

The Prevalence of Homeless Patients in the Emergency Department

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The Prevalence of Homeless Patients in the Emergency Department

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Overview

In 2014, around 578,424 people were found to experience homelessness every night nationwide¹. In just Lehigh and Northampton counties there are an estimated 10,500 residents who qualify as being homeless². Lehigh Valley Health Network (LVHN) employs a **Street Medicine team** lead by Physician Assistant Brett Feldman. This team holds clinics at local soup kitchens and shelters, goes to the homeless encampments and treats those living in them free of charge, and also provides consults to doctors of hospitalized homeless patients to ensure better patient outcomes. This study was done to **observe the prevalence of homeless patients** and to **accurately identify homeless patients** coming through the emergency departments of all three LVHN hospital locations. It was hypothesized that there would be a **difference among homeless patient volume within LVHN hospital locations**, and once this difference is found, Lehigh Valley Health Network can use its resources to meet the needs of the homeless patients.

Methods

This was an Institutional Review Board (IRB) approved cohort study. Collection of the data was done by administering an anonymous five question survey to patients in each of LVHN hospitals' three emergency departments. The survey questions were:

HOUSING STABILITY SCREENING QUESTIONS

- In the last 60 days have you:
1. Changed residences more than twice?
Yes ☐ No ☐
 2. Been concerned about losing your housing?
Yes ☐ No ☐
 3. Lived with a friend or family member you do not normally reside with due to financial hardship?
Yes ☐ No ☐
 4. Faced eviction or have been evicted from your current living situation?
Yes ☐ No ☐
 5. Slept outside, in an abandoned building, your car, in an emergency shelter or a motel due to financial hardship?
Yes ☐ No ☐

A patient was considered homeless if he or she answered yes to any question except question two. A patient was considered "at risk of homelessness" if he or she answered yes to question two.

Steps taken to avoid selection bias:

- Survey was administered in randomly assigned shifts
- Shifts were from 7:00 AM to 4:00 PM or from 4:00PM to 1:00 AM
- Weekends were not excluded from the screening process

Inclusion criteria:

- Patient must speak English, be over the age of 18, have the capacity to answer survey questions, and not be critically ill
- Patient must agree to participate

Results

	Total	17th St	Cedar Crest	Muhlenberg
At Risk for Homelessness	55	16	21	18
Homeless	114	45	34	35
Neither	1447	214	618	615
Total	1616	275	673	668

Table 1: Total Patient Data Breakdown by Location

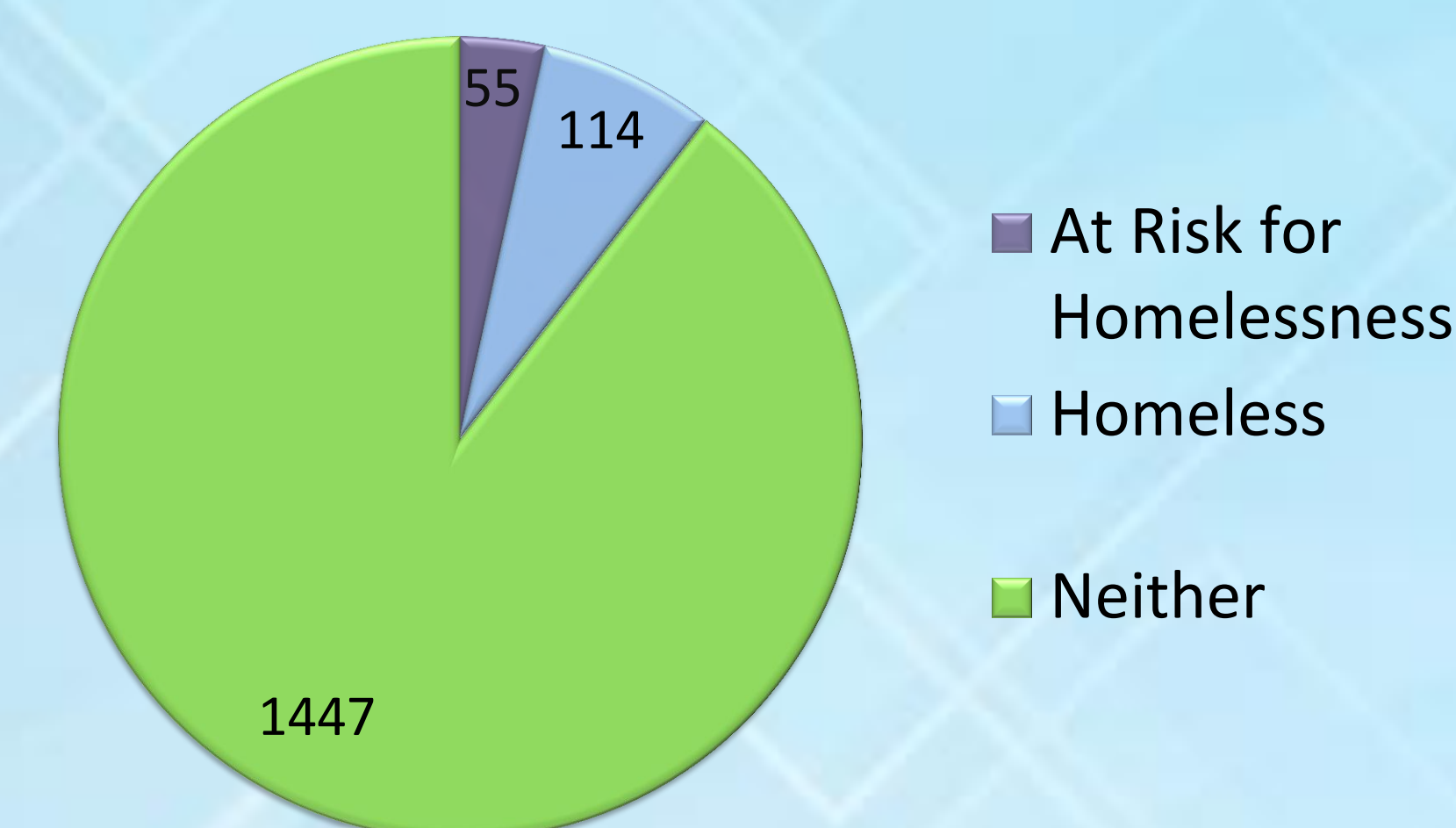


Figure 1: Total Patient Distribution throughout all three Locations

Site	At Risk (%)	Homelessness (%)	Total (%)
17 th	6%	16%	21%
Cedar Crest	3%	5%	8%
Muhlenberg	3%	5%	8%

Table 2: Percentages of Homeless and at Risk of Homelessness Patients by Location

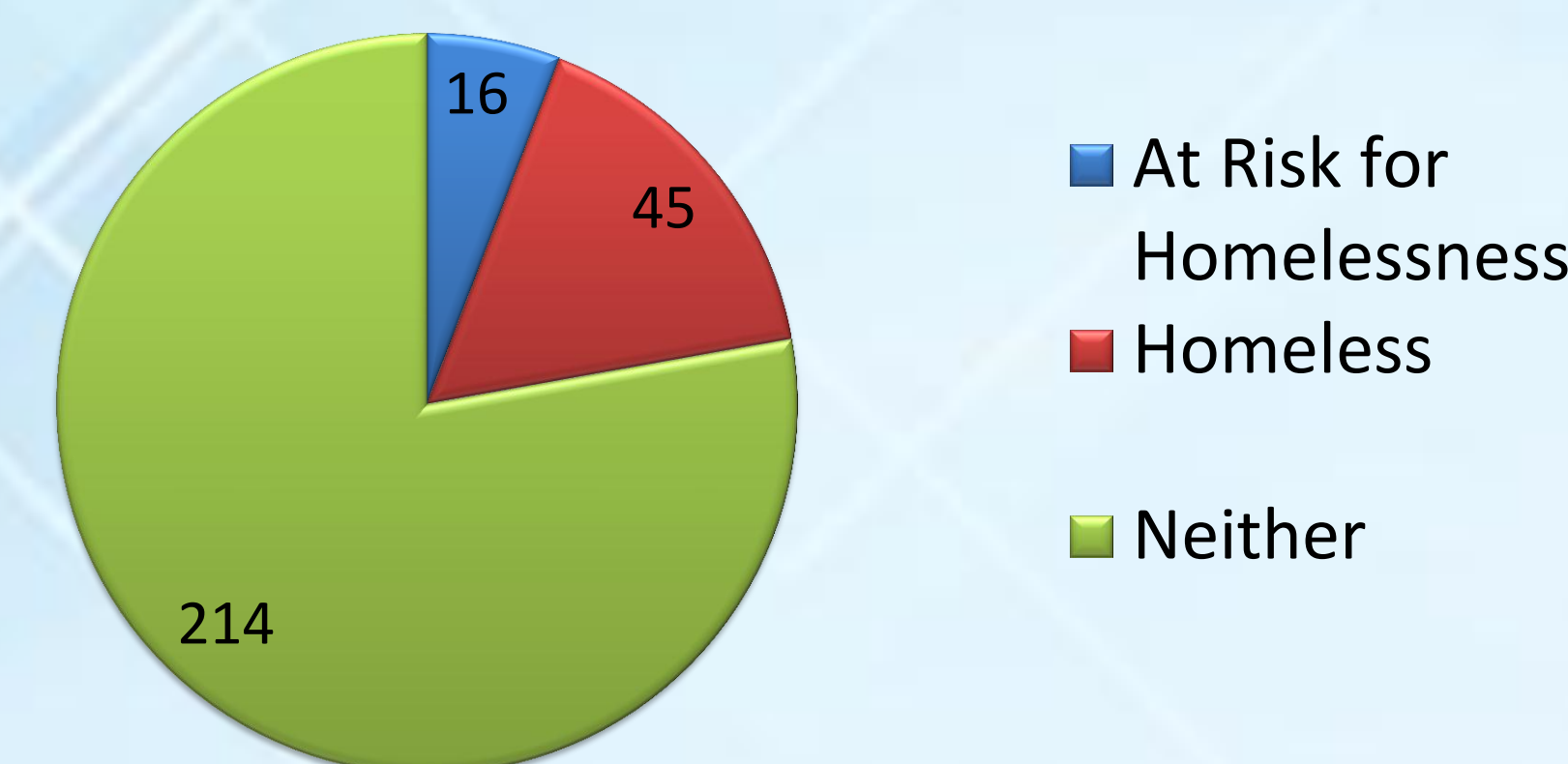


Figure 2: Patient Distribution at the 17th Street location

- 17th Street accounted for 17% of the total participants surveyed
- Muhlenberg and Cedar Crest each accounted for 41.5% of the participants surveyed
- Prevalence of homelessness was **greater at 17th Street than at Cedar Crest** ($p=0.001$)
- Prevalence of homelessness was **greater at 17th Street than at Muhlenberg** ($p=0.0001$)
- **No statistically significant difference** in the prevalence of homeless or at risk of homelessness patients was found **between Cedar Crest and Muhlenberg** ($p=0.920$)

Discussion

- According to the results of this study, the prevalence of homelessness was statistically higher in 17th Street Hospital's emergency department than any other emergency department of LVHN hospitals.
- Even though there was smaller sample size from the 17th Street Hospital, the total number of homeless patients was almost equal to the other two hospitals. Therefore, there is a difference in homeless patient volume among LVHN hospital emergency rooms, which confirms our initial hypothesis.
- According to the United States Census Bureau, in 2013 the zip code of 17th Street Hospital (18103), had a mean household income of \$65,256, the zip code of Muhlenberg Hospital (18107) had a mean household income of \$78,418, and the zip code of Cedar Crest Hospital (18104) had a mean household income of \$86,207³.
- The neighborhood of 17th Street Hospital has a statistically significant lower income than the neighborhoods of the other two hospitals in the study (in both instances $p<0.0001$).
- The hospital in the lowest income area had highest prevalence of homeless in its emergency department.
- Since this survey excluded non English speakers and since 17th Street caters to a heavily Spanish speaking population, it can be assumed that a decent portion of patients could not be surveyed and therefore the prevalence of homelessness is underrepresented in this data.

Future Plans and Implications

- This study is to be replicated in Winter 2016 to see if there is a higher prevalence of homeless patients in the emergency departments in colder weather
- Recommendations:
 - Use the survey in the initial intake log of patients to get a more complete social history of each patient
 - If a patient is identified as homeless or at risk of homelessness, then they can qualify to get free medicine and lab work done through the street medicine program

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