CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
PP180086

Project Title:
Liver Cancer Prevention among those with Experiences of Homelessness

Award Mechanism:
Evidence-Based Prevention Programs and Services

Principal Investigator:
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Entity:
The University of Texas Health Science Center at Houston

Lay Summary:

Need: Mortality due to liver cancer is increasing at a rate that is faster than any other cancer with an incidence rate that is the second fastest growing of all cancers, increasing 56% from 2003-2012.(5) Among individuals with liver cancer, hepatitis is estimated to be a contributing factor in 65-78% of the cases, making prevention and treatment of Hepatitis B (HBV) and Hepatitis C (HCV) one of the most effective ways to reduce liver cancer.(1) Relative to the national prevalence rate of 1.6-2.1%, studies have found HCV prevalence rates among the homeless range from 22-69%.(24) HBV risk is similarly high with HBV rates among the homeless ranging from 23-40%.(25-28) Although vaccination for HBV and treatment of HCV could reduce the prevalence of HBV/HCV among individuals experiencing homelessness, both treatment and vaccine require individuals to take multiple doses over several months. The transient nature of this population coupled with mental and behavioral health concerns historically made treatment and vaccination challenging for individuals with experiences of homelessness. However, in response to a growing body of evidence, there has been a shift in the approach to homelessness with an increase in Housing First models for individuals experiencing homelessness. Individuals with a history of chronic homelessness and chronic health conditions may be eligible for permanent supportive housing (PSH). In Houston, over 9,000 individuals have been housed in PSH since 2012.(9) Unlike earlier housing models designed to provide temporary shelter to those who met behavioral contingencies (e.g., sobriety), individuals in PSH are able to stay as long as needed. Depending on the resources of the PSH provider, individuals living at PSH are offered support to address behavioral health needs. The stability of this new housing model provides a unique opportunity to deliver HBV vaccination and HCV treatment to individuals with experiences of homelessness, a medically underserved population.

Overall Project Strategy: We will partner with the largest PSH provider in Texas, New Hope Housing (NHH) which has eight sites housing over 1200 persons, and a medical organization, Healthcare for the Homeless (HHH), a federally-qualified health center (FQHC) focused on delivering high-quality integrated healthcare to individuals experiencing homelessness, including those in PSH. We will provide education and risk reduction information to NHH residents, test for HBV and HCV onsite, provide immediate results for HCV and make arrangements to deliver HBV results a week later. An algorithm will determine further steps –viral load will be performed for HCV positive individuals and they will be referred to HHH for evaluation. If determined to be medically indicated, they will be offered treatment using a method based on directly-observed therapy. HBV

negative individuals will be offered vaccine and given risk reduction information. HBsAg positive individuals will be navigated to HHH for evaluation. In order to reduce barriers to care, vaccines will be offered directly at the PSH sites. In addition to providing screening, vaccination and treatment to those in PSH, we will distribute risk reduction materials at organizations serving those with experiences of homelessness. We will evaluate the potential of the program to meet the overall study objectives and reduce societal level financial costs.

Specific Goals: The specific goals of this project are to reduce the risk of hepatocellular carcinoma (HCC) in this high risk population by providing education and risk reduction activities for viral hepatitis, screening for HBV and HCV, immunizing those who are HBV naïve, and treating those who are HCV positive. Innovation: Although PEH have been identified as a high risk population, we are unaware of any programs systematically identifying and treating hepatitis in this population. While current programs navigate PSH residents to FQHCs, we propose an in-house program that should increase participation and adherence by meeting people where they are. There are a limited number of programs that are experimenting with this model, but no known programs specifically address HCC in PSH.

Significance and Impact: This proposal addresses a high priority area of CPRIT, reducing hepatocellular carcinoma risk, in a high risk, medically underserved, priority population. Vaccinating against HBV and achieving sustained HCV viral suppression in this population has an additional benefit other than to the individual. By reducing numbers of infected individuals, potential transmission of viral hepatitis to others is reduced, thus reducing HCC risk in the population overall. There is also a potential for financial benefit. The cost of treatment for HCC per patient is estimated to be $33,000. Given that the vast majority of those experiencing homelessness are uninsured, the development of a program to reduce HCC has potential for societal financial benefits.