Implementing a Screening Tool in the Emergency Room as a Way to Better Care for the Homeless Population

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INTRODUCTION

Social determinants of health have become recognized as some of the most influential factors affecting personal wellness, one of the most significant being housing. Approximately 1.5 million Americans experience homelessness each year, with over 600,000 experiencing homelessness or housing instability on any given night [2,6]. The state of Pennsylvania accounts for about 15,000 homeless individuals, with an overall increase of 678 people from 2012-2013 [6]. The Lehigh Valley is not immune to these trends, with an estimated 10,500 individuals qualifying as "homeless" within Lehigh and Northampton Counties based on local shelter census data.

The impact of housing on health outcomes is serious. Homelessness has been associated with high rates of medical and psychiatric illness, alcoholism, substance abuse, social isolation, and high mortality rates [1-5]. The need for quality primary care is great given the high level of disease burden and healthcare utilization among this population. Large numbers of homeless individuals access the emergency room (ER) as a place for care on a regular basis and are three times more likely to visit within a year [4,5]. ER visits by homeless individuals can be prevented by adequate primary care and addressing critical social needs in the healthcare setting [5]. For this reason it is important to dedicate efforts to discover better ways to care for this population.

The Lehigh Valley Health Network (LVHN) Street Medicine team is an integrative, interdisciplinary mobile team that cares for the homeless population. Basic medical and preventive services are provided free of charge to people who are homeless at multiple points of service. With this project, patients accurately defined as homeless during an ER visit are referred to a Street Medicine Consult Service to provide safe discharging planning and rapid outpatient follow up to prevent readmissions.

PLAN

The majority of LVHN's inpatient and outpatient care settings have not standardized an approach to screening for and responding to housing instability, despite its profound effects on health outcomes. With the collection of data, the prevalence estimate of homelessness would ultimately allow for projections of utilization patterns and cost of caring for this subgroup. Creating an opportunity for a population that is often marginalized will be of value to the beneficiaries themselves and to the Lehigh Valley as a whole.

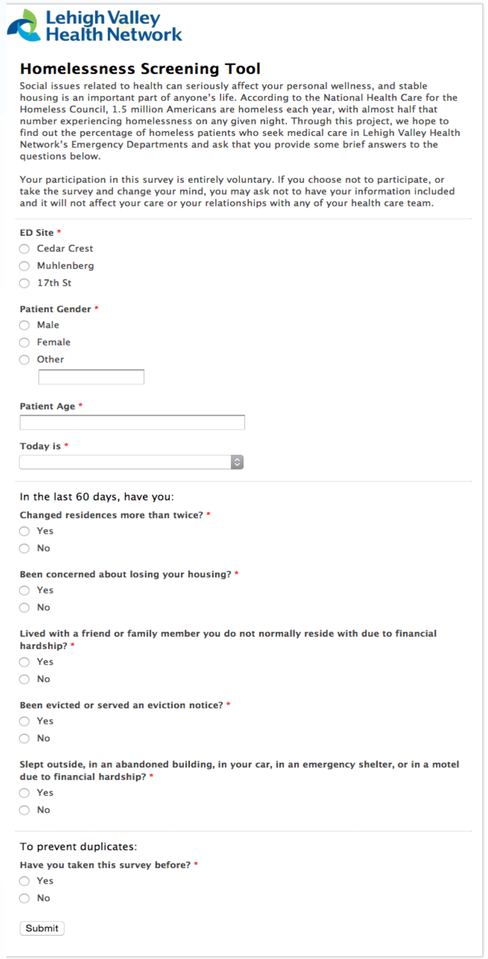
A simple survey was devised to prospectively capture the needed data, consisting of demographic data and five "yes" or "no" questions. The screening tool was derived from the US department of Housing and Urban Development 2012 definition for homelessness. The goal of the study is to determine the prevalence of homelessness or at risk for homelessness in the LVHN Emergency Department (ED) population. With this knowledge it will be determined whether the survey can be used as a screening tool in the ED, and where resources can be allocated with hopes of discovering how to better care for this population.

The protocol passed scientific review by the department of medicine and department of emergency medicine. It was reviewed without major edits by the Network Office of Research and Innovation and exempt by the IRB due to minimal risk of the study. The baseline prevalence data will be used to assist in the evaluation of deployment of resources in the future for medical care of the homeless and is the groundwork for the network to determine if the ED is an appropriate setting to develop an intervention.

METHODS

A five-question survey was administered in the three LVHN ED settings on a scheduled basis. All patients within the ED pod who met exclusion/inclusion criteria were approached. Patients are assigned randomly to different sections of the ED, so screening was done depending on which site/section was assigned that day in order to eliminate screening bias. All input by the patient was self-reported and fully anonymous, and a patient was allowed the option of declining participation in the screening at any point in the interaction. Patients with a positive screen for homelessness were those answering "yes" to any one of the questions, with the exception of question 1 where a "yes" conferred status of "at risk for homelessness". They were then offered a street medicine consult at the attending's discretion.

Inclusion criteria: Patients must be 18 years or older, must speak English, have capacity to answer survey questions, not critically ill, and are willing to participate.
Exclusion criteria: Patients must be less than 18 years old, do not speak English, do not have capacity to answer survey questions, critically ill, or are unwilling to participate.



Lehigh Valley Health Network

Homelessness Screening Tool

Social issues related to health can seriously affect your personal wellness, and stable housing is an important part of anyone's life. According to the National Health Care for the Homeless Council, 1.5 million Americans are homeless each year, with almost half that number experiencing homelessness on any given night. Through this project, we hope to find out the percentage of homeless patients who seek medical care in Lehigh Valley Health Network's Emergency Departments and ask that you provide some brief answers to the questions below.

Your participation in this survey is entirely voluntary. If you choose not to participate, or take the survey and change your mind, you may ask not to have your information included and it will not affect your care or your relationships with any of your health care team.

ED Site *
- Cedar Crest
- Muhlenberg
- 17th St

Patient Gender *
- Male
- Female
- Other

Patient Age *

Today is *

In the last 60 days, have you:

Changed residences more than twice? *
- Yes
- No

Been concerned about losing your housing? *
- Yes
- No

Lived with a friend or family member you do not normally reside with due to financial hardship? *
- Yes
- No

Been evicted or served an eviction notice? *
- Yes
- No

Slept outside, in an abandoned building, in your car, in an emergency shelter, or in a motel due to financial hardship? *
- Yes
- No

To prevent duplicates:

Have you taken this survey before? *
- Yes
- No

Submit

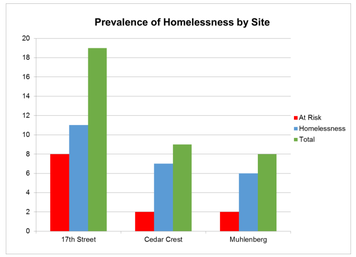
U.S. Department of Housing and Urban Development (HUD) definition of Homelessness:

- An individual who lacks a fixed, regular, and adequate nighttime residence;
- An individual who has a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings, including a car, park, abandoned building, bus or train station, airport, or camping ground;
- An individual or family living in a supervised publicly or privately operated shelter designated to provide temporary living arrangements (including hotels and motels paid for by Federal, State or local government programs for low-income individuals or by charitable organizations, congregate shelters, and transitional housing);
- An individual who resided in a shelter or place not meant for human habitation and who is exiting an institution where he or she temporarily resided;
- An individual or family who will imminently lose their housing [as evidenced by a court order resulting from an eviction action that notifies the individual or family that they must leave within 14 days, having a primary nighttime residence that is a room in a hotel or motel and where they lack the resources necessary to reside there for more than 14 days, or credible evidence indicating that the owner or renter of the housing will not allow the individual or family to stay for more than 14 days, and any oral statement from an individual or family seeking homeless assistance that is found to be credible shall be considered credible evidence for purposes of this clause]; has no subsequent residence identified; and lacks the resources or support networks needed to obtain other permanent housing; and
- Unaccompanied youth and homeless families with children and youth defined as homeless under other Federal statutes who have experienced a long-term period without living independently in permanent housing, have experienced persistent instability as measured by frequent moves over such period, and can be expected to continue in such status for an extended period of time because of chronic disabilities, chronic physical health or mental health conditions, substance addiction, histories of domestic violence or childhood abuse, the presence of a child or youth with a disability, or multiple barriers to employment.

RESULTS

After removing those subjects who had taken the survey before, there were **1044** participants in the analysis. The **overall prevalence of at risk for homelessness was 3% and homelessness was 7%.** Summated, this cohort had a prevalence of homelessness or at risk for homelessness of 10%.

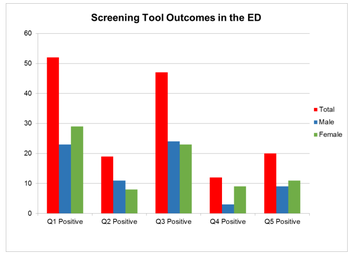
Prevalence by Site



SITE	At Risk N (%)	Homelessness N (%)	Total N(%)
17th	9 (8%)	13 (11%)	22 (19%)
CC	10 (2%)	30 (7%)	40 (9%)
MHC	12 (2%)	28 (6%)	40 (8%)

The prevalence (19%) at 17th street was significantly greater than either CC (9%, p=.002) or Muhlenberg (8%, p=.0001). There was no statistically significant difference between CC and MHC (p=.643)

Screening Tool Outcomes in the ED Setting

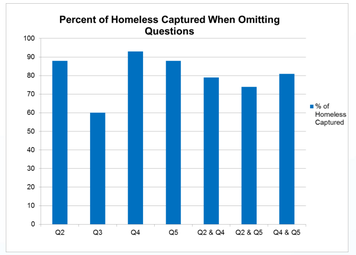


	Total	Male	Female	p -value
Q1 Positive	52	23	29	0.239
Q2 Positive	19	11	8	0.33
Q3 Positive	47	24	23	0.837
Q4 Positive	12	3	9	0.039
Q5 Positive	20	9	11	0.527

Questions 1 and 2 were found to be answered "yes" most frequently. Question 1 considered an individual "at risk for homelessness", whereas any of the other questions resulted in a positive screen for homelessness.

Women who screened positive were more likely to answer question 4 "Been evicted or served an eviction notice?" than men (p-.039). There were no other statistically significant differences in survey question responses.

Percent of Homeless Captured, Omitting Certain Questions



Question(s) Omitted	% of Homeless Captured
Q2	88
Q3	60
Q4	93
Q5	88
Q2 and Q4	79
Q2 and Q5	74
Q4 and Q5	81

In an effort to shorten the survey, it was noted that omitting any one/more of the questions resulted in a decrease in the percent of homelessness captured.

CONCLUSIONS

The prevalence determines the resources that might be allocated when the intervention to help this vulnerable population is determined. This preliminary data has already been used and was pivotal in the allocation of $200,000 from the Pool Trust Foundation to the Street Medicine program. It would appear that resource delivery to the 17th Street site would have a priority based on prevalence.

This survey, while previously validated, had not been evaluated in the ED setting. Evaluating whether the survey could be shortened (saving resources while screening) in the future is important. However, eliminating any question or group of questions resulted in substantial decrease in the capturing of the data. The most likely question that could be removed (Q4) and still capture 93% of those identified by the survey as homeless was the single question that showed a statistically greater likelihood of women answering than men. This would cause a gender-specific selection bias in the ED setting if it were to be removed from the screening tool. Moving forth, it would appear that this screening tool has to be used in its entirety to be the most effective at identifying those who could benefit from the Street Medicine team consultation and evaluation.

The use of a screening tool can be a way to quickly identify homeless individuals and implement appropriate resources through the Street Medicine Team, allowing care in addition to basic medical needs. Knowing the prevalence of homelessness may increase awareness about the need for education on preventing poor outcomes of homeless individuals, considering the high use of the ER by this population [2].

This screening protocol will continue through mid to late 2015, and will repeat in the winter months of 2016 in an attempt to capture seasonal variation. It will be important to identify all at-risk patients to connect them with much needed resources, including the Street Medicine Program. It is hoped that this will be the beginning of a more comprehensive effort that will carry forward and help eliminate health disparities within the community.

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