What's new in homeless health care? A no-jargon summary of the latest research

June 1, 2016

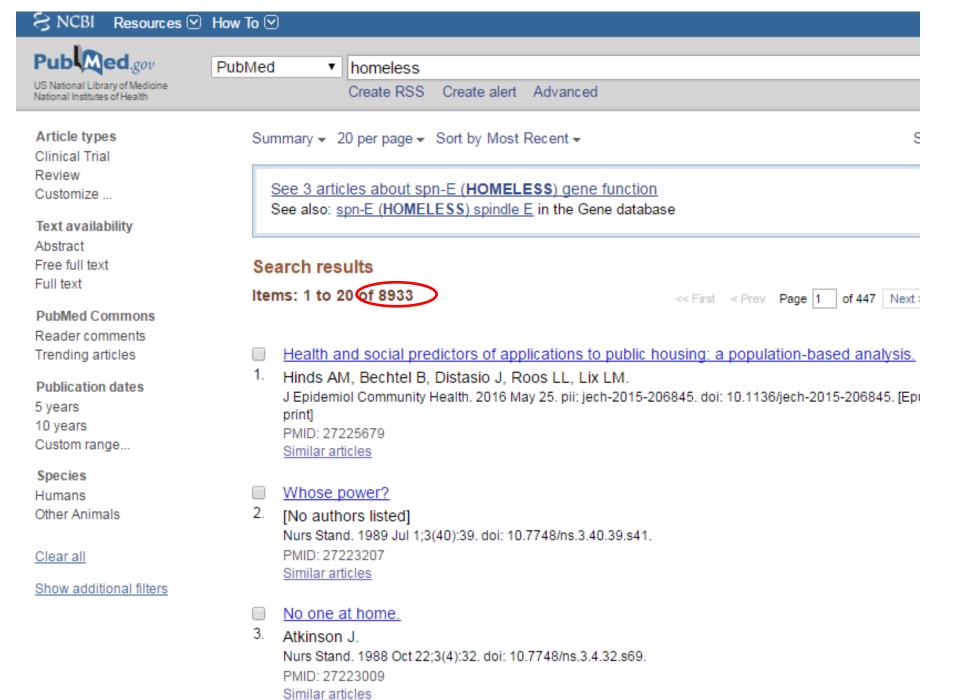
Travis Baggett, Margot Kushel & Stefan Kertesz

Disclosures

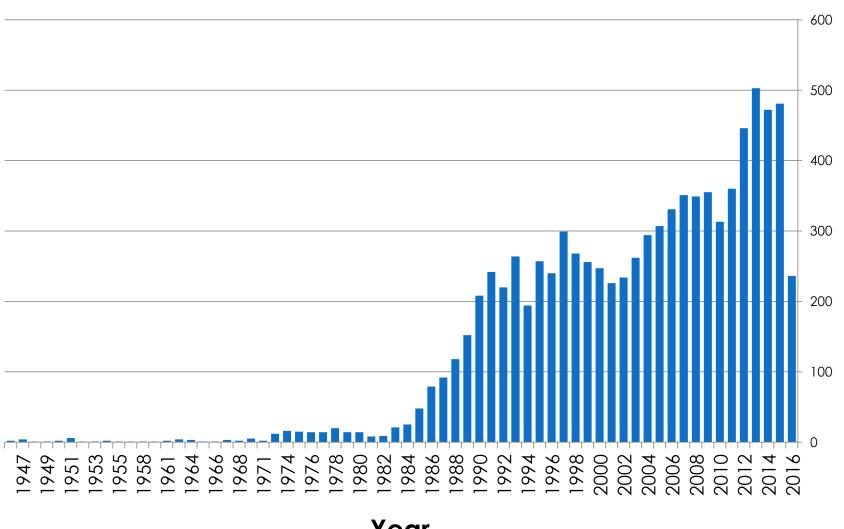
- Dr. Baggett: UpToDate royalties
- Others: None

Background

 Research on homelessness and health: new and small, rapidly growing



PubMed hits for "homeless"



Topic background

- Research on homelessness and health: new and small, but rapidly growing
- Staying up-to-date on the latest research presents considerable challenges
 - Identifying and prioritizing what to read
 - Accessing articles themselves
 - Making sense of obscure methods
- Objective: To present a plain-language summary of the latest research on health, health care, and housing for homeless people

Literature search strategy

- All searches were conducted in PubMed only
- Initial search (4-14-16)
 - Search terms "Homeless Persons" [MeSH] OR homeless
 - Date limits: 01/01/2015 03/31/2016
 - Language: English
- Result: 598 articles

- First manual review of titles & abstracts to weed out:
 - Articles not primarily concerned with homelessness or homeless people
 - I.e. Homelessness was either incidental to the paper, or the paper was not related to homelessness whatsoever
 - Articles that did not present new data or a new systematic review and synthesis of existing data
 - E.g. Non-systematic reviews, trial protocols, case reports, clinical vignettes, perspective/editorial pieces, reflection essays
- Result: 365 articles remained

- Second manual review to weed out:
 - Articles that did not focus on or include North American homeless people
 - Rationale: North American studies would likely be most relevant to the work you all do
- Result: 290 articles remained

- Third manual review to categorize remaining papers into the following domains:
 - Health status: Articles describing the burden or consequences of physical or mental health conditions among homeless people (N=143)
 - **Health care:** Articles describing health care access and utilization, health care organization and delivery, and/or health care interventions for homeless people (N=81)
 - Housing: Observational or interventional studies examining the impact of housing on the health or well-being of homeless people (N=43)
 - Other: Articles not fitting into any of the above 3 domains; not considered further (N=23)

- Each of us reviewed papers in one domain and identified "top 10" based on rigor, impact, novelty
 - Health status: Baggett
 - Health care: Kushel
 - Housing: Kertesz
- All 30 papers are presented in an annotated bibliography available at end of session
 - Concise summary of results
 - Brief explanation of "why we chose this paper"
- We will review 15 papers (5 per category) today

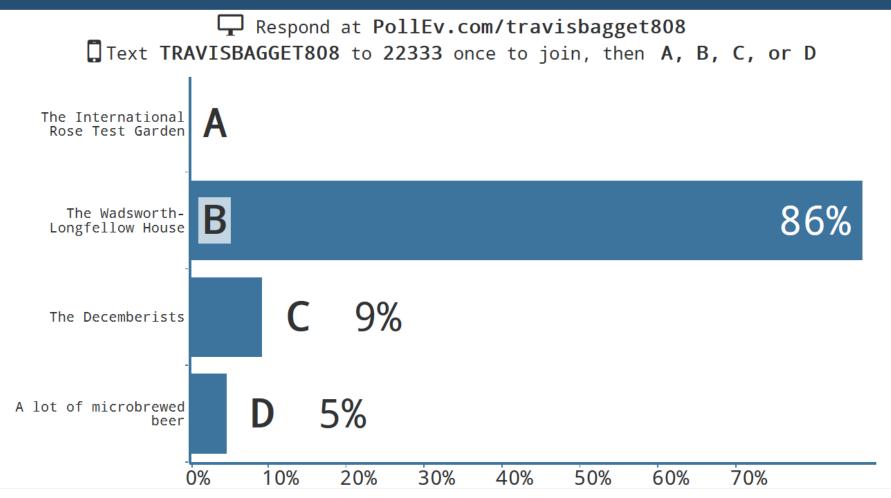
Some comments & disclaimers

- 2015 (and early 2016) was an incredible year
 - Unprecedented number of housing studies!
- We tried to be meticulous
 - But we may have missed something!
- If you published a paper on homelessness this year
 - Thank you for your contribution!
 - If we didn't include it here, don't assume we didn't like it!
 (we had to make some difficult choices)
- If you don't like the methods or results of a particular paper
 - We are (in most cases) merely the messengers!

We want you to participate!

- Phone-based, anonymous audience response system
- To join, text travisbagget808 to 22333

Portland, Oregon is home to all of the following except:

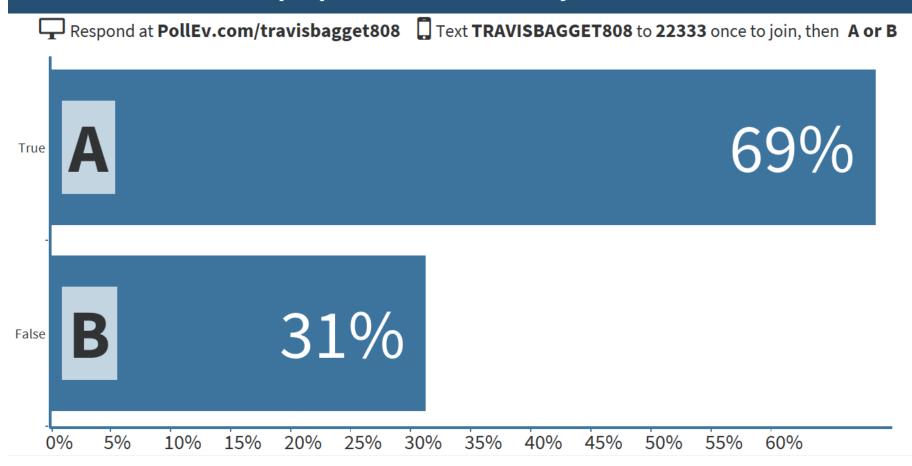


The correct answer is **B**. The Wadsworth-Longfellow House is in Portland, Maine.

Health Status

Travis P. Baggett, MD, MPH Assistant Professor, HMS / MGH Staff Physician, BHCHP

True or False: Canada's universal health care system has enabled most homeless people to obtain routine eye care.



The correct answer is **B** (False).

Visual impairment and unmet eye care needs among homeless adults in a Canadian city

Noel CW, Fung H, Srivastava R, Lebovic G, Hwang SW, Berger A, Lichter M

JAMA Ophthalmol 2015;133(4):455-60

Methods What did they do?

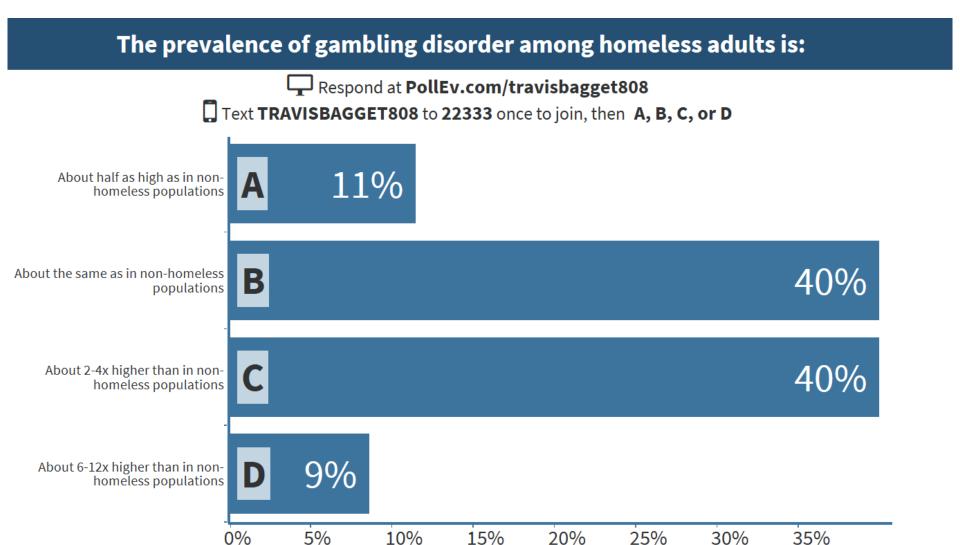
- Assessed visual impairment and eye health in 100 randomly-selected individuals at 10 randomlyselected homeless shelters in Toronto
 - Mean age 48 years; 62% male; 72% white
- Questionnaire on subjective visual acuity
- Objective visual acuity testing
- Screening eye exam
 - Pupil reactivity, visual field testing, extraocular eye movements, intraocular pressures, and undilated retinal exam with direct fundoscopy

Results What did they find?

- One-fourth had objectively impaired vision
 - Over half of these were due to a correctable refractive error (i.e. a problem that could be fixed with glasses)
 - Rate of non-refractive visual impairment >30x higher than in Canadian general population
- One-third had abnormal findings on eye exam
 - Suspected glaucoma and cataracts most common
 - 8 participants required urgent ophthalmologic referral
- Only 14% had visited an eye doctor in the past year
 - Compared with 41% in Canadian population

Implications Why is this important?

- First study of eye health in a random sample of homeless adults
- Considerable prevalence of vision impairment and eye pathology
 - Much of which may be correctable with eyeglasses
- Even in system of universal health insurance, uptake of eye care services was low (not routinely covered for adults ≤65 years old)
- Since intact vision is critical to survival on the streets, eye screening and outreach should be strongly considered



The correct answer is **D**.

Problem gambling and homelessness: results from an epidemiologic study

Nower L, Eyrich-Garg KM, Pollio DE, North CS

J Gambl Stud 2015;31(2):533-45

Methods What did they do?

- Surveyed 275 randomly selected homeless adults in St. Louis, Missouri
 - Average age 41 years; 74% male; 76% Black
- Assessed symptoms of gambling disorder with the South Oaks Gambling Screen
- Assessed other addictive behaviors and mental health conditions using validated questionnaires

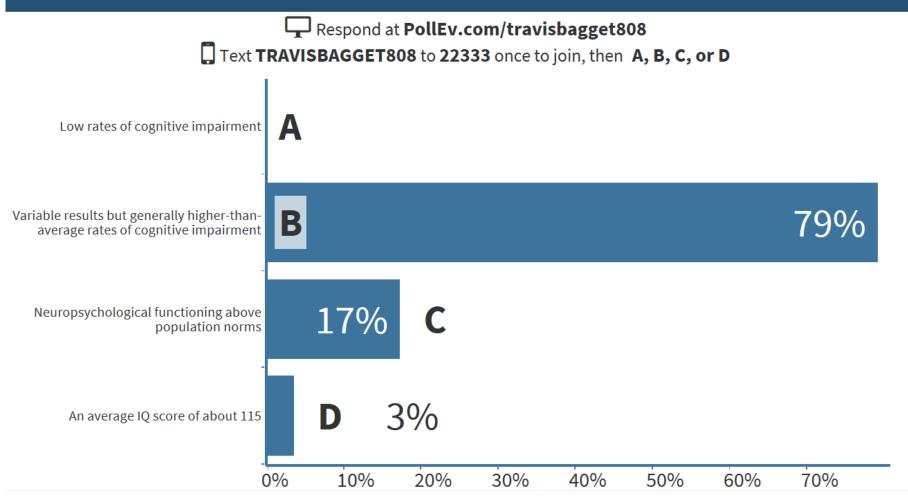
Results What did they find?

- 46% had 1 or more symptom of problem gambling
 - Gambling more than intended (45%) and feeling guilty about gambling (28%) were most commonly endorsed
- 12% met criteria for gambling disorder
- In comparison to non-gamblers, problem gamblers were more likely to have:
 - Nicotine, alcohol, and drug dependence
- In comparison to non-problem gamblers, problem gamblers were more like to have:
 - Antisocial personality disorder, bipolar disorder, and PTSD

Implications Why is this important?

- In comparison non-homeless people in the same geographic area:
 - Rate of problem gambling 5x higher
 - Rate of gambling disorder 12x higher
- Problem gambling associated with other addictive behaviors and selected mental health condition
- I hadn't thought much about this issue before reading this study
- The commonness of this issue and its financial implications make me wonder whether I should be asking my patients about this more consistently

Studies of cognitive functioning in homeless adults have generally shown:



The correct answer is **B**.

A quantitative review of cognitive functioning in homeless adults

Depp CA, Vella L, Orff HJ, Twamley EW

J Nerv Ment Dis 2015;203(2):126-31

Methods What did they do?

- Systematically searched the literature for studies on cognitive function in homeless people (1990-2013)
- Identified 24 studies
 - Half from US or Canada
 - 14 in shelters, 5 in multiple sites, 5 in health care settings
- Total participant sample 2,969
 - Mean age 46 years; 83% male; 55% h/o head injury
- Combined and averaged results from all studies
 - Global cognitive screening (e.g. MMSE)
 - IQ testing
 - Neuropsychological testing

Results What did they find?

- Global cognitive testing
 - One-fourth had results consistent with cognitive impairment
 - Mean MMSE score 26
- IQ testing
 - Mean score 85 (1 standard deviation below normal)
- Neuropsychological testing
 - Scores generally below normal, often in impaired range
- Cautionary note: There was a lot of variability between studies in these results

Implications Why is this important?

- Many of our patients are incredibly resourceful and "street-smart" with well-honed survival skills
- I think this makes it easy to overlook underlying cognitive deficits that may not be readily apparent
- The high rates of TBI, psychiatric illness, and substance use likely contribute to these deficits
- Consider some form of cognitive screening in clinical practice
 - Authors recommend MOCA (Montreal Cognitive Assessment) over MMSE

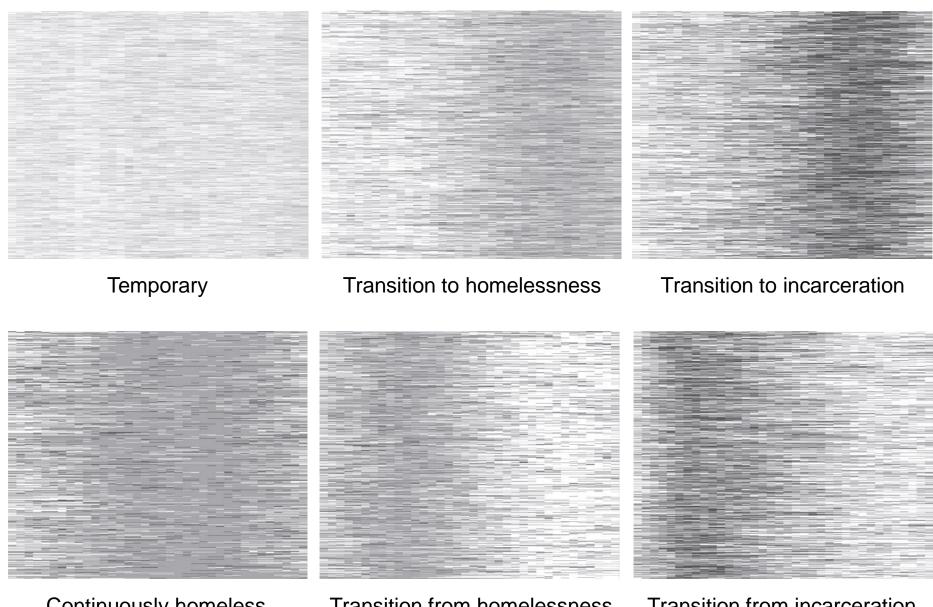
All-cause, drug-related, and HIV-related mortality risk by trajectories of jail incarceration and homelessness among adults in New York City

Lim S, Harris TG, Nash D, Lennon MC, Thorpe LE

Am J Epidemiol 2015;181(4):261-70

Methods What did they do?

- Assembled a cohort of 15,620 who had been incarcerated at least once and homeless at least once in 2001-2003 in New York City
 - 90% male; 62% Black, 30% Hispanic
 - Followed for 2 years
- Used "group-based trajectory modeling" to identify 6 different patterns of experiencing homelessness and incarceration
- Compared all-cause, drug-related, and HIV-related mortality risk for these 6 patterns

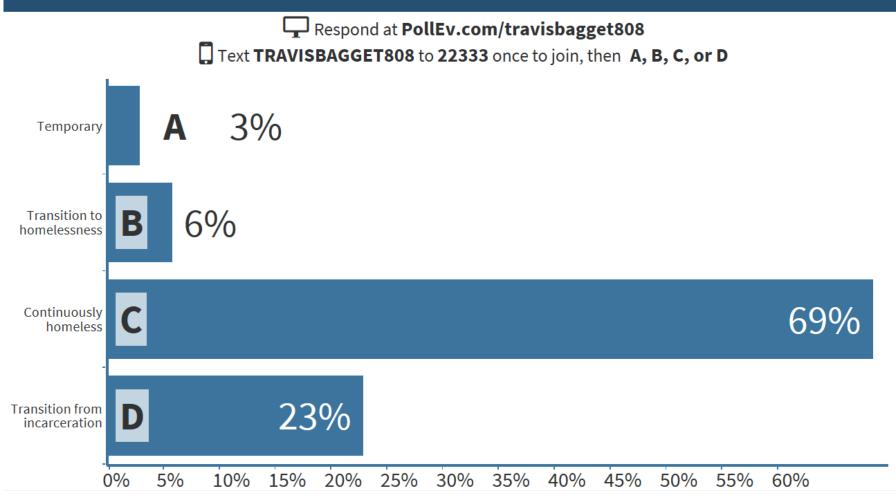


Continuously homeless

Transition from homelessness

Transition from incarceration

Which of these patterns is associated with the highest mortality rates?



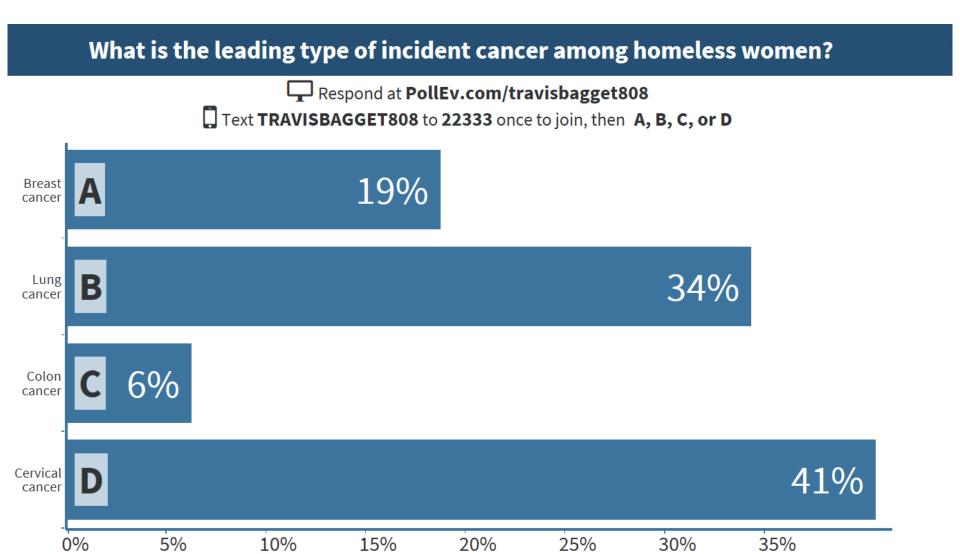
The correct answer is A.

Results What did they find?

- Temporary ("sporadic") pattern was associated with the worst mortality outcomes
- Compared with NYC general population
 - 35% higher all-cause mortality
 - 50% higher HIV-related mortality
 - 4.6-fold higher drug-related mortality
- Compared with continuously homeless
 - 1.9-fold higher all-cause mortality
 - 7.8-fold higher dug-related mortality

Implications Why is this important?

- Innovative and rigorous epidemiologic methods
 - Still subject to limitations of observational data
- Findings support the notion that the "revolving door" may be harmful for health
- Policy approaches to breaking this cycle are warranted



The correct answer is **B**, although A was a close second, followed by D, then C.

Disparities in Cancer Incidence, Stage, and Mortality at Boston Health Care for the Homeless Program

Baggett TP, Chang Y, Porneala BC, Bharel M, Singer DE, Rigotti NA

Am J Prev Med 2015;49(5):694-702

Methods What did they do?

- Assembled a cohort of 28,033 adults who used Boston Health Care for the Homeless Program services in 2003-08
 - Mean age 41 years; 66% men; 43% white; 29% Black
- Cross-linked with Massachusetts Cancer Registry
 - Calculated cancer incidence and mortality rates
 - Estimated proportion of cancers attributable to tobacco
 - Assessed stage at cancer diagnosis
- Compared results to Massachusetts population

Results What did they find?

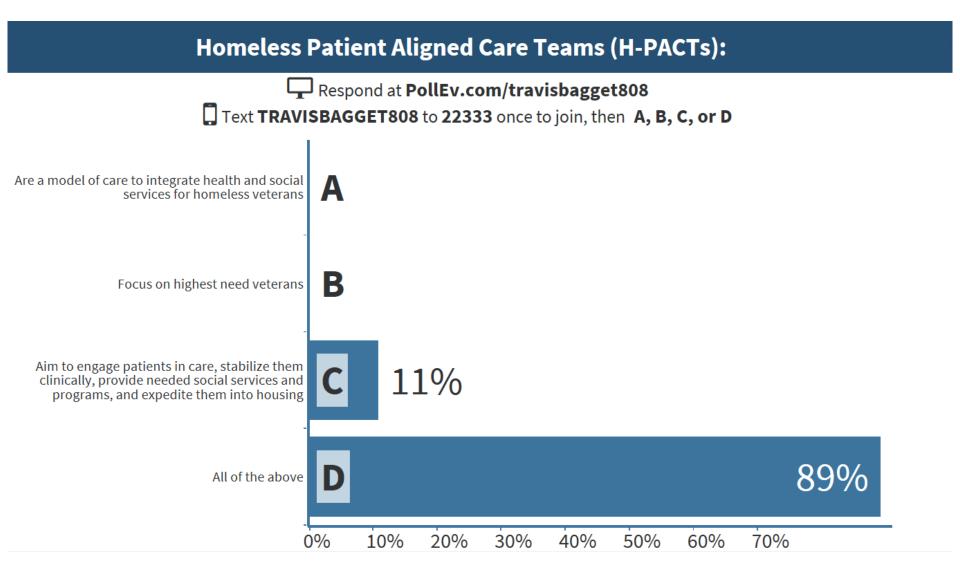
- Lung cancer was leading type of incident cancer and cancer death for men and women
 - 2-fold higher rates than in Massachusetts adult population
- Relative to Massachusetts adults:
 - Men had excess liver and oropharyngeal cancer; higher incidence and mortality for any cancer type
 - Women had excess cervical cancer; higher mortality for any cancer type
 - Colorectal, female breast, and oropharyngeal cancers diagnosed at later stages
- One-third of cancer cases were attributable to tobacco smoking

Implications Why is this important?

- First study of cancer epidemiology in a US homeless population
- Excess rates of many cancer types that are closely related to behavioral risk factors
 - One-third of all cancers smoking-attributable
- Screen-detectable cancers were diagnosed at a later stage
- As homeless population ages, greater attention to cancer prevention and screening will be crucial

Health Care / Interventions

Margot B. Kushel, MD
Professor, UCSF / ZSFGH



The correct answer is **D**.

Tailoring Care to Vulnerable Populations by Incorporating Social Determinants of Health: the Veterans Health Administration's "Homeless Patient Aligned Care Team" Program

O'Toole TP, Johnson EE, Aiello R, Kane V, Pape L

Prev Chronic Dis 2016;13:150567



What was aim of study?

- To describe the national implementation of "homeless medical home" or H-PACTs
- To categorize sites as high performing, moderate performing or low performing, based on changes in health care utilization
- To ascertain features associated with being a high performance site



What is the H-PACT clinical model?

- Five core elements distinguish H-PACTS from traditional primary care
 - Enhanced, low-threshold access to care with open-access, walkin hours; if scheduled, have latitude to be late; clinical outreach
 - Integrated services (mental health and primary care services are located close to on another) and sustenance needs are available
 - Intensive health care management that is integrated with community agencies
 - Ongoing staff training and development of homeless care skills
 - Data-driven accountable care processes



Methods

- Observational study of 33 VHA facilities that served more than 14,000 patients
- Correlated site-specific health care performance data for 3543
 veterans enrolled between October 2013 and March 2014
- Assessed health care utilization at VHA sites for six months prior and six months post enrollment
 - ED visits, hospitalizations
- Ranked 33 sites into high, moderate and low performing based on use patterns of their patients
- Assessed which features associated with being high performing



Results

- Six-month pattern of use showed
 - 19% reduction in ED use and 34.7% reduction in hospitalization
- 17 high performing sites (>30% reduction in ED use or >20% reduction in hospitalizations)
- Features associated with being high performing:
 - Higher staffing ratios(>0.5 FTE RN and PCP)
 - Integration of social supports and social services
 - Outreach to and integration with community agencies
 - (Tracking of housing data)



Limitations

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Pre-post analyses can give misleading data

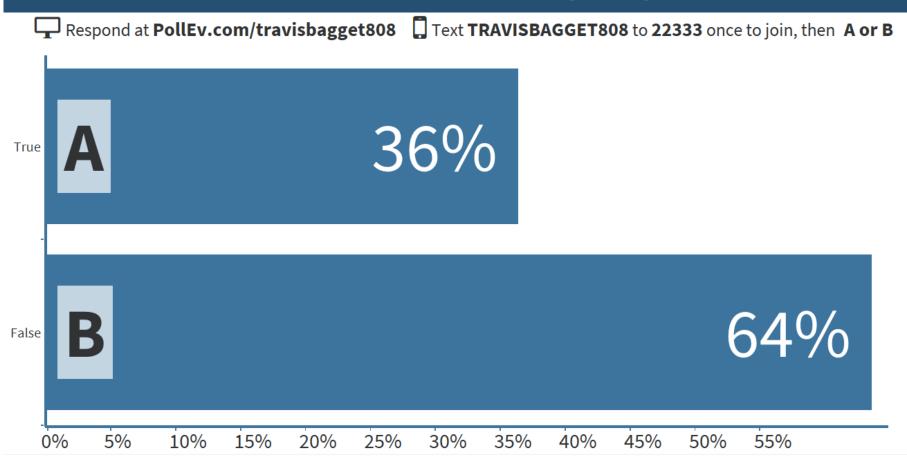


Take home messages

- There is a variation in performance of H-PACTS
- Having adequate staffing, integrating the social services with the health care services and doing outreach beyond the clinic may be key features of becoming a high performing site



True or False: Frequent utilizers of the Emergency Department are less likely than non-frequent utilizers to use primary care.



The correct answer is **B** (False).

Frequent Emergency Department Visits and Hospitalizations Among Homeless People With Medicaid: Implications for Medicaid Expansion

Lin WC, Bharel M, Zhang J, O'Connell E, Clark RE

Am J Public Health 2015;105 Suppl5:S716-22



Study Aims

 To examine factors associated with being a frequent utilizer of the Emergency Department and inpatient hospital among Medicaid insured adults who were homeless



Background

- While individuals who are homeless are more likely to use the ED and hospital than non-homeless individuals, a small group of people account for the majority of the use
- Through the ACA, many homeless people will gain health insurance
- Individuals who are frequent utilizers may require different services than others



Methods

- Merged data from Boston Health Care for the Homeless with Medicaid administrative data in 2010
- Examined variables associated with two outcomes:
 - 3 or more hospitalizations or ED visits in a year



Results

- 6494 BHCH patients included
- One-third had at least one hospitalization and two-thirds had at least one ED visit during 2010
- 12% of patients had 3 or more hospitalizations and accounted for 71% of hospitalizations
- 21% had 6 or more ED visits and accounted for 73% of all ED visits
- Frequent utilizers more likely to be non-Latino white, dually eligible (Medi/Medi), be unsheltered, and have a higher disease burden



Results

- While many factors associated with increased use, co-morbid substance use and mental health disorders strongly associated with increased hospitalization and ED visits
- (For hospitalization)
 - Schizophrenia and substance use disorder 13 times more likely
 - Bipolar with SUD 6 times more likely
 - Depression with SUD 4.4 times more likely
 - SUD 2.4 times more likely
 - Being street living increases the risk
- Of note, having ambulatory care visits associated with more, not fewer ED visits and hospitalizations

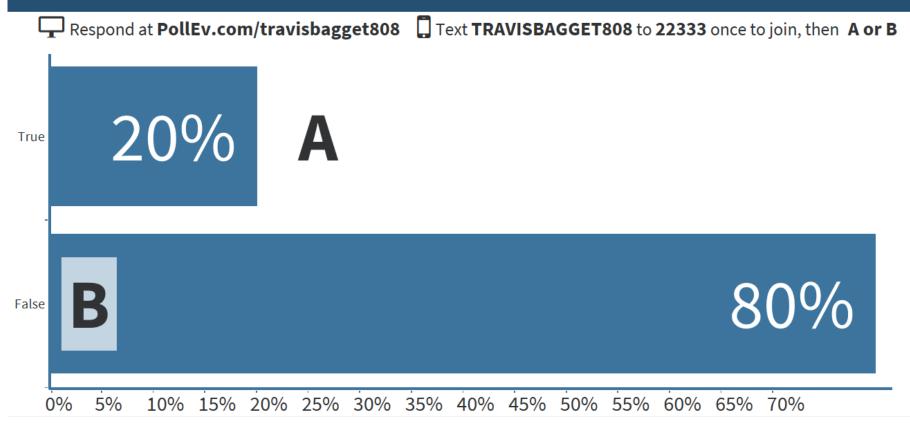


Take Home Messages

- While homeless people are more likely to use the ED and hospital than the general population, a small group of people account for most of the use
- People with co-occurring mental health and substance use disorders are at highest risk of using the ED and hospital
- People who are high users of ED and hospitals are also high users of outpatient care—
 - Other interventions, rather than obtaining primary care for high utilizers, will be necessary



True or False: VA outreach efforts have drawn almost all eligible homeless veterans into care in places that have Homeless Patient-Aligned Care Teams (H-PACTs).



The correct answer is **B** (False).

Tailoring Outreach Efforts to Increase Primary Care Use Among Homeless Veterans: Results of a Randomized Controlled Trial

O'Toole TP, Johnson EE, Borgia ML, Rose J

J Gen Intern Med 2015;30(7):886-98



Aims

 To compare two low-intensity interventions (separately and together) compared to usual care to see what works best to engage out-of-care veterans into primary care



Background

- Most homeless veterans qualify for services at the VHA without charge
- Despite the VHA having designed programs for homeless veterans, there remain too many who are out of care
- Primary care can serve not only to improve healthcare, but also to engage homeless individuals in other services



Methods

- Recruited out-of-care homeless veterans
- Randomized participants to receive usual care or either or both:
 - Personal health assessment and brief intervention (PHA/BI)
 - Visit (where participant is) with RN
 - Brief history and clinical assessment
 - Conducted motivational interviewing about benefit of healthcare



Methods

- Clinic Orientation
 - Veteran driven to clinic
 - Met staff members
 - Offered some services
 - Appointment then if possible
- Outcome: primary care visit at 4 weeks and 6 months (any versus none)



Results

- PHA/BI + CO had best outcomes (4 weeks 77.3%; 6 months 88.7%)
- CO alone next (50%, 80%)
- PHA/BI next (41%,56.4%)
- Usual care: (30.6%, 37.1%)

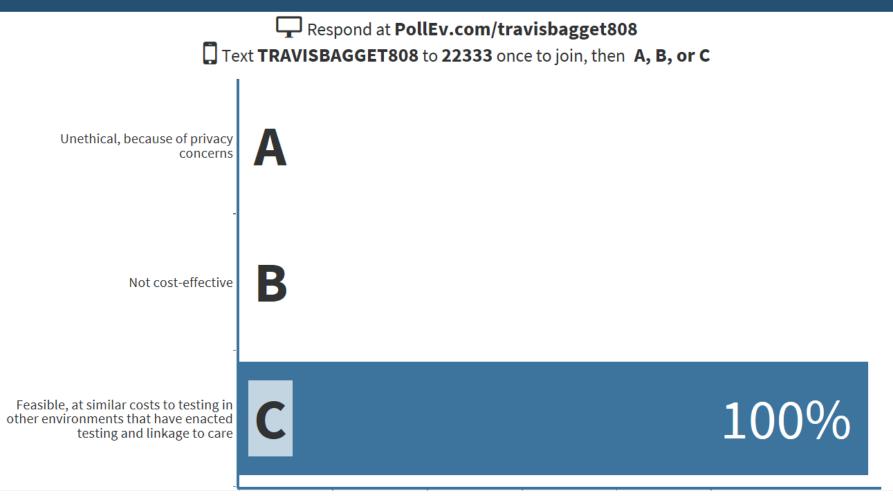


Take Home

- Despite success of HPACT, there are some veterans who are not accessing care
- Can dramatically increase rates of engagement (at least one visit) with relatively low intensity interventions



Conducting HIV testing and linkage to care in homeless shelters is:



The correct answer is C.

Implementing an HIV Rapid Testing-Linkage-to-Care Project Among Homeless Individuals in Los Angeles County: A Collaborative Effort Between Federal, County, and City Government

Anaya HD, Butler JN, Knapp H, Chan K, Conners EE, Rumanes SF Am J Public Health 2015;105(1):85-90



Aim

 To develop and test the feasibility and cost-effectiveness of a shelter-based HIV testing and linkage to care intervention



Background

- Homeless individuals have an increased risk of HIV infection compared to housed populations
 - Shared risk factors
- Failure to identify and treat infected individuals contributes to the HIV epidemic and leads to poorer health outcomes in individuals
- HIV rapid testing with oral swabs can give results in 20 minutes, can be performed by non-clinicians, and has been found to be acceptable in different populations



Methods

- In 3 shelters in Los Angeles, counselors
 - Announced availability of rapid testing via posters and announcements
 - Offered testing to anyone who was not known to be positive and hadn't been tested in prior six months
 - Provided linkage to care for anyone with a positive result
 - Appointment at County affiliated clinic for confirmatory testing/treatment
 - Taxi voucher to get there
- Researched acceptability and cost-effectiveness



Results

- In 18 months, made 189 visits and performed 817 tests
- Identified 7 HIV infected individuals (not previously diagnosed)
- 5 of whom presented to linkage visit at clinic for confirmatory testing and treatment
- Qualitative results showed acceptance by homeless individuals, shelter staff and clinic personnel
- Cost-effectiveness analysis showed cost of \$5714 per positive test,
 which is similar to costs for rapid testing and linkage in the military



Take home message

- With advent of rapid testing for HIV and consideration of relatively high prevalence of HIV in homeless populations, it is feasible and cost-effective to implement HIV screening and linkage to care in homeless shelters
- Requires cooperation between multiple agencies
- Acceptable and cost-effective



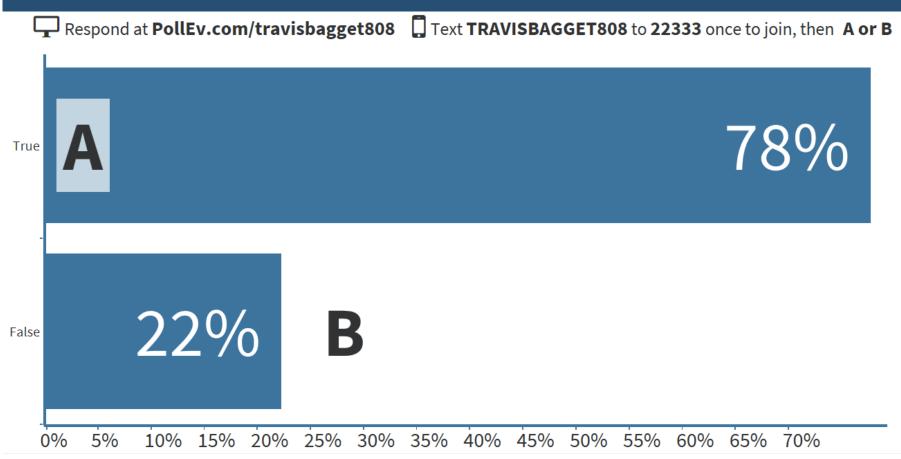
Housing

Stefan G. Kertesz, MD, MSc Associate Professor, UAB / Birmingham VA The Shelter + Care program in my county offers permanent supportive housing and supportive services for chronically homeless persons who can document 6 months of sobriety. Is this a Housing First approach?



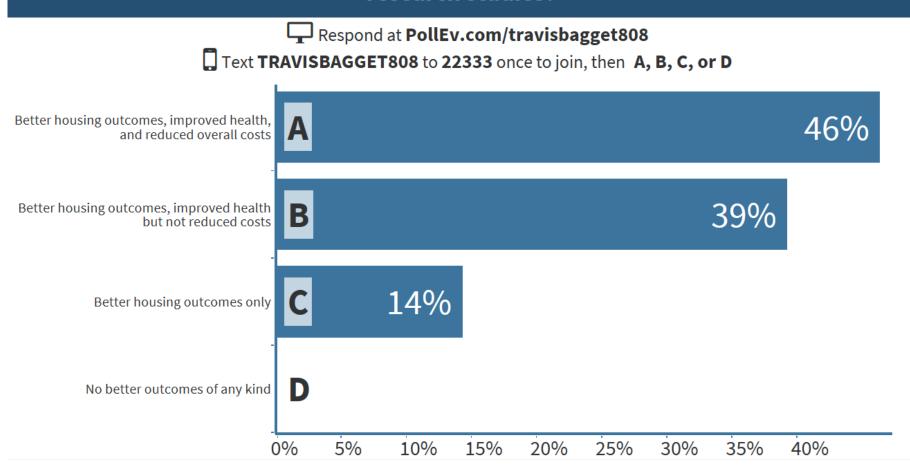
The correct answer is C.

True or False: Research studies show that offering Housing First results in an overall cost savings to society.



The correct answer is **B** (False).

What is the typical pattern of benefits identified in well-conducted Housing First research studies?



The correct answer is C.

What is Housing First

- 1. Rapid access to permanent housing in the community.
- Supportive services to help maintain and promote recovery
- 3. No preconditions for treatment or sobriety (other than being a responsible tenant)
- 4. Prioritization of most vulnerable for housing

HUD and VA both have prioritized this approach

Mother Jones

SHOCKINGLY
EFFECTIVE,
SURPRISINGLY
CHEAP WAY
TO FIX

HOMELESSNESS

INTERNET'S NEW CONSERVATIVE ATTACK MACHINE

THE BREF LIFE AND TRASK BEATH OF A PRINKTIAD FOSTER CHILD Effect of scattered-site housing using rent supplements and intensive case management on housing stability among homeless adults with mental illness: a randomized trial.

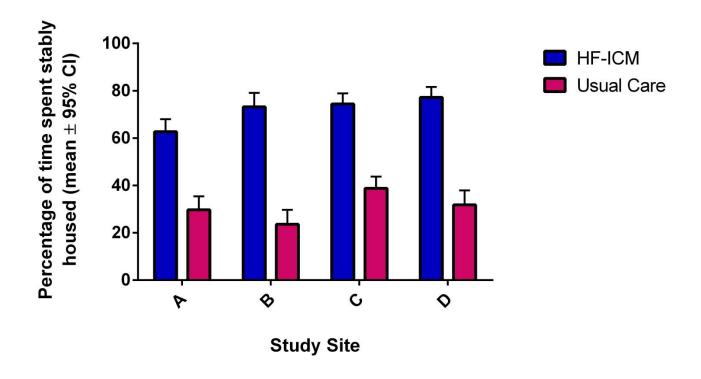
Stergiopoulos et al

JAMA 2015; 313(9):905-15

Scattered Site Trial "Chez Soi"

- Housing First with intensive case management (n=689) vs Usual Care (n=509) in 4 cities
 - Looked at days housed
 - Compared mental symptoms, substance use, physical health, psychological symptoms, ED visits, hospitalizations and costs
- In year 2, 78% of HF vs 39% of usual care were stably housed for >50% of the year

Housing Stability: HF-ICM vs. TAU



Stergiopoulos et al, 2015



Scattered Site Trial "Chez Soi"

- No difference in health-related quality of life, mental symptoms, substance use, physical health, psychological symptoms, arrests, or physical community integration
- No difference in hospital use
- HF superior ratings for leisure, living situation
- HF costed \$14,177/yr and it offset \$4849/yr in other service expenses

Housing First Impact on Costs and Associated Cost Offsets: A Review of the Literature

Ly A and Latimer E

Canadian J Psychiatry 2015;

60(11):475-87

Housing First and Costs

- Systematic review of HF cost studies
- 4 randomized trials, 8 published quasiexperimental studies, 22 unpublished studies
- Among 34 studies, 21 used pre-post design
 - These have no comparison group

Housing First Cost Study

- Shelter and ED costs tend to fall with HF
- Hospital and jail cost changes less consistent
- All 21 studies using pre-post method showed a reduction in overall costs
- 3 of 4 studies with experimental design showed overall costs were higher with HF

Housing First Costs: my take

- Housing First interventions offset some categories of expense (ED)
- Mostly, total expense is higher.
 - Housing + services costs money
- If one studies only very high-cost persons, one might find overall savings
- Most social programs don't work that way
- Cost savings arguments, meh

Housing Programs for Homeless Individuals With Mental Illness: Effects on Housing and Mental Health Outcomes

Benston EA

Psychiatr Serv 2015;66(8):806-16

Housing First Effects Review

- Reviewed 14 randomized trials & quasiexperimental studies of PSH (1980-2013)
- Housing: 12 studies with housing outcomes
 - 11 seemed to favor the housing intervention
 - Many inconsistencies in the interventions, in housing measures (% days, % housed, etc)
- Clinical: 7 studies had clinical outcomes
 - Benefits very rare

Housing First Effects

- Attrition large & rarely analyzed
- Only 3 studies assessed whether housing intervention was faithful to a standard
- Only 3 had case management ratios
- Housing First research leaves unclear what was really offered to either trial arm
- Housing does improve

Here for Now: A mixed-methods evaluation of a short-term housing support program for homeless families

Meschede T, Chaganti T Eval Program Plann 2015;52:85-95

Here for Now

- In 2015, 36% of homeless were in families
- Challenge: jobs, education & childcare
- MA: Family Home pilot program
 - Rental voucher x 2 yrs + case management
 - Caseworker load 35-50 families, monthly contact
- Researchers combined interviews and focus groups of staff, advocates, homeless families
- Surveys of families (58 of 155 returned, 37%)

Home for Now

- Voucher helpful for privacy, security, stability
- Issues: lack of jobs or childcare, low pay with irregular hours, credit, inability to get education
- For 55 families leaving program, ~1/2 did go to more stable arrangements
- Staff & clients mostly agreed that short-term assistance is not sufficient

The Dilemmas of Frontline Staff Working with the Homeless: Housing First, Discretion, and the Task Environment

van den Berk-Clark C Hous Policy Debate 2016;26(1):105-122

Dilemmas of frontline staff

- HF research rarely shows how staff work
- Setting: public hsg corporation (S + C funds)
- At risk: capital funds, security, clinical staff
- Observation & interviews of clients & staff
 - Property Managers (24-hour live in supervisors)
 - Case Managers (social work like function)
 - Clients
- Declared "Housing First" agency

Dilemmas of Frontline Staff

- Admission not preconditioned on treatment
- Property managers (PM): formerly homeless, screen clients, collect rent, maintain building, prepare evictions
- Case managers (CM): social work-like
- PMs monitor guests, warn and evict poor tenants. Agency success rides on them
- PMs had superior leverage to CMs

Dilemmas of Frontline Staff

- "Task environment demands" fall on the PMs
- PMs must keep the buildings successful despite few resources for security & care
- Low-threshold admissions, low-demand and eviction prevention are undermined
- My view: Housing First fidelity turns crucially on the resource commitments and resources at risk for the HF agency

Thank you!

Questions?