A Comparison of Health Care Use by People Experiencing Sheltered and Unsheltered Homelessness

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Research Questions

• How do individuals sleeping rough compare to those using shelters?

• How do these two subgroups differ based on:
  • Any use of JPS health services
  • Use of individual JPS service sectors (emergency, urgent care, outpatient, inpatient)

• Identify predictors of service utilization using Behavioral Model for Vulnerable Populations\textsuperscript{4}
Background

• Previous research has examined the use of health services by people experiencing homelessness

• Many rely on people sleeping in shelters or retrospective studies of individuals residing in housing

• Few examine the service use of people sleeping rough (unsheltered) and fewer compare unsheltered and sheltered subgroups

• Findings indicate that these groups use services similarly

• However, as expected, these studies possess limitation
Study Setting

• North Central Texas
• Dallas Fort Worth (DFW) Metroplex (4th) – 7.1 million
• Fort Worth (16th) – 854,000
• Tarrant County (16th) – 2 million
• Point In Time Count 2018
  • Tarrant County – 2,015 (678 unsheltered)
• 3 Emergency Shelters – only 2 using HMIS database
JPS Health Network

Health Network Hospital System
• Publicly Funded
• Only Level 1 Trauma Center
• Only Psychiatric Emergency Center
• Comprehensive Level 1 Stroke Center
• 17 Residency & Fellowship Programs
• 40+ Primary & Specialty Health Centers
• 6,500 Team Members
• Licensed for 589 beds
• 196,454 Unique Patients
JPS Health Network

Homeless Health Care Services

• True Worth Medical Home – PCMH
• Care Connections Outreach – Street Medicine
• Pathways To Housing – Collaborative housing model for high ED utilizers with Medicaid
• Recuperative Care Program – Respite care
• Academics – Family Medicine Residency Street Medicine Track with 4th Year option as well as elective rotations; Students
• Research – Collaborative research efforts with JPS, TCU, & UNT
JPS Health Network

JPS Connection Homeless Program

• Financial assistance for medical care for people experiencing documented homelessness and without any income
• Payer of last resort
• Good for one year
• Only covers costs at JPS
• No copayments
• Near total access to all health care at JPS
• 5 free prescriptions/month
Methods

- Retrospective, community-based study
- Approved by JPS and TCU IRB’s
- Identified participants using 2015 annual Point-In-Time count of homelessness using HUD & VI-SPDAT
- Local CoC agency conducting count furnished personal identifying information for individuals identified through count to JPS Research Institute
- JPS then linked count records to JPS health records using iterative, deterministic method
- Evaluated official health records for the 24 months prior to the homeless count (January 2013 – January 2015)
Methods – Data Sources

• Point-In-Time count
  • Name
  • Birthdate
  • Social Security Number
  • Times homeless in last year
  • Months of current episode
  • Assessment of chronic homelessness
  • Chronic health problem
  • Mental health problem
  • Substance use disorder
  • Veteran status

• JPS Health Records
  • ED, Urgent Care, and outpatient visits
  • Inpatient admissions
  • Length of stay
  • Health service charges
  • Payer information
  • Age
  • Gender
  • Race
  • Ethnicity
Methods

• Logistic regression models using IBM SPSS ver. 22
  • Dichotomous dependent (yes/no) variables – any service use, ED use, urgent care use, outpatient use, and inpatient use
  • Independent variables conceptualized using literature and Behavioral Model

<table>
<thead>
<tr>
<th>Need Factors</th>
<th>Enabling Factors</th>
<th>Predisposing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic health condition</td>
<td>Insurance</td>
<td>Age</td>
</tr>
<tr>
<td>Mental health condition</td>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Substance use disorder</td>
<td>Race</td>
<td>Chronically Homeless</td>
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<tr>
<td></td>
<td>Sheltered status</td>
<td></td>
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</tbody>
</table>

• Used step-wise and simultaneous approaches for regression analyses
• Chi-square, t-test, and Mann-Whitney $U$ tests
• Results did not differ, presenting simultaneous results
Results

740 total unduplicated individuals:
• 91%/9% sheltered/unsheltered
• 66% predominantly male
• 53% African-American & 39% Caucasian
• Mean age 50 years old
• 5% report prior military service
• 32% report chronic health condition
• 38% report mental health problem
• 7% report substance use disorder
• Mean current homelessness episode = 33.8 months
• Mean times homeless in last three years = 2.8
### Results

<table>
<thead>
<tr>
<th></th>
<th>Sheltered</th>
<th>Unsheltered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td>49.1</td>
<td>45.9</td>
</tr>
<tr>
<td><strong>MALE</strong></td>
<td>63.6%</td>
<td>75.4%</td>
</tr>
<tr>
<td><strong>AFRICAN AMERICAN</strong></td>
<td>55.4%</td>
<td>27.5%</td>
</tr>
<tr>
<td><strong>CAUCASIAN</strong></td>
<td>36.6%</td>
<td>63.7%</td>
</tr>
<tr>
<td><strong>REPORTED A SUD</strong></td>
<td>5.5%</td>
<td>17.4%</td>
</tr>
<tr>
<td><strong>EPISODES OF HOMELESSNESS</strong></td>
<td>32 months</td>
<td>51.5 months</td>
</tr>
<tr>
<td><strong>EPISODES OF HOMELESSNESS IN LAST 3 YEARS</strong></td>
<td>2.4yrs</td>
<td>3yrs</td>
</tr>
<tr>
<td><strong>CHRONIC HOMELESSNESS</strong></td>
<td>36.4%</td>
<td>64.1%</td>
</tr>
<tr>
<td><strong>HEALTH CARE COVERAGE</strong></td>
<td>64.1%</td>
<td>50.7%</td>
</tr>
</tbody>
</table>

*P<.05  **P<.01  ***P<.001
Results

• 84% of all participants accessed JPS services in prior 24 months
  • 61% ED
  • 66% outpatient
  • 48% urgent care
  • 30% inpatient
• Unsheltered significantly \((p<.05)\) more likely to access any service \((94.2\%, \, 83.5\%)\) and ED services \((72.5\%, \, 59.8\%)\)
• Unsheltered rates significantly higher for ED \((4.41, \, 3.03 \, p<.05)\) and outpatient \((13.46, \, 5.7 \, p<.01)\) over 2yrs
• 11% were identified as high ED utilizers \((>8 \text{ visits in 24month})\)
  • Accounted for 32% of all services used and 35% of all charges
## Results

<table>
<thead>
<tr>
<th></th>
<th>Any Use</th>
<th>ED Use</th>
<th>UC Use</th>
<th>OP Use</th>
<th>IP Use</th>
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</thead>
<tbody>
<tr>
<td>Age (P)</td>
<td></td>
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<tr>
<td>Gender (P)</td>
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<tr>
<td>Race (P)</td>
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<tr>
<td>Chronic Homelessness (P)</td>
<td>X</td>
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<tr>
<td>Unsheltered (P)</td>
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<tr>
<td>Insurance (E)</td>
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<tr>
<td>Chronic Health Problem (N)</td>
<td>X</td>
<td>X</td>
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<td></td>
</tr>
<tr>
<td>Mental Health Problem (N)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Substance Use Disorder (N)</td>
<td></td>
<td></td>
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<td>X</td>
<td>X</td>
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</tbody>
</table>

P = Predisposing Factor  E = Enabling Factor  N = Need Factor
Discussion

• Our findings confirm that people experiencing homelessness are frequent users of health services:
  • ED – 3.5 times higher than GP (158 per 100 versus 45.1 in GP)\textsuperscript{10}
  • Outpatient – 2.2 times higher than GP (321 per 100 versus 147.2 in GP)\textsuperscript{11}

• Service use differences were found between sheltered and unsheltered participants in our study:
  • Unsheltered visited ED (\textbf{4.41, 3.03}) and OP (\textbf{13.46, 5.7}) significantly more often

• Jail-based services should also be examined separately
Discussion

• Substance use did not predict any service use
  • Did not include substance specific services
  • Substance use reported as low by sample (Unsheltered – 17%, Sheltered – 5%)
  • Possibly underreported due to sheltered intake surveys being administered by staff and unsheltered surveys being administered by unfamiliar volunteers

• Being sheltered or unsheltered was not predictive of service use

• Frequent ED utilizers, consuming a disproportionate amount of services should be studied further
Limitations

• Specific geographical area in North Texas
• Point-In-Time Count – missing data, under/over reporting, etc
• Self-report information collection
• Health service data not collected from other hospitals in area

Strengths

• Community level perspective
• Included sheltered and unsheltered
• Used objective administrative and medical records
• 24 month observation period
Big Take Aways

• Promotes creation or continuation of public health policy and program initiatives that facilitate access to care

• High ED use by unsheltered subgroup indicates need for community-based care with follow-up

• Chronic homelessness should remain a priority population

• JPS Connection is an important resource for non-Medicaid/Medicare eligible individuals

• JPS should evaluate integration of out-patient behavioral health services with ED and Urgent Care
BIBLIOGRAPHY


8. http://www.jpshealthnet.org/about_jps/community_outreach


THANK YOU!

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