INCREASING THE OVERALL PREVALENCE OF TUBERCULOSIS SCREENING AMONG THE HOMELESS POPULATION THROUGH EDUCATION AND ADVERTISEMENT

Lauren Darlene Albanese, Jamie Lynne Hodgson, Heather Nicole Reynolds

ABSTRACT

Purpose: The homeless population is among the main groups considered to be at high risk for tuberculosis infection. Among the homeless living in urban areas, 53% of the newly-reported cases of TB have been attributed to new primary infections, compared to only 10% of the reported cases in the general population. Close living quarters of the homeless and non-compliance with recommended treatment has resulted in treatment failure, further spread of preventable illness, and the development of drug-resistant strains. The purpose of the proposed research was to increase tuberculosis screening of the street homeless population in an urban medically underserved area through education and advertisement. The objectives included: increasing awareness of the availability of free tuberculosis screening x-rays offered by a local health department, educating these individuals about the signs and symptoms of tuberculosis, and thus increasing the overall incidence of screening. Therefore, it is hypothesized that there will be a 20% overall increase in TB screening through radiographic evaluation of homeless people in the Pittsburgh area using 2003 and 2005 data available from the ACHD.

Methods: The subject population for the research included the chronic street homeless of an urban area along with some adjective low socioeconomic areas. This research project consisted of educating the homeless on tuberculosis, in order to promote tuberculosis screening at a mobile van, staffed and operated by the local health department. There were two phases of this project, the first was flier distribution and the second was data collection and analysis to compare screening rates. The fliers were constructed at a 5th grade reading level to advertise for each screening and included information regarding the free chest x-ray screening for Tuberculosis by the local health department, which included the date, time, and location (general area and specific site). Also, common symptoms of tuberculosis listed in layman’s terms on the flier included; deep cough, weight loss, coughing up blood or yellow stuff, night sweats, fever, chest pain, can’t eat, and muscle pain. Fliers were distributed one to two days before, or the day of the local health department chest x-ray screening van performed a designated screening session. The number of x-rays were recorded by Allegheny County Health Department (ACHD) and then the investigators received the data, which included the number of chest x-ray screenings at each of the 16 sites for 2003 and 2005. Overall Pittsburgh-area homeless populations for 2003 and 2005 were collected from the Allegheny County Department of Human Services. The data set was analyzed using paired t-tests, z-tests, and Wilcoxon Signed Ranks test.
Results: The results revealed that 261 homeless people received chest x-ray screening in 2005, which is a 51 person increase when compared to x-rays performed in 2003 (n=210). Therefore, there was a 24.3% overall increase in chest x-ray screening among the homeless population, thus surpassing the research goal of an overall increase of 20%.

Conclusions: There have been no attempts in the past to advertise tuberculosis screening to the homeless population in this area through education and flier distribution. However, research has shown that tuberculosis has had resurgence nationally, especially among the homeless population. Increased knowledge of both tuberculosis and available screening is the key to intervention in preventing spread of disease or even death in this population. Increased penetrance via advertisement, along with education has increased TB screening among the homeless population in the Pittsburgh area in 2005. Active advertisement is paramount in increasing chest radiograph screenings in the homeless population.