, Gabrielian S, Lee ML, Chang ET. Risk factors for diabetic retinopathy among homeless veterans. *Psychol Serv* 2017 May;14(2):221-228.

Screening for Food Insecurity in Six Veterans Administration Clinics for the Homeless, June-December 2015
O'Toole TP, Roberts CB, Johnson EE
Prev Chronic Dis 2017 Jan 12;14:E04.

Summary: The authors examined food insecurity among 270 individuals who enrolled in care between June and December 2015 at any of 6 VA Homeless Patient Aligned Care Teams in geographically and demographically diverse regions across the US. Almost half (49%) reported food insecurity in the past 3 months, which was assessed using a brief instrument that took 3-5 minutes to administer and was well-received by patients and clinical staff. Among food insecure patients, 63% were in their own apartment and 47% were receiving food stamps.

Why we chose this paper: Food insecurity is common among homeless patients and this issue extends to formerly homeless people in housing. Brief screening can be incorporated into clinical workflows with good acceptability. Nutrition assistance is necessary but may not be sufficient.

Related papers:
Parpouchi M, Moniruzzaman A, Russolillo A, Somers JM. Food Insecurity among Homeless Adults with Mental Illness. *PLoS One.* 2016 Jul 20;11(7):e0159334.

Bowen EA, Bowen SK, Barman-Adhikari A. Prevalence and covariates of food insecurity among residents of single-room occupancy housing in Chicago, IL, USA*. Public Health Nutr* 2016 Apr;19(6):1122-30.

Characteristics and Factors Associated with Pain in Older Homeless Individuals: Results from the HOPE HOME Study
Landefeld JC, Miaskowski C, Tieu L, Ponath C, Lee CT, Guzman D, Kushel M
J Pain 2017 Apr 12. pii: S1526-5900(17)30535-7.

Summary: The authors assessed duration, severity, and correlates of pain using a validated set of questions in a community-based cohort of 350 older homeless adults (≥50 years old) in Oakland, California. Almost half (47%) reported chronic moderate to severe pain with high levels of interference with general activity and life enjoyment. PTSD, arthritis, and a history of abuse (verbal, physical, or sexual) were more common among people with chronic pain.

Why we chose this paper: This study draws attention to the very high prevalence of chronic pain among older homeless adults and its close association with traumatic life experiences, highlighting the need for trauma-informed management strategies that incorporate physical and psychiatric treatment modalities.

Related papers:
Vogel M, Frank A, Choi F, Strehlau V, Nikoo N, Nikoo M, Hwang SW, Somers J, Krausz MR, Schütz CG. Chronic Pain Among Homeless Persons with Mental Illness. *Pain Med* 2017 Feb 8.

Simmonds M, Simmonds K, Weleff J. Prevalence and problems of pain in the homeless: a systematic review. *J Pain* 2016 Apr;17(4S):S12-S13. (Scientific abstract)

Homelessness, Unsheltered Status, and Risk Factors for Mortality: Findings From the 100 ,000 Homes Campaign
Montgomery AE, Szymkowiak D, Marcus J, Howard P, Culhane DP
Public Health Rep 2016 Nov;131(6):765-772.

Summary: The authors examined unsheltered status among 25,489 homeless people who participated in the 100,000 Homes Campaign in 62 US communities between 2008 and 2014. Male sex, white race, lower education, longer duration of homelessness, military service history, incarceration history, and various

measures of substance use were associated with a greater likelihood of usually living in unsheltered situations. Unsheltered individuals were more likely to have risk factors for death.

Why we chose this paper: Unsheltered homeless people (also known as "rough sleepers") are commonly assumed to be an ultra-high-risk subset of homeless people, but few studies have focused on this group. This study, coupled with those below, lends credence to the high-risk hypothesis and identifies the correlates of sleeping rough in a large sample of homeless people.

Related papers:
Byrne T, Montgomery AE, Fargo JD. Unsheltered Homelessness Among Veterans: Correlates and Profiles. *Community Ment Health J.* 2016 Feb;52(2):148-57.

Montgomery AE, Szymkowiak D, Culhane D. Gender Differences in Factors Associated with Unsheltered Status and Increased Risk of Premature Mortality among Individuals Experiencing Homelessness. *Womens Health Issues* 2017 May - Jun;27(3):256-263.

Adherence to antipsychotic medication among homeless adults in Vancouver, Canada: a 15-year retrospective cohort study
Rezansoff SN, Moniruzzaman A, Fazel S, Procyshyn R, Somers JM
Soc Psychiatry Psychiatr Epidemiol 2016 Dec;51(12):1623-1632.

Summary: The authors retrospectively examined antipsychotic medication adherence among 290 participants in the Vancouver At Home/Chez Soi Housing First studies who had been prescribed an antipsychotic medication. Medication adherence was operationalized as a "medication possession ratio" (percent of time that prescribed medication is filled) and calculated based on prescription drug filling patterns captured in a province-wide database for up to 15 years prior to study enrollment. Only 12% filled their prescriptions at least 80% of the time they were prescribed (a commonly used threshold for adequate adherence), and the median medication possession ratio was 41%. Longer duration of homelessness and lower engagement in primary health services were associated with lower medication adherence, while receipt of long-acting injectable antipsychotic prescriptions was associated with higher adherence.

Why we chose this paper: This study quantifies the suboptimal rates of psychotropic medication adherence among homeless people with serious mental illness and points toward potentially actionable areas for improving this, including linkage with primary care and consideration of long-acting injectable formulations.

Related papers:
Hermes E, Rosenheck R. Psychopharmacologic Services for Homeless Veterans: Comparing Psychotropic Prescription Fills Among Homeless and Non-Homeless Veterans with Serious Mental Illness. *Community Ment Health J* 2016 Feb;52(2):142-7.

Increased Mortality Among Older Veterans Admitted to VA Homelessness Programs
Schinka JA, Bossarte RM, Curtiss G, Lapcevic WA, Casey RJ
Psychiatr Serv 2016 Apr 1;67(4):465-8.

Summary: The authors examined mortality and causes of death among 4,475 veterans ≥55 years old who enrolled in VA homelessness programs in 2000-2003, as compared with an age-matched sample of non-homeless veterans who received VA medical care in 2003-2003. Over up to 11 years of follow-up, about twice as many homeless veterans died than non-homeless veterans (35% vs. 18%). Despite having a similar mean age at baseline, the mean age at death was about 2 years younger among homeless decedents. Disparities in survival between homeless and non-homeless veterans were evident for both old (55-59 years old) and older (≥60 years old) subgroups of patients. The homeless sample had a higher proportion of deaths due to digestive diseases, mental or behavioral disorders, and accidents or self-harm.

Why we chose this paper: Although excess mortality among homeless people is a well-established

phenomenon, this study demonstrates that these disparities extend to older homeless people, who represent a growing yet understudied segment of the homeless population.

Related papers:
Schinka JA, Curtiss G, Leventhal K, Bossarte RM, Lapcevic W, Casey R. Predictors of Mortality in Older Homeless Veterans. *J Gerontol B Psychol Sci Soc Sci* 2016 Apr 10. pii: gbw042.

Kimbler KJ, DeWees MA, Harris AN. Characteristics of the old and homeless: identifying distinct service needs. *Aging Ment Health* 2017 Feb;21(2):190-198.

Multiple HOPE HOME studies conducted by Kushel and colleagues.

Incidence and Associated Risk Factors of Traumatic Brain Injury in a Cohort of Homeless and Vulnerably Housed Adults in 3 Canadian Cities
Nikoo M, Gadermann A, To MJ, Krausz M, Hwang SW, Palepu A
J Head Trauma Rehabil 2016 Nov 8.

Summary: The authors assessed the incidence of and risk factors for experiencing self-reported traumatic brain injury (TBI) in a longitudinally-followed cohort of 1190 homeless and marginally housed adults in 3 Canadian cities (Vancouver, Toronto, and Ottawa). Over 3 years of follow-up, 37% of participants experienced at least one TBI, with 18-19% experiencing a TBI during any given year. Risk factors for experiencing a TBI during follow-up included having a prior history of TBI, problematic alcohol use, problematic drug use, and poorer mental health. Older individuals and participants who achieved residential stability had a lower risk for TBI.

Why we chose this paper: Although the high lifetime prevalence of TBI among homeless adults is now well-documented, less is known about TBI incidence in this population. This study documents the high annual incidence of TBI among homeless people and identifies risk factors for TBI that can be incorporated into targeted prevention and treatment efforts.

Related papers:
Topolovec-Vranic J, Schuler A, Gozdzik A, Somers J, Bourque PÉ, Frankish CJ, Jbilou J, Pakzad S, Palma Lazgare LI, Hwang SW. The high burden of traumatic brain injury and comorbidities amongst homeless adults with mental illness. *J Psychiatr Res* 2017 Apr;87:53-60.

Bacciardi S, Maremmani AG, Nikoo N, Cambioli L, Schütz C, Jang K, Krausz M. Is bipolar disorder associated with tramautic brain injury in the homeless? *Riv Psichiatr* 2017 Jan-Feb;52(1):40-46.

II. Health Care / Interventions

Margot B. Kushel

Engagement in steps of advance health care planning by homeless veterans
Dubbert PM, Garner KK, Lensing S, White JG, Sullivan DH
Psychological services 2017;14(2):214-220.

Summary: The authors analyzed data from 288 homeless veterans who voluntarily attended psycho-educational groups focused on advance health care planning based at a day treatment center or residential treatment center for substance use or PTSD. Seventy percent of participants reported having thought about their care at the end of life, but considerably fewer reported talking to someone about making health decisions on their behalf (48%), naming someone to make their health decisions (46%), or discussing advance care planning with a health care team (28%). Minority race veterans were significantly less likely than white participants to report having thought about their end of life preferences. Only 26% of participants had an advance directive in their VHA medical record. Older veterans and those in urban areas were more likely to have an advance directive on file.

Why we chose this paper: With the aging of the homeless population, there is increasing awareness of the need to engage homeless-experienced adults in advance care planning but limited understanding of the problem. This study suggests that most homeless experienced veterans think about end of life issues but few have spoken with health care providers about this or filled out advance directives. This study demonstrates that homeless veterans are willing to discuss end of life issues in group settings.

Cost of health care utilization among homeless frequent emergency department users
Mitchell MS, Leon CLK, Byrne TH, Lin WC, Bharel M
Psychological services 2017;14(2):193-202.

Summary: The authors analyzed health care utilization data from 6388 patients at Boston Health Care for the Homeless Program who were enrolled in the Massachusetts Medicaid program (MassHealth) in 2010. More frequent emergency department (ED) use was associated with higher costs for all non-ED services (ambulatory care, inpatient medical and behavioral health hospitalizations, pharmacy services, and other non-ED services). In a latent class analysis of participants who had 4 or more ED visits, the authors found 6 distinct groups: young and healthy persons, persons with alcohol use disorders, young persons with drug use and co-occuring disorders, persons with mental illness and disability, older persons with chronic illness, and persons with trimorbid illness. Those with trimorbid illness (having a serious mental illness, drug or alcohol disorder, and physical health condition) incurred the highest non-ED costs, followed by elderly individuals with a chronic illness.

Why we chose this paper: This article leverages Medicaid claims data to comprehensively assess costs among individuals using a large HCH program. The findings dispel the conventional wisdom that the solution to ED overuse is access to non-ED services. To the contrary, people who use the ED most also use both ambulatory and inpatient services the most, suggesting that the problem is unlikely to be easily "solved" by providing access to non-ED care and that individuals with frequent use are not using the ED for entirely inconsequential reasons. Latent class analyses identified 4 distinct "phenotypes" of homeless-experienced high users which may provide insights into interventions.

Experience and Outcomes of Hepatitis C Treatment in a Cohort of Homeless and Marginally Housed Adults
Barocas JA, Beiser M, Leon C, Gaeta JM, O'Connell JJ, Linas BP
JAMA Internal Medicine 2017;177(6):880-882.

Summary: The authors described the experiences and outcomes of homeless individuals receiving oral treatment for hepatitis C virus (HCV) infection at Boston Health Care for the Homeless Program from 2014 to 2015. Treatment was offered using a team-oriented approach, including a case manager who made follow-up calls to assist patients, with no preconditions regarding sobriety. Of 64 patients who received treatment within the study period, few (13%) reported missing more than 3 doses of the treatment. All but 2 participants (97%) achieved sustained virologic response for 12 weeks, indicating successful treatment. Those with ongoing drug use all achieved sustained virologic response.

Why we chose this paper: Hepatitis C is common among people experiencing homelessness. The new oral medication regimens offer great promise, but their high cost has led to concerns about their use in populations with unstable housing. This small study demonstrates that these medications can be used successfully in people experiencing homelessness, including those with ongoing substance use.

A group-based motivational interviewing brief intervention to reduce substance use and sexual risk behavior among homeless young adults
Tucker JS, D'Amico EJ, Ewing BA, Miles JN, Pedersen ER
Journal of Substance Abuse Treatment 2017;76:20-27.

Summary: This paper describes the results of a pilot cross-over randomized controlled trial of a 4-session motivational interviewing group visit intervention (AWARE) administered at young adult homeless drop-in centers and designed to decrease alcohol use, drug use, and risky sexual behavior. Participants (N=200)

were young adults (mean age 22 years) who were predominantly male (73%) and racially and ethnically diverse. Over three-quarters attended more than one session, and satisfaction with the intervention was high. At three months, intervention participants reported significantly improved past 30 day and past 3 month alcohol use, motivation to reduce drug use, and condom use self-efficacy as compared to controls. Intervention participants with multiple sexual partners reported reductions in the number of partners, while control group members did not.

Why we chose this paper: Alcohol and drug use and risky sexual behaviors are prevalent and create significant risk to homeless young adults. There is a dearth of evidenced-based feasible interventions to improve outcomes in this high risk group. This well-done pilot study presents credible evidence of a promising and feasible potential intervention in this underserved group.

Civil Legal Services and Medical-Legal Partnerships Needed by the Homeless Population: A National Survey

Tsai J, Jenkins D, Lawton E

American journal of public health 2017;107(3):398-401.

Summary: The authors conducted a survey of 61 HCH programs (response rate 79%) regarding the need for and availability of medical-legal partnerships. Medical-legal partnerships integrate lawyers into health care teams that serve vulnerable patient populations and are a relatively new innovation to improve access to civil legal services and remove legal barriers to improved health. Overall, 93% of programs reported that their clients had civil legal issues, with the most commonly reported issues being related to housing, social security benefits, employment, and health insurance. Half of programs reported screening for civil legal issues, and only 10% reported having a medical-legal partnership. The majority of programs reported an interest in receiving training on civil legal issues and developing medical-legal partnerships.

Why we chose this paper: Legal issues can affect access to housing and benefits. This article highlights the level of unmet need for, and the interest in developing, medical-legal partnerships in HCH settings.

Emergency Department Use in a Cohort of Older Homeless Adults: Results from the HOPE HOME Study

Raven MC, Tieu L, Lee CT, Ponath C, Guzman D, Kushel M

Academic emergency medicine 2017;24(1):63-74.

Summary: The authors examined emergency department (ED) utilization in a population-based cohort of 350 homeless adults ≥50 years old. Almost three quarters of participants identified a regular, non-ED source for care. Despite this, half made at least one ED visit in the prior 6 months. About 7% of participants accounted for half of all ED visits made by the sample as a whole. Only 7% of all ED visits resulted in a hospitalization. Those who had spent some of the prior 6 months in housing were half as likely to have made an ED visit than those who had spent all of the prior 6 months staying in shelters, other institutional settings, or unsheltered locations. Participants with pain or a history of psychiatric hospitalization were more likely to have made an ED visit. Having a regular source of care did not protect against ED visits.

Why we chose this paper: Older homeless adults have a high burden of chronic diseases and experience an earlier onset of geriatric conditions, yet little is known about their health care utilization patterns. This study sheds light on the extraordinarily high rate of ED use among older homeless adults despite a high prevalence of having a non-ED usual care source, reflecting the many barriers to effective primary care faced by this population.

Hospital Readmissions in a Community-based Sample of Homeless Adults: a Matched-cohort Study

Saab D, Nisenbaum R, Dhalla I, Hwang SW

Journal of general internal medicine 2016;31(9):1011-1018.

Summary: The investigators cross-linked a cohort of 1165 homeless adults in Toronto with data from the Ontario health insurance system to examine hospitalizations and readmissions over a 5-year period in comparison to low-income, non-homeless controls matched on age, sex, and case mix group. The readmission rate among homeless participants (22%) was substantially higher than the readmission rate among low-income controls (7%). Among the homeless participants, leaving against medical advice and having a primary care physician were both associated with a higher likelihood of hospital readmission.

Why we chose this paper: Hospital readmissions are considered an important quality indicator, and hospitals with high readmission rates face penalties under some insurance plans. This study suggests that homelessness is a more powerful predictor of readmission than other known factors. This points to the need for more systematic identification of homelessness among hospitalized patients to enable better discharge planning and for consideration of better case mix adjustment methods to prevent hospitals caring for a high proportion of homeless patients from being financially penalized.

Do managed alcohol programs change patterns of alcohol consumption and reduce related harm? A pilot study

Vallance K, Stockwell T, Pauly B, Chow C, Gray E, Krysowaty B, Perkin K, Zhao J
Harm reduction journal 2016;13(1):13.

Summary: Managed alcohol programs (MAPs) provide housing, social services, counseling, and management of alcohol use through controlled dispensing of alcohol for people experiencing housing instability and severe alcohol dependence. The authors used quantitative and qualitative methods to assess alcohol use, liver function, interaction with the criminal justice system, and health service utilization among 18 participants in a MAP in Thunder Bay, Ontario, relative to 20 control individuals who were eligible for the MAP but did not enroll. While frequency and amount of alcohol consumption did not differ between groups, MAP participants consumed non-beverage alcohol (e.g., mouthwash, hand sanitizer, hairspray) about 8 fewer days per month than non-MAP participants. For participants whose pre-entry tests were available, MAP participants showed post-entry improvements in liver function. Compared to control participants, MAP residents had significantly fewer detoxification admissions and a lower proportion of police contacts resulting in custody time. In qualitative interviews, MAP participants noted a desire to avoid non-beverage alcohol, feelings of increased safety, improved quality of contacts with police, and improved access to primary health care services.

Why we chose this paper: Homeless individuals with severe alcohol dependency fare poorly in many domains. This small study suggests that MAPs may have some benefits as a harm reduction strategy in this hard-to-reach population, which bears further testing in larger samples.

Successful implementation of outpatient parenteral antimicrobial therapy at a medical respite facility for homeless patients

Beieler AM, Dellit TH, Chan JD, Dhanireddy S, Enzian LK, Stone TJ, Dwyer-O'Connor E, Lynch JB
Journal of hospital medicine 2016;11(8):531-535.

Summary: The authors conducted a chart review of 53 encounters by homeless adult patients who received outpatient parenteral antimicrobial therapy (OPAT) in a medical respite program from January 2012 to January 2014 following discharge from Harborview Medical Center in Seattle, Washington. The majority of participants (87%) completed antibiotic therapy (parenteral or oral), and 64% successfully completed OPAT within a medical respite. Nineteen (36%) episodes of care resulted in non-adherence to OPAT, 8 of which required readmission to the hospital. Overall, 16 episodes (30%) resulted in a hospital readmission, of which 10 (19%) were deemed OPAT failures as opposed to hospitalization for other reasons. The average length of OPAT within medical respite was 22 days, resulting in an estimated cost savings of $25,000 per episode of OPAT as compared to inpatient treatment.

Why we chose this paper: Conditions that require prolonged parenteral antibiotics are costly and difficult to treat. While housed individuals often have the choice of home-based parental therapy, homeless

individuals may need prolonged hospitalizations or skilled nursing facility stays. Concerns about indwelling catheters and staffing issues have complicated the use of outpatient parental antibiotics in respite centers. This small retrospective case review suggests that outpatient parenteral therapy at respite centers may be a feasible and cost-saving alternative to prolonged inpatient treatment for infection.

Building Tobacco Cessation Capacity in Homeless Shelters: A Pilot Study
Vijayaraghavan M, Guydish J, Pierce JP
Journal of community health 2016;41(5):998-1005.

Summary: The authors conducted a pilot intervention study to build capacity for shelter-based tobacco treatment by focusing on improving organizational culture and social norms around smoking in shelters and training shelter staff to provide cessation counseling. The intervention included a 1.5-hour training for shelter staff at 2 transitional shelters on topics related to tobacco cessation, followed by 2 separate 1-hour meetings 6 and 12 weeks later to address problems and reinforce information. Before and after the intervention, the investigators measured knowledge, attitudes, and practices among staff as well as knowledge, attitudes, and receipt of tobacco-related services from the shelter among clients who smoked. There were significant improvements in knowledge and staff self-efficacy in treating tobacco dependence. Two of three staff who were smokers quit following the intervention. Clients noted significant increases in receipt of tobacco-related services from the shelter.

Why we chose this paper: Tobacco use is common among homeless people and a major contributor to morbidity and mortality in this population. Homeless service sites are a potentially important but underutilized resource for tobacco treatment. This pilot study showed that a brief intervention with staff at homeless service sites could have some beneficial effects that bear testing in larger studies.

III. Housing

Stefan G. Kertesz

"They're homeless in a home": Retaining homeless-experienced consumers in supported housing
Gabrielian S, Hamilton AB, Alexandrino A, Hellemann G, Young AS
Psychol Serv 2017 May;14(2):154-166.

Summary: The investigators studied differences between people who successfully stayed in VA permanent supportive housing and people who exited the program in less than a year, a problem that occurs for roughly 6% of entrants in this VA program. In comparing 85 “stayers” and “exiters,” they noted that fewer stayers were chronically homeless (57% vs. 77%) and fewer stayers had severe mental illness (24% vs. 35%). A statistical partition tool found mental health admission history, being chronically homeless, and lack of engagement with primary care predicted exit. In qualitative interviews, key themes were intrinsic motivation to obtain housing, unmet needs for mental health care, and skills (both social and money management skills) as key to understanding exits. Many clients and clinicians desired program mandates to participate in treatment, and the lack of such mandates was identified by exiters as one reason for their departure from housing.

Why we chose this paper: There are relatively few efforts to study what enables people to successfully retain housing. This paper shows that persons who are more at risk of exiting may also be persons that health systems should prioritize if they wish to prioritize the most vulnerable. Some clients and clinicians wish to see mandates for treatment, and whether such mandates can be aligned with the emphasis on self-determination that defines Housing First programs remains to be seen.

Housing first on a large scale: Fidelity strengths and challenges in the VA's HUD-VASH program
Kertesz SG, Austin EL, Holmes SK, DeRussy AJ, Van Deusen Lukas C, Pollio DE
Psychol Serv 2017 May;14(2):118-128.

Summary: The authors assessed fidelity across 8 VA Medical Centers mandated to apply Housing First in the context of a program combining vouchers with VA service supports (HUD-VASH), conducting 175

interviews over two interview cycles. They scored 20 Housing First criteria grouped into five domains. They found fidelity was high for removing traditional treatment preconditions to housing and the emphasis on permanent housing placement. They found intermediate fidelity to the idea of prioritizing the most vulnerable, partly because the need to rapidly place clients favored taking the easier customers. They found lower fidelity for the assurance of sufficient support services, with less than ideal encounter frequency, and difficulty providing optimal staff support to vulnerable clients and landlords. Staff shortfalls and lack of training in a modern recovery philosophy were problematic.

Why we chose this paper: Randomized trials and demonstration projects reveal that Housing First can be implemented with considerable success and high fidelity. But what happens when countries or large agencies mandate Housing First as policy, absent the unique resources of highly-resourced demonstration projects? This study suggests that failure to deliver adequate resources to vulnerable clients remains a serious threat to the potential success and acceptability of Housing First.

"The Apartment is for You, It's Not for Anyone Else": Managing Social Recovery and Risk on the Frontlines of Single-Adult Supportive Housing
Tiderington E
Adm Policy Ment Health 2016 Nov 30.

Summary: This qualitative study explored how 35 frontline providers of supportive housing for formerly homeless adults viewed social relationships and the challenges to social recovery when clients are in supportive housing, over 84 total interviews and 106 hours of observation. One challenge was that programs enforced single resident “Use and Occupancy” agreements that would not apply if they were renters. Visitation policies varied from strict prohibitions that precluded overnight/sexual contact (i.e. “no visitors after 10:00 pm” and “you’re not supposed to have guests in the bedroom”) to merely prohibiting long-term visitors. Frontline providers were described as “negotiating social lives”, sometimes enforcing rules against clients (“a single guy, who doesn’t like living alone, so he picks up ‘strays off the street’ because he’s lonely”) and other times trying to assure wiggle room for relationship development (i.e. consumers “are people too”). Providers understood socialization as sometimes dangerous (including drug dealers who visited “sitting duck” clients) and a need to uphold relationships with housing providers. The result was a mixture of rule enforcement and selectively “turning a blind eye” to social activity that seemed part of recovery.

Why we chose this paper: Thus far the literature on housing interventions does not consistently show that they promote social recovery, and in some instances the literature shows that supportive housing results in social isolation for persons with mental illness. This paper shows that relationships, including intimate ones, are part of recovery but nonetheless function as a double-edged sword in supportive housing. Case managers hold the informal role of enforcing or permitting violation of standard occupancy agreements, based on their personal assessment of what constitutes social recovery versus risky interaction.

How did a Housing First intervention improve health and social outcomes among homeless adults with mental illness in Toronto? Two-year outcomes from a randomised trial
O'Campo P, Stergiopoulos V, Nir P, Levy M, Misir V, Chum A, Arbach B, Nisenbaum R, To MJ, Hwang SW
BMJ Open 2016 Sep 12;6(9):e010581.

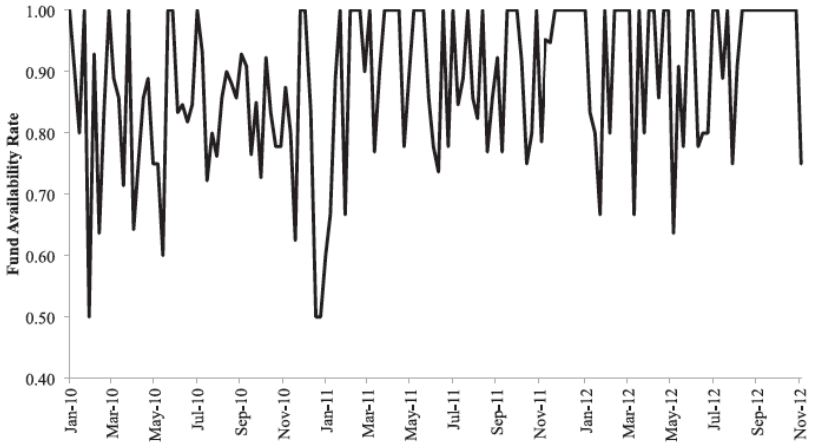
Summary: In this subanalysis of the 5-city Canadian Chez Soi/At Home trial, the authors examined client outcomes comparing Housing First with Assertive Community Treatment (n=97) to Treatment As Usual (TAU; n=100) among clients in Toronto, a location where nearly half the clients were ethnoracial minorities and the services available to TAU clients were extremely robust. HF clients spent more time housed in the first 24 months (74% vs 28%). Across a range functional outcomes, the HF clients generally did not improve more than the TAU clients. Exceptions included “days in a psychiatric hospital” and the Multnomah Community Ability Scale, where the clinician rates client functioning on a range of social, psychological, and life well-being items. In sum, both groups improved but HF clients improved more for housing and for a few indicators. A separate paper by Aubry combining all 5 sites (reference below) mentions that Housing First with ACT costed 22,257 CAD/person but offset 21,367 CAD/person in service costs elsewhere.

Why we chose this paper: Whether Housing First programs deliver health improvements remains unsettled and this study should reinforce caution for such claims. It's helpful to note that in a highly resourced community with a great deal of community service, both HF and TAU clients make significant gains, without a lot of difference. We can affirm that HF programs assure better housing outcomes. What is trickier to sort out is whether persons not offered Housing First would do anywhere near as well as the Toronto clients if they reside in communities where the care resources are far more constricted.

Related paper:
Aubry T, Goering P, Veldhuizen S, Adair CE, Bourque J, Distasio J, Latimer E, Stergiopoulos V, Somers J, Streiner DL, Tsemberis S. A Multiple-City RCT of Housing First With Assertive Community Treatment for Homeless Canadians With Serious Mental Illness. *Psych Serv* 2016;67(3):275-281.

The impact of homelessness prevention programs on homelessness
Evans WN, Sullivan JX, Wallskog M
Science 2016 Aug 12;353(6300):694-9.

Summary: There has not been much data to sort out whether short-term homeless prevention funding assistance (2-3 months of rent or security deposits) actually prevents people from becoming homeless. The study authors recognized that the availability of funds to callers in the Chicago prevention program was randomly distributed over time (see chart). That allowed them to check whether calling at a time when funds were available prevented homelessness, compared to when they were not available. That's a bit like a randomized trial, although the authors did a lot of statistical work. In absolute terms, calling when funds were available was associated with a 1.6% lower likelihood of entering shelter within 6 months (relatively speaking, a 76% decline in the chance of becoming homeless). Among the really, really poor callers (those below 90% of the federal poverty line), it was 2.2% (relatively speaking, 88% lower likelihood). What this means: a lot of people who called the Chicago line for help did not become homeless in the end, with or without assistance. However, receiving assistance helped.



Why we chose this paper: This paper highlights the apparent helpfulness of homeless prevention funds in preventing homelessness. It also shows that a lot of people calling for help have a variety of ways to avoid homelessness and don't enter the shelter system, even if they do not receive the funds assistance. It's also a good example of how economists study social policy data.

Nurses in Supportive Housing are Associated With Decreased Health Care Utilization and Improved HIV Biomarkers in Formerly Homeless Adults
Dobbins SK, Cruz M, Shah S, Abt L, Moore J, Bamberger J
J Assoc Nurses AIDS Care 2016 Jul-Aug;27(4):444-54.

Summary: In a multisite San Francisco program called Direct Access to Housing (DAH), homeless persons living with HIV/AIDS (HLWH) are sometimes placed in supportive housing units with onsite nurses, based on a decision that the client needs a higher level of service. This research compared health service utilization and HIV outcomes (CD4 cell counts, viral suppression) over time for HLWH who went to DAH buildings with nursing support, compared to HLWH who went to buildings without nurses. Using statistical models, they found that going to a building with onsite nursing was associated with 4.8 fewer ED visits over

a year using one method of estimation, and 2.3 fewer visits using a different approach, and these were statistically significant. Persons who went to buildings with nurses were also 2/3rds less likely to wind up with CD4 cell count <200. Results sometimes were not statistically significant depending on the modeling approach used. But the tendency was for better improvements in other HIV indicators as well.

Why we chose this paper: Nurses are not always part of the service package in communities that seek to offer Housing First, and yet they may play a very helpful role for vulnerable persons. Persons with HIV offer a particularly striking test case because there is a medicine that directly acts on HIV and the involvement of nurses to potentially promote taking that medicine produces an easily measurable result. This is a lot more difficult with other serious chronic illnesses. It should be recognized that cause and effect are not proven by observational studies like this, but the results are suggestive.

A Systematic Review of the Transition from Homelessness to Finding a Home
Iaquinta MS
J Community Health Nurs 2016;33(1):20-41.

Summary: The author reviewed 26 studies focused on the transition from homelessness to home, recognizing that "home" is not just housing but a sense of place, identity, and activities of being at home. Qualitative themes included: urgent basic needs (shelter, money food), stability, which could be gained (i.e. sending kids to one school) or threatened (i.e. substandard facilities, prohibition on family members from entering unit), coping with challenges (fear of relapse and volatility of interim sheltering arrangements), barriers to transition (rigid rules/regulations, need for advocacy support with proprietors, stigmatization during shopping/recreation), making adjustments (sacrificing on space or adequate play areas for children to find housing), moving beyond (hope/gratitude vs continued marginalization), and "a place called home" (including privacy ensured by lock and key, decoration, and peace of mind). Demographic, community, and program characteristics were also notable in review of quantitative studies.

Why we chose this paper: Policy initiatives tend to narrow the question of ending homelessness to numeric indicators such as "point in time count" or "number of individuals housed." They overlook precisely what this paper examined, namely, that the transition to home from homelessness is a major life transition. How well we attend to that transition is likely to influence the durability of housing placement, the health and well-being of the individuals returning home, and the communities where they reside.

Implementation and Outcomes of Forensic Housing First Programs
Kriegel LS, Henwood BF, Gilmer TP
Community Ment Health J 2016 Jan;52(1):46-55.

Summary: Homeless persons with mental illness or addiction are often subject to legal mandates for treatment as part of jail diversion. This study looked at adult housing programs (called "Full Service Partnerships" [FSPs] in California), comparing 7 supportive housing FSPs for criminal justice clients to 61 non-forensic housing FSPs. Quantitatively, the forensic FSPs were less likely to provide lease/occupancy agreements that specify tenant rights. Qualitatively, clinical staff negotiated housing based in part on the choice restrictions devised by the courts, which could simply require congregate housing. But if the courts did not do this, then lack of housing stock or benefits often narrowed choices to short-term residential or board-and-care units. Where choice was available, clients and clinicians often tried to find the least risky location in terms of relapse. This was seen as competition between "recovery power" and "non-recovery power," but clients and staff both saw some value in honoring and working with the court's perspective.

> "He really wasn't able to make that decision (about referral to a structured housing environment). He wasn't able to participate meaningfully in that decision process. He doesn't understand the charges. He doesn't understand why he's there. …When a person poses a risk to themselves or the community and they don't understand at that point, [that's] when we sometimes have to make a decision for the client. It is less collaborative. But it's for their own safety and their own care."
> (Court had mandated treatment. Staff support that view.)

Why we chose this paper: The coercive power of the legal system sets up an inherent tension with client-centered harm reduction philosophies at the heart of Housing First. This paper highlights the tension but

opens the door to potentially applying somewhat different standards of fidelity to housing programs that deal with forensic clients, with possible agreement and support of both staff and some clients.

Collaboration and involvement of persons with lived experience in planning Canada's At Home/Chez Soi project

Nelson G, Macnaughton E, Curwood SE, Egalité N, Voronka J, Fleury MJ, Kirst M, Flowers L, Patterson M, Dudley M, Piat M, Goering P

Health Soc Care Community. 2016 Mar;24(2):184-93.

Summary: This team reviewed lessons from the effort to include persons with lived experienced of homelessness (PWLE) in planning a Housing First initiative at 5 sites in the Canadian $110 million Chez Soi/At Home initiative. The study involved interviews and focus groups with principle investigators, PWLE, and providers (n=131). The short timeline for the proposal submission (4 months) resulted in tension and distrust between individuals and organizations who did not have the same ideas. Set-aside time for building relationships and working on a shared vision of Housing First helped. There were dedicated staff to coordinate a National Consumer Panel and in some sites there were focus groups and caucuses established for PWLE. Early on, however, there was confusion about the researcher vs. clinical provider leadership roles. What worked well was that the Housing First embrace of housing as a human right helped to galvanize collaboration. Also, strong site coordinators worked to bring people together.

Why we chose this paper: This paper shows that Housing First depends on a set of collaborative relationships that are likely to be more grounded and effective if they include time and a method to include the people to be served. It struck us as important because Housing First is increasingly presented as a mandate from funders, with weak or inconsistent attention to the planning and stakeholder inclusion that are fundamental to the success of any large community endeavor. We note that a $110 million budget makes this a somewhat unique example. The optimum way to incorporate such lessons in communities with fewer resources is unclear.

Further Validation of the Pathways Housing First Fidelity Scale

Goering P, Veldhuizen S, Nelson GB, Stefancic A, Tsemberis S, Adair CE, Distasio J, Aubry T, Stergiopoulos V, Streiner DL

Psychiatr Serv 2016 Jan;67(1):111-4.

Summary: While some entities define Housing First in very simple terms of not requiring treatment for housing, Housing First involves several active ingredients. A rating tool with 38 items (each rated 1-4, total score 38-152) was developed for the Canadian 5-site Housing First clinical trial (Chez Soi/At Home). Example items include uncoupling of housing from service engagement, commitment to rehousing clients if they lose the unit, locating services away from housing, provision of psychiatric services, stepwise substance use treatment, nursing services, and 24-hour availability. The authors demonstrated that fidelity score assessed using this tool was correlated with service contact time for clients. They showed that higher fidelity was associated with improved scores on the Multnomah Community Ability Scale and the Lehman Quality of Life Interview and with better housing stability.

Why we chose this paper: In the US, many housing programs are under pressure to affirm a Housing First approach but they often lack both the training and resources to deliver what Housing First typically requires. This Canadian study highlights that there are multiple active ingredients and that whether they are present matters for client outcomes. To the extent that these ingredients matter, I (SGK) suggest that there is a vulnerability to federal and community mandates for Housing First when the appropriate resources or supports are not provided.