Lehigh Valley Health Network
LVHN Scholarly Works

USF-LVHN SELECT

Implementing a Screening Tool for Homelessness at LVHN

Timothy Batchelor
Lehigh Valley Health Network, timothy.batchelor@lvhn.org

Kareem Elsayed MS2
USF MCOM- LVHN Campus, kareem.elsayed@lvhn.org

Cristina Calogero
Lehigh Valley Health Network, Cristina.Calogero@lvhn.org

Marna R. Greenberg DO, MPH, FACEP
Lehigh Valley Health Network, marna.greenberg@lvhn.org

Follow this and additional works at: https://scholarlyworks.lvhn.org/select-program

Part of the Medical Education Commons

Published In/Presented At

Batchelor, T., Elsayed, K., Calogero, C., Greenberg, M. (2015, July 16). *Implementing a Screening Tool for Homelessness at LVHN.* Poster presented at The Prologue II Presenation Day University of South Florida, Tampa, FL.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.

SELECT Scholarly Excellence. Leadership Experiences. Collaborative Training.

Experiences for a lifetime. A network for life.™

Implementing a Screening Tool for Homelessness at LVHN

Tim Batchelor, Kareem Elsayed, Cristina Calogero, Marna Greenberg DO MPH

INTRODUCTION

The National Health Care for the Homeless Council states 1.5 million Americans experience homelessness each year with >600,000 on any given night[7]. Approximately one-third of the homeless are families with children, and another 3% represent unaccompanied minors[6]. The Lehigh Valley is not immune to these national trends, and has a population of approximately 10,500 individuals qualifying as "homeless" based on local shelter census data — a figure that is rising.

The correlation between housing status and health outcomes cannot be overstated, as evidenced by an average life expectancy 30 years less within the homeless population as compared to non-homeless individuals, and a mortality rate for the chronically homelessness 4-9 times that of the general population[8]. The need to provide quality primary care for the homeless population is great given the high level of disease burden and healthcare utilization among that population, as well as data that clearly support the critical role of primary care with regard to wellness promotion and disease management[9]. Large numbers of the national homeless population access hospital ER's as a place for care on a regular basis[1,3,5] and, when admitted, stay approximately 4 days longer regardless of diagnosis. In this population the 30 day readmission rate is 10 times that of a citizen living in poverty but with secure housing[2]. The NHCHC estimates that 80% of ER visits by homeless individuals can be prevented by adequate primary care.

A LVHN Street Medicine Team was created, utilizing an integrative, interdisciplinary mobile team approach for the care of homeless individuals and families in the Lehigh Valley. Basic medical and preventive services are provided free of charge to people who are homeless at multiple points of service. Patients identified as homeless during an ER visit or inpatient hospitalization are referred to a Street Medicine Consult Service, which provides safe discharge planning and rapid outpatient follow up to prevent readmissions.

LVHN is currently unable to report actual utilization rates or costs of caring for patients who are homeless due to challenges in documenting homelessness and housing instability, which currently rely heavily on data related to uninsured patients. Thus, annual cost totals become impossible to generate although it is clear that the status quo in caring for this patient demographic is quite unsustainable. In FY2012, each LVHN admission of a self-pay patient cost the hospital an average of $20,000, and each ER visit cost a minimum of $150. With a total of $327 million in uncompensated care provided to the community in 2013, adequate attention to this particular subset of patients could provide significant system wide savings and improved health outcomes[4].

PLAN

Predicting the level of need for community services is always a challenge. A significant component of this uncertainty is the absence of reliable data, due primarily to a lack of standardized screening initiatives integrated into care models.

LVHN hopes to continuously collect valid data related to rates of homelessness within the patient population. This would ultimately allow for projections of utilization patterns and costs of caring for this subgroup, and would provide a springboard for operational planning, funding acquisition, outcomes evaluation, and prediction of future trends.

Considering the longitudinal nature of such a plan, I focused predominantly on measuring the prevalence of homelessness among specific ER sites, with respect to time-of-week. By accurately quantifying where and when homeless patients (or those at-risk for homelessness) seek medical attention, we can begin to assess the needs of the population and improve healthcare access by allocating resources specific to their demand.

DO

A simple survey method for prospectively capturing the needed data was devised. In addition to very basic demographic data, a brief screening tool comprised of five "Yes or No" questions was administered to patients admitted to LVHN Emergency Rooms.

Participation in the survey is voluntary, and participation does not affect a patient's care or their relationships with any of the healthcare team. Consent is implied by survey completion.

All patients who presented to LVHN ED's during scheduled survey times and met inclusion criteria were eligible for enrollment, and were approached.

The inclusion criteria:

- 18 years or older
- Speak English
- Have capacity to answer survey questions
- Not critically ill
- Willing to participate

The screening protocol was uniform throughout all sites, but adapted to the unique layout and patient flow of each setting:

- **Cedar Crest** - a single pod was selected for screening purposes and all patients within it eligible for involvement.
- **17th Street** - all eligible and willing patients within the ED assessed on a given shift.
- **Muhlenberg** - screening rotates between the Rapid Assessment Unit (RAU) and various pods over the course of screening duration.

This allowed for comprehensive sampling of demographics and problem acuity. Patients are typically assigned randomly to different sections of the ED, so by screening all patients in these sections bias was eliminated. Over the course of the screening period, a reasonable collection representing available hours and days of the week had coverage, again combating screening bias.

Survey administration occurred electronically through the use of iPads utilizing a secure online interface, which stores only anonymous and de-identified data. Patients with positive screens are offered a Street Medicine Consult at the healthcare providers' discretion.

STUDY

By Site

Summer ED sampling yielded a total 1044 unique participants for analysis. The overall prevalence of homelessness was 7% and at-risk for homelessness was 3% as reported by the survey. In total, our study sample had a prevalence of homelessness or at-risk for homelessness of 10%.

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 total prevalence at the 17th Street Emergency Department (19%) was significantly greater than both Cedar Crest (9%, p=.002) and Muhlenberg (8%, p=.0001) Emergency Departments. There was no statistically significant difference when comparing Cedar Crest and Muhlenberg (p=.643).

By Time-of-Week

Of the 1044 participants, 72 of 693 screened Monday through Thursday were identified as homeless or at-risk for homelessness (10%). 30 of 351 screened Friday through Sunday were identified as homeless or at-risk for homelessness (8.5%).

Day of Week	17th	CC	MHC
M-Thur	15/72 (20.8%)	29/246 (11.8%)	28/375 (7.5%)
F-Sun	7/42 (16.6%)	11/196 (5.6%)	12/113 (10.6%)

There was no statistically significant difference in presentation between weekdays and weekends of the participants who screened positive for homelessness or at-risk for homelessness (p=.34). There was also no statistically significant difference between presentation on weekday or weekend at 17th Street (p=.653) or Muhlenberg (p=.328). Subjects were more likely to screen positive for homelessness at Cedar Crest on weekdays as compared to weekends (p=.039) however.

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

Appendix 2, Survey

Date: ______________

Site: ________ Age: ______ Gender: ________

Time Survey Completed: ______________

To be explained to the patient:

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

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

Should you have any concerns about the study, you may contact the study investigator and EM ian, Marna Greenberg, DO, at 484-884-7514/7513, or the Research Participant Protection Office at One City Center, 707 Hamilton Street, 8th Floor, Allentown, 18101, telephone: 484-862-3770.

Housing stability screening questions:

In the **last 60 days** have you:

Been concerned about losing your housing?

Yes ☐ No☐

Changed residences more than twice?

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, your car, in an emergency shelter, or in a motel due to financial hardship?

Yes ☐ No☐

NOTE: If a patient answers YES to any of these questions (with the exception of Question 1), they are considered "homeless;" "YES" responses to Question 1 will confer a status of "at risk for homelessness."

If "homeless," ask the ER doctor to consider referring the patient for a Street Medicine Consult.

ersion #1, dated 4/09/15 Page 8 of 8

ACT

In general terms, the prevalence governs distribution of resources when the interventions that would best to help the homeless and at-risk for homelessness populations are determined. Strictly from a health systems perspective, knowing whether the needs of the patient population increase over weekends or are equally distributed throughout the week impacts resource deployment, as does population presentation delineated between sites.

At the present time, continuing data collection and analysis will yield the greatest study benefit. As the number of cohort participants increases, the more accurate project interpretations will become. We ideally wish to breakdown homeless population by location and time-of-week, but currently the sample size is too small to produce a significant result. Current data suggests that resource delivery to the 17th Street site should have priority based on reported prevalence.

The preliminary data from this study has already been used and was pivotal in the allocation of $200,000 from the Pool Trust Foundation to the Street Medicine program (a budget increase of $40,000). The next steps for our project would be to utilize this acquisition in conjunction with a significantly large sample analysis to deploy services and resources where they will yield the highest benefit. Such an endeavor will likely occur after an additional round of data sampling, set to occur during the winter months. If our endeavor proves to accurately identify and meet the population's needs, implementing such a screening tool system-wide would be the most effective, beneficial, and cost-appropriate endgame for this study.

RESOURCES

1. Bharel M., Lin W.C., Zhang J., O'Connell E., Taube R., and Clark R.E. *Health Care Utilization Patterns of Homeless Individuals in Boston: Preparing for Medicaid Expansion Under the Affordable Care Act*. AJPH, 2013; 103(S2): S311-S317.
2. Hwang S.W., Weaver J., Aubry T., and Hoch J.S. *Hospital Costs and Length of Stay Among Homeless Patients Admitted to Medical, Surgical, and Psychiatric Services*. Medical Care, 2011; 49(4)350-354.
3. Kushel M.B., Perry S., Bangsberg D., Clark R., and Moss A.R. *Emergency Department Use Among the Homeless and Marginally Housed: Results from a Community-Based Study*. AJPH. 2002; 92(5): 778- 784
4. *LVHN 2013 Annual Report - Community Benefit FY 2013.* (2013). Retrieved from LVHN Website: http://www.lvhn.org/2013report/downloads/LVHN_Community_Benefits.pdf.
5. Morris D.M., & Gordon J.A. *The Role of the Emergency Department in the Care of Homeless and Disadvantaged Populations*. Emerg Med Clin N Am, 2006; 24: 839-848
6. *Project HOPE*. (2014). Retrieved from Nova Southeastern University College of Osteopathic Medicine Website: http://medicine.nova.edu/epr/project-hope.html
7. *What is the official definition of homelessness?* (2015). Retrieved from NHCHC Website: http://www.nhchc.org/faq/official-definition-homelessness/
8. Wilkins C., & Elliot J. (2010, June). *Background Paper - Chronic Homelessness.* Retrieved from USICH Website: http://usich.gov/resources/uploads/asset_library/BkgrdPap_ChronicHomelessness.pdf
1. World Health Organization (WHO). (2008). *World Health Report 2008 - Primary Health Care (Now More Than Ever).* Retrieved from World Health Organization Website: http://www.who.int/whr/2008/en/

USF HEALTH MORSANI COLLEGE OF MEDICINE UNIVERSITY OF SOUTH FLORIDA | Lehigh Valley Health Network