

Living in the Emergency Department: Frequent Users, Homelessness, and the Role of the Public Health Community

Public Health Practice Grand Rounds

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Where We're Going Today

- ▶ Why homelessness? Why frequent use? Why now?
- ▶ What we already knew
- ▶ Frequent Baltimore ED Visitors and Homelessness
- ▶ The Top Twenty & The Top Four
- ▶ Recent Literature
- ▶ Tested Solutions
- ▶ Discussion – Bring Your Thoughts

Why Examine Homelessness?

- ▶ High rates of chronic and acute illnesses and disability, to include medical, psychiatric, and substance abuse
- ▶ Unmet basic needs: shelter, food, clothing, hygiene, sleep, safety/security

What's the Problem?

- ▶ Small number of patients visit the emergency department (ED) frequently
- ▶ Cumulative impact of visits tax hospital resources and is costly
- ▶ Patients' presenting problems not ultimately solved within ED

Why the ED?

- ▶ ED provides:
 - Medical and personal attention
 - Shelter/warmth*
 - Safety/security*
 - Sleep*
 - Food*
 - Clothing*
 - Bath/hygiene*
 - Access to other services
- ▶ Open 24/7/365

* = services particularly needed by individuals experiencing homeless

Lit Review: What do we know already?

- ▶ Frequent Users
 - Varying definitions of "frequent"
 - Demographics: age, race, gender, insurance status/income, isolation
 - Clinical needs
 - Urgent v. non-urgent care
 - Patient and clinician perspectives
 - Admission rates, mortality, survival analysis

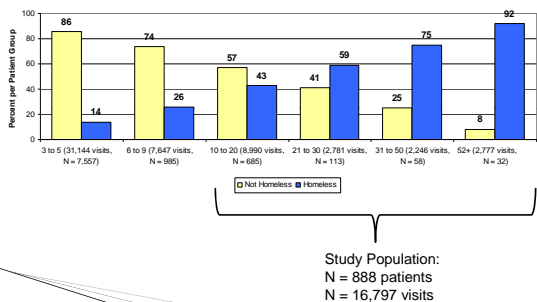
Lit Review: What do we know already?

- ▶ Homeless Use of the ED
 - Identifying housing status in ED is difficult
 - Demographics: age, race, gender, insurance status/income, education levels
 - Clinical needs
 - Usual source of care and frequency of ED use

Baltimore Study

- ▶ Three EDs: Mercy, University, Hopkins
- ▶ Frequent user = 10+ visits total, but at least 3 visits at any 1 ED in CY2005
- ▶ Unique identifier assigned
- ▶ Adult patients only
- ▶ Same UI assigned to all shelter users and HCH clients during same year
- ▶ Patients matched, homeless status identified
- ▶ Comparisons made between frequent user/homeless v. frequent user/not homeless

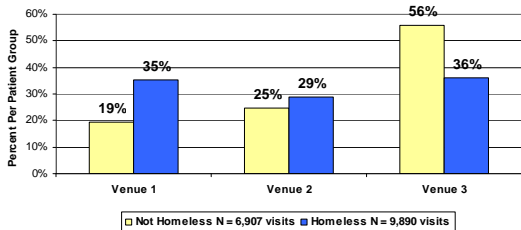
Patients by Frequency



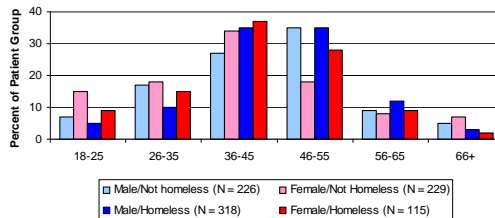
Adding Perspective

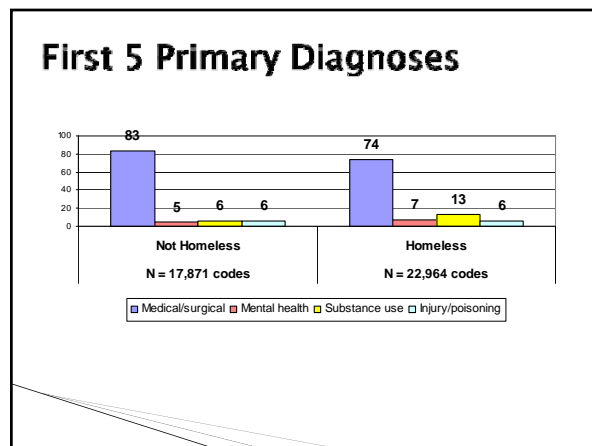
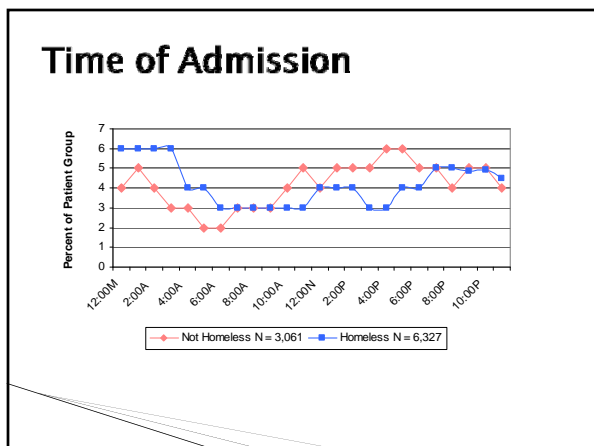
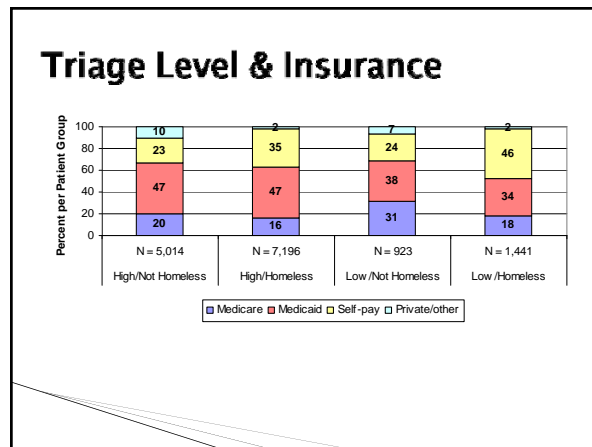
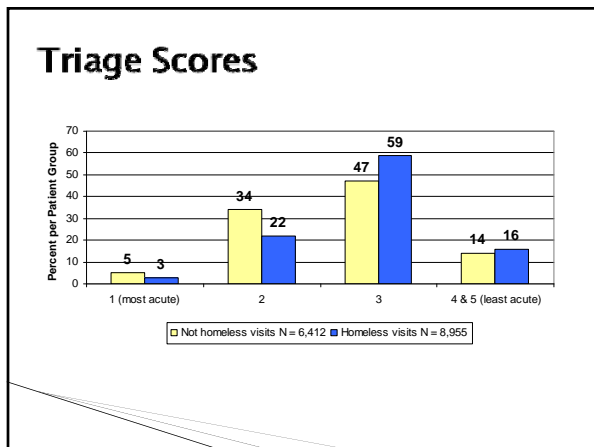
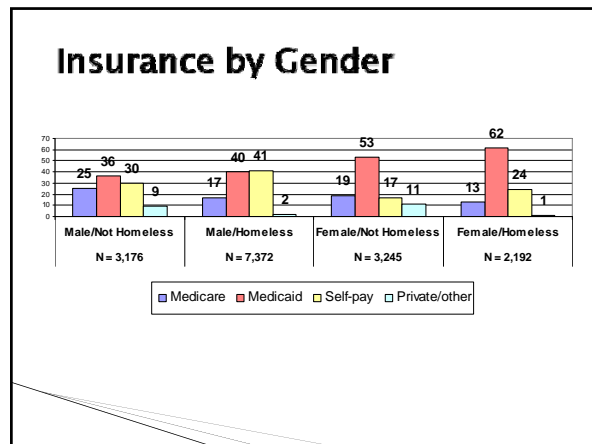
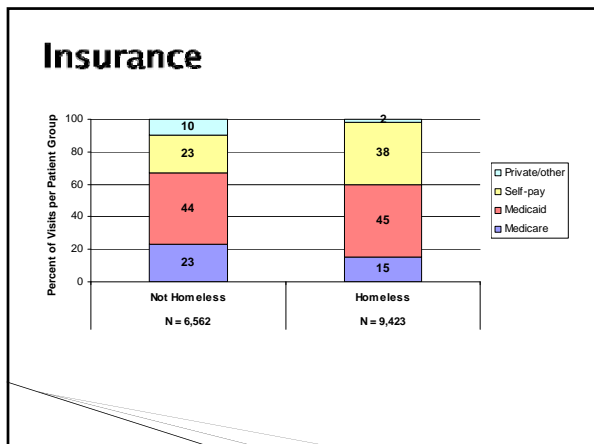
- ▶ Three EDs saw 159,340 total visits from 96,258 patients in 2005
- ▶ 888 patients visited 10+ times each (0.9% of all patients)
- ▶ Total impact: 16,797 visits, or 10.5% of total ED volume
- ▶ Total charges: \$26,612,060 (inclusive of inpatient)
- ▶ This study examines the utilization of those 888 patients and their visits, with an emphasis on housing status differences

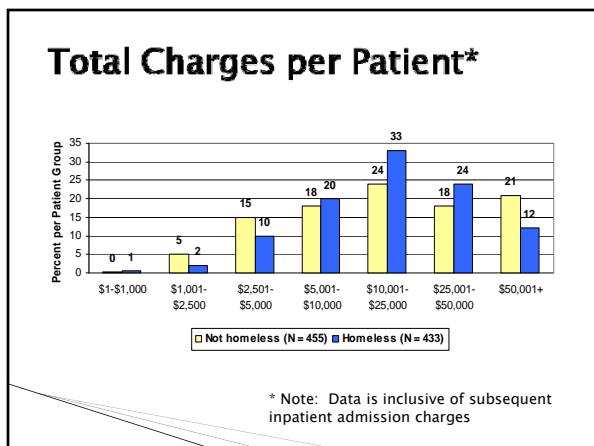
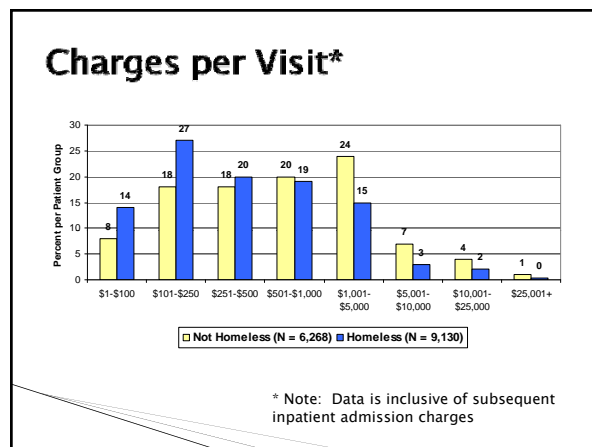
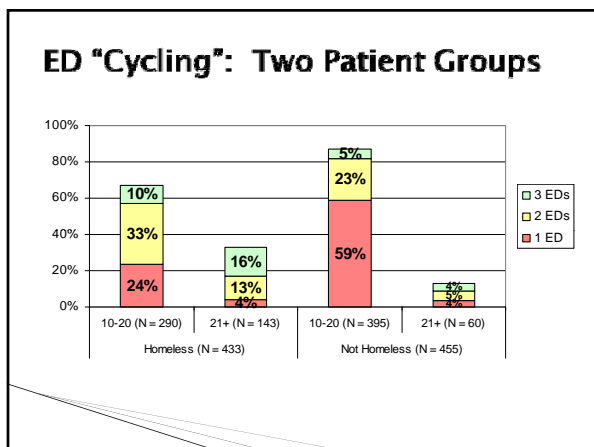
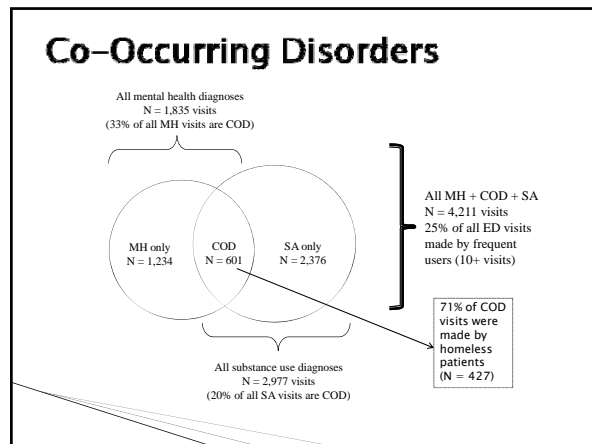
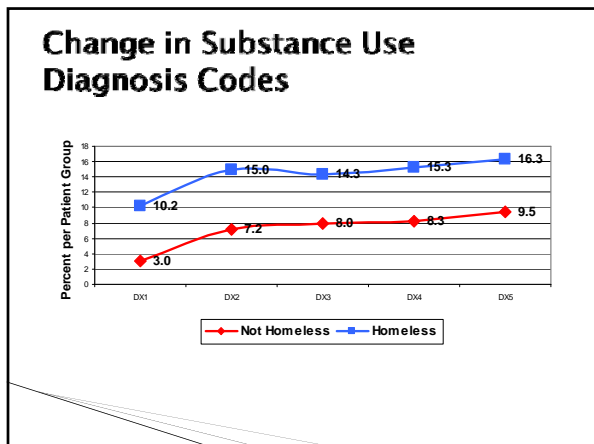
Frequent User Visits at Each Hospital Site



Age and Gender by Patient Group







Study Limitations

- Methodology relies on accurate and complete administrative data entry
- Limited to three City EDs (out of 11)
- Likely to undercount homeless patients
 - Not all homeless use shelters
 - Only public shelters provide data to City HMIS
- Definition of homelessness arguable

Top 20 Patients

- ▶ **2,079 visits**
 - Range: 67–185
 - # EDs: 1:1; 2:6; 3:13
 - Mean age: 48
 - Homeless: 18/20
- ▶ **Diagnoses:**
 - Substance abuse: 11
 - Hypertension: 8
 - Diabetes: 6
 - Asthma: 5
 - Mental health: 5
 - HIV: 4
- ▶ **Triage:**
 - High (1,2): 25%
 - Moderate (3): 61%
 - Low (4,5): 14%
- ▶ **Insurance:**
 - Medicaid: 8
 - Self-pay: 8
 - Medicare: 4
- ▶ **Charges: \$1,007,999**
(ave. \$484.85/visit)
(ave. \$50,399.95/patient)

Patient Details

- ▶ **Top User #1: 55–yo female, 185 visits/2 EDs, homeless, \$42,610 total charges/Medicaid**
 - Codes: Diabetes, hypertension, back/abdominal/other body pain, fever/nausea/convulsions, upper respiratory infections, foot infections
 - Triage*: 29/112/9
- ▶ **Top User #2: 49–yo male, 182 visits/3 EDs, homeless, \$44,417/Medicare**
 - Codes: HIV, respiratory & skin infections, cough, chest pain
 - Triage*: 25/107/37

[* Triage: High/Medium/Low]

Patient Details

- ▶ **Top User #3: 41–yo male, 168 visits/3 EDs, homeless, \$52,528/Medicaid**
 - Codes: Alcohol abuse, hypertension, convulsions, diabetes, fatigue, headache, chest pain, nausea
 - Triage*: 44/101/15
- ▶ **Top User #4: 43–yo male, 148 visits/3 EDs, homeless, \$43,518/Medicaid**
 - Codes: HIV, drug and alcohol abuse, back pain, cough, nausea, frostbite and other exposure-related injuries
 - Triage*: 41/73/7

[* Triage: High/Medium/Low]

Study Conclusions

- ▶ Cannot assume all frequent users are homeless, nor are all homeless users uninsured
- ▶ Clinical presentation is similar between both homeless and non-homeless patients
- ▶ Small proportion of ED users make big impact. Top 20 users made over 2,000 visits, (12.3% of study total, and 1.3% of all ED visits total) and incurred over \$1 million in charges
- ▶ Patient pool is disproportionately homeless, chronically ill, high needs, use multiple ED sites

So, What are the Real Problems?

- A. High ED utilization?
- B. Unmet need among frequent users?
- C. Prevalence of homelessness among top-end users?
- D. All of the above?
- E. Other?

Recent Study: National Data

PART IV: BRIEF COMMUNICATION

A Comparison of National Emergency Department Use by Homeless versus Non-Homeless People in the United States

Gary Oates, MD
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Stephen M. Davis, MPA, MSW

Abstract: Background. A single-site study described differences between homeless and non-homeless patient utilization of the emergency department (ED). No prior study has examined ED use by the homeless on a national level. Objective. To analyze national ED utilization by homeless patients. Methods. Data were extracted from the 2005 National Hospital Ambulatory Medical Care Survey. SAS callable SUDAAN was used to produce

Journal of Health Care for the Poor and Underserved 20 (2009): 840–845.

City Frequent 911 Caller Study

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Emergency Calls Down Among Frequent Ambulance Callers

Baltimore, MD (September 4, 2008) – Baltimore HealthCare Access, Inc., The Baltimore City Fire Department, and the Baltimore City Health Department released a report of the pilot program "Operation Care," which assists vulnerable city residents who make multiple calls for ambulance transport. The report finds that "Operation Care led to improvements in access to healthcare and declines in 911 calls.

In the pilot program:

- o The six patients served were generally assessed with multiple chronic medical conditions. The average age was 61 years. Common conditions included heart disease, alcohol or drug abuse disorders, and psychiatric disorders.
- o Care managers linked patients with a wide variety of services. These included specialty medical care, substance abuse treatment, and transportation.
- o Calls to 911 were 47% less than expected. In seven of 10 cases, calls declined by more than 80%.
- o The project saved \$17,889.71 in EMT costs alone. Other savings not counted by the report include medical expenses in Emergency Departments and hospitalizations.

Some examples include a woman with poorly controlled diabetes who continued to receive care for diabetes complications could be better managed, a man with several chronic diseases was connected to a variety of health and community resources to assist him, and an elderly woman who complained of loneliness in receiving daily visits from a care manager who helps her with activities of daily living.

Recent Study: Needs of Homeless in ED

HEALTH POLICY AND CLINICAL PRACTICE/BRIEF RESEARCH REPORT

Food, Shelter and Safety Needs Motivating Homeless Persons' Visits to an Urban Emergency Department

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Jonathan Hoffman, BS
Chris Chen, BS
Valerie Ng, BS
Daniel Poon, BS

From the Departments of Medicine and Emergency Medicine, San Francisco General Hospital, University of California San Francisco School of Medicine, San Francisco, CA.

Study objectives: We determined whether homeless persons present to the emergency department (ED) for food, shelter, and safety and whether the availability of alternative sites for provision of these needs might decrease their ED presentations.

Methods: In July to August 2006 and February to March 2007, adult homeless and control (not homeless) patients, who self-presented (nonambulance) to an urban county ED, were interviewed with a structured questionnaire.

Results: One hundred homeless and 65 control subjects were enrolled. Homeless persons spent a mean estimated duration 30(9) of 3.5 (3.0) nights sleeping without shelter and ate a mean 10(2) of 2.1 (2.1) meals per day. 53% stated they had been assaulted on the street. On an evening scale, in which 0=no problem and 10=worst possible problem in their daily lives, the mean (SD) homeless subject responses for hunger, lack of shelter, and safety were 4.8 (3.7), 6.3 (4.2), and 8.2 (4.0), respectively. Mean homeless (20%) (10/148) then not homeless (12%) (8/62) persons needed food, hunger, safety concerns, and lack of shelter were reasons they came to the ED (4-20%, 90% confidence interval 3% to 29%), if offered a place that would provide food, shelter, and safety at all times, 24% of homeless subjects stated they would not have come to the ED.

Conclusions: Homeless persons commonly come to the ED for food, shelter, and safety. Provision of these subsistence needs at all times at another site may decrease their ED presentations. (J Gen Intern Med. 2009; 33:508-512.)

Recent Study: Housing and CM

Effect of a Housing and Case Management Program on Emergency Department Visits and Hospitalizations Among Chronically Ill Homeless Adults
A Randomized Trial

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Rosina A. Lee, MD, MPH
Tyler J. VanderWeele, PhD
David Buchanan, MD, MS

Context: Homeless adults, especially those with chronic medical illnesses, are frequent users of costly medical services, especially emergency department and hospital services.

Objective: To assess the effectiveness of a case management and housing program in reducing use of urgent medical services among homeless adults with chronic medical illnesses.

Design, Setting, and Participants: Randomized controlled trial conducted at a public teaching hospital and a private, nonteaching hospital in Chicago, Illinois. Participants were 407 social worker-referred homeless adults with chronic medical illnesses (89% of referrals) from September 2003 until May 2006, with follow-up through December 2007. Analysis was by intention-to-treat.

JAMA. 2009;301(17):1771-1778

Tested Solutions

- ▶ Identify the patient group
- ▶ Determine individual needs
- ▶ Provide range of case management
- ▶ Partner with primary care community
 - Share data, create treatment plan, develop system flags
- ▶ Develop community resources
- ▶ Develop medical respite care capacity (e.g., convalescent care)
- ▶ Develop supportive housing models across a range of needs
- ▶ Unified electronic health records

Challenging Factors: Systemic

- ▶ Lack of primary responsible party
- ▶ Fragmented services system
- ▶ Lack of funding mechanism
- ▶ Lack of health insurance
- ▶ Lack of community willingness to host residential or health services (i.e., NIMBY)
- ▶ Real or perceived legal barriers
- ▶ Multiple hospital & professional objectives
- ▶ Lack of long-term ability to follow-up, connect to services, "hand-hold"

Challenging Factors: Patients

- ▶ Multiple illnesses (co-morbidity)
- ▶ Psychiatric illness and substance abuse
- ▶ Homelessness (!)
- ▶ Difficulty making/keeping appointments
- ▶ Patient ability or willingness to engage
- ▶ Limited social network and financial resources
- ▶ Limited literacy and medical cognition
- ▶ Pervasive crisis, sporadic or episodic attention to health
- ▶ Other areas of life take priority over healthcare (housing, employment, relationships)

In the End...

- › No one solution will be a panacea—requires a multi-faceted approach
- › Requires willingness to invest resources in non-traditional areas
- › Requires willingness to collaborate to make many pieces work together
- › Requires all parts of the system to make changes