"What Women Want:" Characteristics, Shelter-based Clinic Usage, and Predictors of Health Care Utilization of Homeless/Marginally-housed Women

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Background

Homelessness

- Homelessness affects close to 1% of the United States population.
- Routes to homelessness include a combination of personal factors such as substance abuse and psychiatric illness, and economic factors such as poverty.
- Health consequences of homelessness include increased mortality, poorly-managed chronic diseases, violence, and foot/skin conditions.
- Despite increased hospitalization rates, higher hospital costs, and more use of acute care among the homeless, a significant proportion report barriers to necessary health care.

Homeless Women

- Women are among the fast growing segments of the homeless population, yet they are underrepresented in existing literature on homelessness.
- Evidence indicates that homeless women differ from their male counterparts with regards to routes for homelessness, medical and psychiatric co-morbidities, as well as medical and social service utilization.
  - Domestic/sexual violence is the leading cause of homelessness in women.
  - They have lower prevalences of substance abuse but higher prevalences of major depression than men.
  - They use more services than men. Treatment of all their health care and social problems at the same place facilitates their treatment.

Women of Means, Inc.

- Physician-run non-profit organization where volunteer doctors and staff nurses provide free health care to homeless women at Boston's women-only shelters.
- Shelter clients are seen privately on a first-come first-served basis with brief notes taken for later input as text into an electronic medical record.
- Focus is on patient-centered trust building, case management, and connection to mainstream primary care providers (PCPs).

Areas of Need

- Most data on the homeless population is derived from self-report, which is inherently unreliable especially with regards to health care utilization.
- There is little or no data characterizing the motivations and self-motivational behavior among homeless individuals.
- **A better understanding of the health needs and utilization patterns of homeless women is needed to adequately serve them.**

Objectives

- To characterize the medical co-morbidities and health care utilization of homeless/marginally-housed women.
- To determine predictors of homeless women's usage of shelter-based medical care.

Methods

Study Design

- Cross-sectional study of homeless/marginally-housed women who were treated at a women-only day shelter in Boston.
- Data is from de-identified database collected from the electronic medical records of women served by Women of Means, Inc. from 7/2010-11/2011.

Statistical analysis

- Descriptive statistics were used to describe the demographics, medical co-morbidities, and primary care physician status and to characterize reasons for seeking care at shelter-based medical clinics (acute medical, preventive medical, psychiatric, social assistance, and self-motivational).
- One-sample tests for proportions were conducted to compare age-standardized medical co-morbidities of the study population to that of the general population.
- Multivariate linear and logistic regression were conducted to determine how age, PCP status, and presence of multiple or certain co-morbidities predicted shelter-based health care usage, both in terms of volume and number of reasons for seeking care.
- Data underwent IRB exemption from the Harvard School of Public Health, and all statistical analysis was conducted using StataIC11 software.

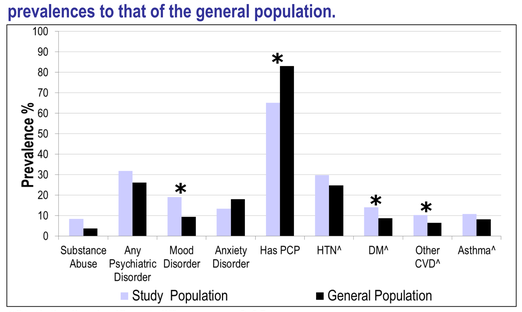
Results

Table 1. Characteristics of Study Sample (N=208)

	Crude % (n)
Predisposing Factors	
Age (mean, sd)	53.4 (15.9)
Psychiatric Condition*	31.7% (n=66)
Mood Disorder*	18.8% (n=39)
Anxiety Disorder*	14.4% (n=30)
Other*	6.3% (n=13)
Substance Abuse*	9.6% (n=20)
Enabling Factors	
Has a PCP	67.8% (n=141)
MD/DO	35.6% (n=74)
Nurse/NP	5.8% (n=12)
PA	1.0% (n=2)
Psychiatrist	0.5% (n=1)
Has a Listed PCP Location	45.7% (n=72)
Academic Medical Center	26.4% (n=55)
Community Health Center	12.5% (n=26)
BHCHP	5.8% (n=12)
Private Practice	1.0% (n=2)
Need Factors	
Number of Co-morbidities (mean, sd)	1.8 (1.6)
Hypertension	35.6% (n=74)
Diabetes/Glucose Intolerance	19.2% (n=40)
Other CVD	13.5% (n=28)
Asthma	11.1% (n=23)

*12-month prevalence

Figure 1. Comparison of age-adjusted study population characteristic prevalences to that of the general population.



*Statistically-significant difference p<0.05

Table 2. Shelter-based Health Care Utilization

	% (n) N=208
# of visits per year (mean, sd)	**8.4 (13.3)**
Most recent visit	
<1 wk	31.7% (n=66)
1week-1month	24.5% (n=51)
1-6months	21.6% (n=45)
6months-1year	2.9% (n=6)
# Reasons for Visit (mean, sd)	**2.3 (1.0)**
Acute Care	**58.2% (n=121)**
Cut/Laceration	31.25% (n=65)
MSK/LBP	14.4% (n=30)
URI symptoms	8.7% (n=18)
Headache	6.25% (n=13)
Sore Feet/Foot Care	5.3% (n=11)
Rash/Derm	4.8% (n=10)
GI upset	2.4% (n=5)
Gynecologic	1.0% (n=2)
Chest pain	0.5% (n=1)
Preventive Care	**44.7% (n=93)**
Blood Pressure Check	37.5% (n=78)
Blood Sugar Check	11.5% (n=24)
Weight	4.3% (n=9)
Flu Shot	2.4% (n=5)
Psychiatric Care	**13.0% (n=27)**
Other/Unspecified	6.3% (n=13)
Mood	4.8% (n=10)
Anxiety	4.3% (n=9)
Social Assistance	**63.5% (n=132)**
Counseling	32.9% (n=68)
Patient Education	23.6% (n=49)
Case Management	9.1% (n=19)
Medical Paperwork	8.7% (n=18)
Medical appointment	8.7% (n=18)
Medication Management	7.2% (n=15)
Housing	2.4% (n=5)
Transportation	2.9% (n=6)
Self-Motivation	**47.1% (n=98)**
Follow-up/Update	30.7% (n=64)
Self-advocacy	19.7% (n=41)
Asked for Referral	3.4% (n=7)

Table 3. Predictors of Health Care Utilization Type

	Multivariate OR (95%CI)				
	Acute Care	Preventive Care	Psychiatric Issue	Social Assistance	Self-Motivation
Age					
≤25	1.0	1.0	1.0	1.0	1.0
25 – 50	1.05 (0.24-4.58)	0.35 (0.11-2.03)	1.46 (0.14-15.53)	2.45 (0.61-9.92)	1.93 (0.44-8.48)
>50	0.77 (0.18-3.35)	0.68 (0.21-3.91)	0.37 (0.03-4.30)	2.91 (0.71-11.90)	1.77 (0.5-7.78)
PCP Status					
No	1.0	1.0	1.0	1.0	1.0
Yes	**0.44 (0.22-0.85)***	**2.84 (1.41-5.73)^**	1.44 (0.19-4.20)	1.08 (0.57-2.07)	**2.43 (1.28-4.64)***
# Co-morbidities					
0	1.0	1.0	1.0	1.0	1.0
1	0.55 (0.23-1.32)	**3.01 (1.20-7.59)^**	2.20 (0.35-13.88)	0.59 (026-1.37)	2.02 (0.86-4.71)
2	0.82 (0.32-2.07)	**3.36 (1.28-8.80)***	1.03 (0.14-7.54)	1.18 (0.47-2.96)	1.94 (0.79-4.76)
≥3	0.40 (0.15-1.06)	**8.93 (3.07-25.97)^**	1.23 (0.16-9.41)	1.19 (0.45-3.17)	1.45 (0.56-3.72)
Psychiatric Condition					
No	1.0	1.0	1.0	1.0	1.0
Yes	0.84(0.42-1.69)	**0.40 (0.19-0.85)^**	**12.10 (3.46-42.23)^**	**2.85 (1.31-6.18)***	0.48 (0.29-1.15)
Substance Abuse					
No	1.0	1.0	1.0	1.0	1.0
Yes	2.18 (0.76-6.28)	**0.21(0.06-0.68)^**	0.90 (0.19-4.38)	0.74 (0.25-2.19)	1.14 (0.41-3.17)

* p-value <0.05; ^ p-value <0.001

Table 4. Predictors of Health Care Utilization Volume

	β (se)	
	# Visits in Past Year	# Reasons per visit
Age	0.17 (0.05)^	-0.00 (0.00)
Has a PCP	**6.25 (1.86)***	0.28 (0.14)
# Co-morbidities	**2.31 (0.66)^**	**0.12(0.05)***
Psychiatric Condition	-.34 (2.08)	0.10 (0.16)
Substance Abuse	-1.23 (2.92)	-0.24 (0.23)

* p-value <0.05; ^ p-value <0.001

Conclusions

Characteristics

- Homeless/marginally-housed women who seek shelter-based medical care tend to be older than average homeless women.
  - Possible explanations include difficulty escaping homelessness and aging of the general population and rise in impoverished elderly
- These women are poorly linked to care with a significantly smaller proportion having a PCP compared to the general population
  - Known barriers: transportation, scheduling, stigmatization, and insurance
  - PCP is a resident at academic medical center who leaves the area
- They have similar chronic illnesses as the general population but increased prevalences of diabetes and other CVD
  - Food insecurity, poor medical insight, poor chronic disease management
- Increased substance abuse and depression

Shelter-based Clinic Usage

- Homeless women have diverse reasons for seeking shelter-based medical care.
- Half have a self-motivational component to seeking care
  - Medical provision model (open communication, patient education, social support) that empowers women to make healthy choices

Predictors of Shelter-based Health Care Utilization

- Having a PCP and an increased number of co-morbidities was predictive of increased number of visits to the shelter clinic
  - Integrated disease monitoring while women are obtaining meals or other shelter services
- Having a PCP predicts seeking preventive medical care and self-motivation but not acute medical care.
  - Collaboration of shelter-based clinicians with PCPs to reinforce chronic disease management
- Women with psychiatric illness are more poorly functioning, requiring targeted psychiatric care and increased social assistance.

Limitations

- Study population
- Sample size (n=208)
- Electronic medical records not initially designed for retrieval

These data offer novel insight into homeless women and their reasons for health care utilization, which may be informative for creating an effective service model to address the complex medical, psychiatric, and social needs of this population.

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