UC San Diego
Independent Study Projects

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UCSD Emergency Department Community Placement Project.

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UCSD EMERGENCY DEPARTMENT COMMUNITY PLACEMENT PROJECT

ST. VINCENT DE PAUL VILLAGE

YEAR 1 EVALUATION
BRANKO MATICH, MS4
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Homelessness in San Diego

- 4th largest homeless population in metro area only surpassed by NYC, LA, and Seattle
- In 2013 there were 8,879 homeless and about half were unsheltered
- One of the lowest rental vacancy rates in nation
- Average rent = $1,438 for a 1 bedroom
- No County medical hospital just psychiatric
The Problem

- Homeless have higher rates of substance use, mental illness, and chronic health conditions
- Mortality rates 3 times higher than general population
- Homeless disproportionately use costly services such as emergency rooms, hospitals, and law enforcement.
- Million Dollar Murray: “It cost us one million dollars not to do something about Murray.”
Opportunity to Improve Health Care

“Emergency Room visits and hospital admissions should be considered failures of the health care system until proven otherwise”
Jeffrey Brenner, “Hotspotting” in Camden NJ

“The health care system is not designed to handle complex patients

“Most expensive care is not always the best care….the best care is often the least expensive.”
Atul Gawande
The Solution: Connect Homeless with Housing

• 405 homeless persons with chronic medical illness in Chicago
  • Intervention group → referred to community based programs for housing and case management
  • Control group → usual care
  • Hospital days decreased 29%, ED visits decreased 24%

• Orange County hospitals discharge patients to community based homeless organization, hospitals pay $200/day
  • Recuperative care, housing and case management services provided
  • 85% percent remained medically stable or improved
  • 39% decrease in ED use
  • 11 million in cost savings to referring hospitals
EDCPP and St. Vincent de Paul Village

- Reduce homeless ED recidivism by linking patients with temporary housing and resources through local agencies
- Homeless ED patients who meet eligibility criteria are referred to St. Vincent de Paul Village (SVdPV)
- SVdPV one of 3 sites for referrals
- UCSD able to refer 2 patients per week at a monthly contract rate of $2,514
- Patients sent to shelter via cab between 7am-5pm
- SVdPV provides housing, case management and other social services, and medical care
Year 1 Evaluation

- Total of 25 individuals referred to SVdPV from April 2013 to March 2014
- Demographic characteristics
- Homeless outcomes
- Collected UCSD health care utilization data 6 months prior and after SVdPV referral
- Correlated with SVdPV services
Basic Demographics

- **Avg age:** 50
- **Range:** 28-70
- **84% White**
- **68% Male
  32% Female**
- **32% Chronically Homeless**
- **36% Had Disability Income**
- **16% US Veterans**
Health Care Demographics

- 25% Uninsured
- 56% Self-Reported Mental Illness
- 44% Self-Reported Substance Abuse
- 80% with at Least 1 Medical Co-morbidity

ED Patients
SVdPV Placements Per Month

- SVdPV Placements
- Capacity
Utilization of SVdPV Resources

- Housing placement: 42%
- Substance abuse services: 15%
- Mental health services: 23%
- Clinic visit: 69%
- Case management: 69%
Homeless Outcomes

Exits (N = 19)

- Streets: 53%
- Permanent Housing: 16%
- Temporary Housing: 21%
- Institutions: 11%

Length of Stay (LOS) in days for those who exited:
- Avg = 41
- Median = 20
- Range = 1-311

Length of Stay (LOS) in days for 13 with full follow up:
- Avg = 80
- Median = 24
- Range = 1-349
Who are the top 3 utilizers?

Patient A
10 ED Visits
41 Hospital Days

Patient B
36 ED Visits
26 Hospital Days

Patient C
19 ED Visits
14 Hospital Days

61% of all ED Visits
82% of all Hospital Days

Over the past year 3 patients accounted for $234,921 in medical costs
Hospital Service Use

13 Participants (with high utilizers)

- 57 Total # ED visits
- 62 Total # Admissions
- 53 Total # Hospital Days

10 Participants (with top 3 high utilizers removed)

- 28 Total # ED visits
- 23 Total # Admissions
- 13 Total # Hospital Days

- 62% of participants decreased ED visits
- 31% of participants decreased inpatient encounters
- Only 16 of the 62 ED visits (26%) post diversion occurred while still in a bed at SVdPV.
Estimated costs based on San Diego averages:
ED visit = $753
Hospital day = $2296

Cost Savings Analysis

Net Medical Costs Pre- $164,609
Net Medical Costs Post- $152,302
Net medical savings $12,307
Cost to cover SVdPV services $4,123
Overall Program Savings $8,184
### Complicated patients...

<table>
<thead>
<tr>
<th>Patient A</th>
<th>49 year old chronically homeless man with alcoholic hepatitis, COPD and depression; admitted numerous times for alcoholic intoxication, acute on chronic pancreatitis and trauma, with two ED visits within 24 hours</th>
<th>28 ED visits and 14 hospital days post diversion</th>
<th>LOS at SVdPV 20 days, with case management and 2 clinic visits, only 1 ED visit while in a bed Patient left the program to the streets</th>
</tr>
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<tbody>
<tr>
<td>Patient B</td>
<td>29 year old woman with epilepsy admitted numerous times for seizures and pregnancy complications; delivered during project timeframe</td>
<td>8 ED visits and 14 hospital days post diversion</td>
<td>LOS at SVdPV 162 days, with case management and 8 clinic visits Patient is currently in Project 25</td>
</tr>
<tr>
<td>Patient C</td>
<td>59 year old chronically homeless man with a history of severe COPD (CO2 60-70’s), diastolic heart failure and HTN, as well as alcohol abuse, smoking and bipolar disorder</td>
<td>3 ED visits and 13 hospital days post diversion</td>
<td>LOS at SVdPV only one day, discharged back to hospital Progress notes state he was later D/C’d to independent living facility</td>
</tr>
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## Program worked for...

<table>
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<tr>
<th>Patient C</th>
<th>52 year old man with a history of HTN, DM, chronic pain and depression. 3 ED visits for alcoholic intoxication, suicidal ideation and medication refill. Homeless for only past few months.</th>
<th>Only 1 ED post diversion (for med refill), no hospital days</th>
<th>LOS at SVdPV 311, with case management, 8 clinic visits, alcohol &amp; drug counseling and mental health services Patient discharged to family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient D</td>
<td>28 year old man with a history of chronic pain and depression. Majority of ED visits 2/2 laceration repairs and suicidal ideation.</td>
<td>No ED or hospital days post diversion (6 ED visits prior)</td>
<td>LOS at SVdPV 60 days, case management, 5 clinic visits, alcohol &amp; drug counseling and mental health services Patient not yet discharged.</td>
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Conclusions

• Allows ED staff to be able to discharge homeless patients to a housing resource and not the streets

• Most patients using services at SVdPV

• Minor reduction of hospital services and cost
  • 74% of ED visits post diversion occurred after exiting homeless shelter.

• In general, program working for patients with less severe medical and psychiatric profiles
Next Steps

• Refine referral process, target more complex patients to non-shelter program.
• Have ED staff better assess willingness or likeliness to stay at SVdPV
• Increase placements per month
• Explore which factors are associated with program success
• Collect data on larger sample size and with full follow-up
• Possible collaboration with surrounding hospitals
Limitations

• Clear limitation is small sample size and no control group
• Interim analysis; 12 more participants without sufficient follow up
• Several notes report ED visits at other institutions
• Does not include other community costs such as 911 transports
References


Short-Term Housing and Care for Homeless Individuals After Discharge Leads to Improvements in Medical and Housing Status, Fewer Emergency Department Visits, and Significant Cost Savings. Illumination Foundation’s Recuperative Care Program http://www.innovations.ahrq.gov/content.aspx?id=3881