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Addressing the Sexual Health of the Homeless: Recommendations for STI Prevention Education for Homeless Women

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Abstract

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By Rachel Rosmarin

Background
The experience of homelessness in its complexity involves psychological, physical and economic constraints that contribute to an increased risk of poor health outcomes, including recurrent sexually transmitted infections (STIs).

Goal
The goal of this special studies project was to identify the best practices for STI education among homeless women to assist clinics who provide free STI services to this population to better address the educational needs of the women they serve.

Methods
In order to achieve this goal this project used an iterative process of information gathering and analysis from 1) the context of the project, clinics that target homeless individuals, 2) a comprehensive review of available literature, and 3) educational practices and methodologies, which guided further investigation and was used to develop recommendations.

Results
There are several factors that influence homeless women's decision-making in regards to high-risk sexual behaviors including physical health issues, both acute and chronic, mental health issues, substance abuse issues, past and recent experiences of sexual or domestic violence (i.e. intimate partner violence), poverty, and the experience of homelessness overall. Additionally, it is the complex interactions of these risk factors that further place homeless women at a greater risk for continued homelessness and partaking in high-risk sexual behaviors.

The literature suggests that the most effective intervention for homeless populations is a coordinated and integrated model of care. Additionally, structured educational sessions have been shown to be effective in reducing the likelihood of engaging in high-risk sexual health behaviors among homeless youth. According to public information, several organizations in the Atlanta area currently provide structured educational sessions to the homeless population in regards to their sexual health. Therefore, collaboration between these organizations is necessary in order to help promote safer sex practices within this population.

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Chapter 1: Introduction

Women can experience serious adverse health outcomes as a result of untreated sexually transmitted infections (STIs). According to the Centers for Disease Control and Prevention (CDC), chlamydial and gonorrheal infection, the two most commonly reported STIs, can cause pelvic inflammatory disease (PID), ectopic pregnancy, and infertility (2007; 2010). Additionally, research has shown that recurrent cases of Chlamydia increase these risks. According to the Georgia Department of Public Health, between 2008 and 2012, approximately 5 percent (3,799) of all persons diagnosed with gonorrhea had a recurrent case of infection within the same year (2013). Homeless women are at an even greater risk of recurrent infection, compared to their stably housed counterparts, due to several vulnerabilities associated with the experience of homelessness.

The experience of homelessness in its complexity involves psychological, physical and economic constraints that contribute to an increased risk of poor health outcomes, including recurrent STIs. Several factors, such as high rates of unprotected sex, engaging in high-risk sexual behaviors with multiple partners, and transactional sex, are associated with homelessness and place women at an increased risk of contracting STIs, including HIV.

For my practicum experience I work as one of the clinic coordinators for Community Advanced Practice Nurses, Inc. Community Advanced Practice Nurses, Inc. (CAPN) is a non-profit organization led by health care professionals who provide free health care services to Atlanta's homeless and economically disadvantaged. Beyond direct patient care, the CAPN model integrates health education, support for mental health care, as well as case management services. CAPN's mission is to "strengthen the lives of persons who are medically underserved and to help interrupt the cycle of poverty" (Community Advanced Practice Nurses, Inc., n.d.).

They primarily focus on providing services to homeless or underserved women, children and youth regardless of whether or not they have proper identification or insurance. These services include but are not limited to physical, mental, reproductive and sexual health care.

As the clinic coordinator, my main responsibilities involve contact with both patients and providers and include patient intake, management of the provider patient load, as well as other administrative tasks. Through my experiences working alongside other members of the CAPN community it was brought to my attention that several women frequently seek testing and treatment for repeated occurrences of sexually transmitted infections (STIs) even though they previously received care free of charge and concurrently received sexual health education during their clinic visit. I decided that for my special studies project I would investigate this issue further so as to provide Community Advanced Practice Nurses with recommendations for how to proceed with addressing this reoccurring problem.

Problem Statement

Homelessness is a significant social problem and of those sheltered, women in families are disproportionately affected. According to the 2010 Annual Homeless Assessment Report (AHAR), between October 2009 and September 2010, among all sheltered persons in families, 77.9% were female and 22.1% were male (U.S. Department of Housing and Urban Development [HUD], 2010). Most recent data suggest that families make up 34% of the total homeless population and 84% of these families have a woman as their head of household (American College of Obstetricians and Gynecologists (ACOG), 2013). To further understand the demographics of this population, it is important to note that a large percentage (53%) of homeless women with children have not completed high school, a factor associated with homelessness and lower health literacy (ACOG, 2013).

Persons who experience homelessness are at a greater risk for many poor health outcomes. For homeless women these include higher mortality rates, mental health problems, substance abuse, victimization and poor birth outcomes, compared to the women in the general population. According to findings from the Homeless Women's Health Study, which in part aimed to identify the barriers and challenges faced by homeless women in obtaining women's health services, factors that influence this population are a lack of priority for their health, a burden of transportation and scheduling, and perceived stigma from health care providers (Gelberg, Browner, Lejano & Arangua, 2004).

Homeless women in Atlanta frequently seek testing and treatment for repeated occurrences of sexually transmitted infections (STIs) despite the sexual health education provided surrounding condom use and the risks associated with a lack thereof at every sexual health related clinic visit (R. Moges, personal communication, September 2014). Homeless individuals, regardless of age, gender, or sexual identity who engage in high-risk sexual behaviors, whether consensual or not, are at greater risk for acquiring STIs (Bharel, Brammer, Centrone, Morrison, Phillips, Rabner & Strehlow, 2013). More specifically, the barriers that limit the protective sexual health behavior decision-making associated with a reduced risk of contracting a STI disproportionately affect single homeless women.

Project Objectives

The primary goal of this special studies project is to identify the best practices for STI education among homeless women to assist clinics who provide STI services to this population to better address the educational needs of the women they serve.

In order to accomplish this goal, the following questions need to be asked:

1. What are the challenges and barriers to the success of sexual health education among homeless populations?
2. What STI educational methods are currently in use by organizations that target homeless populations?
3. Considering these challenges and barriers, what are effective STI prevention education methods for homeless women?

Significance

Identification of the vulnerabilities associated with the experience of homelessness for women allows for further understanding of the complex nature and transiency of the population. In addition, knowledge of homeless women's vulnerabilities provides insight into the mechanisms that attribute to their behaviors and moreover allows for the break down of these complex mechanisms in order to implement effective behavior change interventions and methodologies.

Dissemination of these findings will inform organizations that provide free STI services about the needs of their target population. Furthermore, it will allow these organizations to implement STI education that will in turn help to decrease the prevalence of STIs among homeless women. Additionally, this will help to address the gap that currently exists between homeless women and their stably housed counterparts.

Chapter 2. Comprehensive Review of the Literature

This literature review sought to understand and evaluate the relationship between homelessness and risk factors associated with sexually transmitted infections. Additionally, it attempted to analyze the existing evidence on interventions with the objective of improving the sexual health decision-making of homeless women.

Research has shown that homeless persons face a wide variety of barriers to receiving appropriate health related services. Homeless persons have higher rates of physical and/or mental illness, substance abuse and early mortality compared to non-homeless counterparts. For those experiencing homelessness, health care needs are a lower priority when compared to the more immediate needs of food and shelter (Kushel, Vittinghoff & Haas, 2001). However, when provided the opportunity, homeless persons are willing to seek out health care services for more high priority medical conditions (Kushel, Vittinghoff & Haas, 2001). In contrast, several vulnerabilities associated with the experience of homelessness further increase homeless individuals' risk of high-risk health decision-making, including lower priority given to health care needs and health promoting behaviors overall. This variability in the prioritization of their health promotion decision-making and health care needs creates an environment where fidelity to treatment can often be a low priority and results in poor health outcomes.

Definition of Homelessness

Defining homelessness is important for organizations that provide services to this population, as well as their funders. Federal and state government agencies provide funding to community-based organizations that provide primary health care services to populations that are considered medically underserved, including individuals and families experiencing homelessness. Therefore, defining populations is necessary in order to allow these organizations

to provide the funders with data that in turn ensure funding. Homelessness, due to its transient nature, is inherently difficult to measure. For example, one definition, states that a homeless individual is "an individual who lacks housing...including an individual whose primary residence during the night is a supervised public or private facility that provides temporary living accommodations and an individual who is a resident in transitional housing" (Health Resources and Services Administration [HRSA], Bureau of Primary Health Care, 2011). Some organizations use this definition to describe an individual who is experiencing literal homelessness. Other definitions differentiate between literal homelessness and imminent homelessness or imminent risk, the expectation that an individual will experience homelessness in the immediate future (Toro, 2007).

Prevalence of Homelessness

In order to better understand the scope of the problem of homelessness, it is important to look at its prevalence, at the national, state and local level. According to recent data from the U.S. Department of Housing and Urban Development (HUD), over 578,000 people were homeless on a given night in 2014; sixty nine percent of homeless persons were located in residential programs for the homeless and the other 31 percent were found in unsheltered locations including on the streets, abandoned buildings, vehicles or parks (U.S. Department of Housing and Urban Development [HUD], 2014). Additionally, more than 84,000 individuals experiencing homelessness were reported as chronically homeless, which HUD defines as homeless individuals with a disabling condition that have either been continuously homeless for a year or more or have experienced at least four episodes of homelessness in the past three years (U.S. Department of Housing and Urban Development [HUD], 2014).

In 2010, HUD's most recent demographic data for homelessness states that among the estimated 1.59 million sheltered homeless persons for that year, the majority reported were male (62 percent) compared to 38 percent female. In contrast, when stratifying by household type, the majority of homeless women were in families (78 percent), while the majority of men were reported as homeless individuals (71 percent). Additionally, data by race and ethnicity shows that among the same population, approximately 42 percent, 37 percent and 10 percent identified themselves as--white, non-Hispanic; Black/African-American; and white, Hispanic; respectively. Five percent identified with other single races and 7 percent multiple races (U.S. Department of Housing and Urban Development [HUD], 2010).

State-specific data also show that in the state of Georgia, the location of this project, approximately 16,521 people were homeless on a given night in 2014 with over 50 percent (8,307 people) being unsheltered (U.S. Department of Housing and Urban Development [HUD], 2014). According to this same AHAR report (2014), the state of Georgia is one of the five states in the U.S. which comprise approximately half of all homeless individuals: California (90,765), New York (32,643), Florida (28,730), Texas (19,177), and Georgia (12,403).

There are approximately 4,033 homeless individuals within the Atlanta metropolitan area (Metro Atlanta Tri Jurisdictional Collaborative Homeless Census, 2013). Additionally, according to the census data collected, Atlanta's homeless population consisted of approximately 1,100 individuals (357 families) in 2013 (Metro Atlanta Tri Jurisdictional Collaborative Homeless Census, 2013). Of these individuals, 331 females were reported as head of their household and represented 30% (or 331 individuals) of the homeless population (Metro Atlanta Tri Jurisdictional Collaborative Homeless Census, 2013).

Prevalence of STIs/HIV

Among men and women in the United States, there were approximately 110 million prevalent sexually transmitted infections (STIs) in 2008 with over 20% of these among the 15 to 24 year old age group (Satterwhite et al., 2013). At the same time, there were an estimated 19.7 million incident cases of STIs with men and women aged 15 to 24 years old composing 50% of cases (Satterwhite et al., 2013).

The Southeastern United States has consistently had the highest burden of STIs compared to the rest of country. In 2013, CDC STD surveillance data showed that the southern region of the United States had the highest rate of gonorrhea with 128.6 cases per 100,000 population compared to the Midwest (108.6), Northeast (85.5), and western region (83.5) (CDC, 2014). Similarly, according to the same CDC report, the highest rates of reported chlamydia were highest in the South (485.1 per 100,000 population), compare to 439.0, 424.9, and 403.3 cases per 100,000 persons in the Midwest, West, and Northeast, respectively (CDC, 2014). Chlamydia and gonorrhea were the most commonly reportable STIs in Georgia in 2013, with 51,070 cases of chlamydia and 14,252 cases of gonorrhea reported (CDC, 2014).

For both chlamydia and gonorrhea African-Americans are disproportionately affected. According to estimates, in 2012 the rate of chlamydia among white non-Hispanic females in Georgia was 167.1 per 100,000 persons; in contrast, the rate among African-American non-Hispanic females was 1,066.3 per 100,000 persons (Georgia Department of Public Health, 2013). Similarly, in that same year among Georgia females, the rate of gonorrhea was 24.6 per 100,000 population for white non-Hispanics and 297.3 per 100,000 persons for African-American non-Hispanics (Georgia Department of Public Health, 2013).

The CDC estimates that currently more than 1.2 million people in the United States are living with HIV and approximately 14 percent are unaware that they are infected with the virus (Hall et al., 2015). In 2012, the total number of persons living with HIV in the state of Georgia was over 50,000 with 45 percent of those living with HIV having HIV and the remaining 55% having AIDS (Georgia Department of Public Health, 2013). Almost two-thirds of those living with HIV infection in Georgia reside in the Atlanta Metropolitan area (Georgia Department of Public Health, 2013). Additionally, the highest numbers and rates of the population living with HIV infection and AIDS were in the Fulton and DeKalb health districts, of the Metropolitan Atlanta area (Georgia Department of Public Health, 2013).

Vulnerabilities Associated with Homelessness

The one vulnerability that all homeless persons share is poverty. Additionally, homeless individuals and families experience certain vulnerabilities such as disabling or chronic medical conditions, mental illness, substance abuse issues, violence, and previous incarceration. The co-existence of these vulnerabilities further places homeless persons at a greater risk of experiencing the high-risk behaviors associated with homelessness. This creates a continuous cycle of homelessness and co-existing vulnerabilities that is difficult to break.

Health and Homelessness

Several studies indicate that the prevalence of poor health outcomes disproportionately affect the homeless population. Homeless individuals can have a wide range of acute and chronic illnesses, and many of their healthcare needs are unmet (Baggett, O'Connell, Singer, & Rigotti, 2010). According to the literature, the most common physical health concerns among those who are homeless are respiratory tract infections, physical trauma, genitourinary infections (especially among females), hypertension, skin or ear infections, gastrointestinal issues,

musculoskeletal problems, and dental and vision problems (Centers for Substance Abuse Treatment, 2013).

Researchers have shown that mortality is significantly increased among homeless people, with greater risk most evident among adolescents, young adults and in several cases, women (Hwang & Burns, 2014). Homelessness confers increased risk of mortality through a variety of mechanisms. Many studies have aimed to identify the causes of death among the homeless population, finding that increased mortality is due to infections, such as HIV and tuberculosis, ischemic heart disease, substance abuse or misuse, and external factors including unintentional injuries, suicides, homicides, and poisoning from misuse of substances (Hwang & Burns, 2014).

Much of the excess mortality among the homeless can be explained by greater exposure to risk factors including poor nutrition, cold exposure, poor skin integrity, low immunity, high risk sexual behaviors, drug and alcohol use, and mental health disorders, which often coexist (Speirs, Johnson, & Jirojwong, 2013; Hwang & Burns, 2014). Homeless individuals are also more likely to receive worse medical care, have less fidelity to prescribed care, and are often less informed about measures for prevention and types of treatment options that are available for their health concerns (Centers for Substance Abuse Treatment, 2013). This can lead to increased risk of infectious diseases, increased severity of medical conditions and worse health outcomes (Centers for Substance Abuse Treatment, 2013).

Mental Health/Substance Abuse

Within the homeless population different subgroups experience different health problems. For example, although the prevalence of substance abuse is lower for homeless single women compared to their homeless male counterparts, more homeless women experience major depression (Cheung & Hwang, 2004).

Homeless persons, especially those individuals and families experiencing chronic homelessness, are disproportionately affected by serious mental illness. According to Chambers et al., "the relationship between mental health and homelessness is complex and multidirectional; mental health problems can function as both a cause and a result of homelessness" (Chambers et. al., 2014). Similar to larger homeless population, the primary causes of homelessness among women with dependent children are poverty and lack of affordable housing. Additionally, according to Goodman et al., the coexistence of the adverse effects of poverty, experiencing violence and decreasing mental health contribute to the cycle of homelessness (Goodman et al., 2009). In particular, homeless women in families additionally lack social support and other key protective factors, which thereby reduce their ability as a parent to provide a nurturing and protective environment for their children (Chambers et. al., 2014). Furthermore, this leads to the deprivation of homeless mother's mental wellbeing, such as feelings of depression or anxiety (Chambers et. al., 2014).

Violence

Intimate partner violence (IPV) is highly prevalent among women experiencing homelessness, with prevalence rates between 30 and 90 percent (Vijayaraghavan et al., 2012). Research shows that women who experience IPV report higher rates of mental health issues, such as depression, post-traumatic stress disorder, and substance abuse. Women experiencing IPV are also more likely to participate in high-risk sexual behaviors leading to increased rates of sexually transmitted infections (Vijayaraghavan et al., 2012). Additionally, women who experience violence have increased rates of health care use, and also report barriers to care, resulting in increased use of the emergency department (Vijayaraghavan et al., 2012).

Homeless women who experience violence usually have a history of experiencing violence prior to their current situation. Many homeless women report having experienced

emotional, physical, and/or sexual abuse during their childhood, which is also linked to other vulnerabilities such as chronic homelessness, mental health and substance abuse issues (Kennedy et al., 2010). Studies have also shown that due to the avoidant coping strategies stemming from these past experiences of violence, homeless women tend to have difficulty developing healthy relationships and also develop psychological disorders, which promote further victimization (Kennedy et al., 2010).

Sexual Health Behaviors and Homelessness

A lack of housing can affect sexual risk behaviors through several pathways including trading sex for shelter or decreased access to contraception and other modes of protection. Also, research suggests that housing status influences the structure of a person's social network, which determine the social norms and values that influence an individuals' risk behaviors. Sexual partnerships and relationships can also be affected by a person's housing status. Homelessness is associated with increased intimate partner violence which can lead to high risk sexual behaviors since forced sex or the threat of violence may prevent individuals from negotiating safe sex practices (e.g. condom use) or refusing sexual encounters with their partner (Adimora & Schoenbach, 2013).

Among Homeless Youth

Homeless youth are at a significantly increased risk of a wide range of negative health outcomes, not unlike the rest of the homeless population. Street-involved youth, more specifically, are disproportionately affected by sexually transmitted infections (STIs), including HIV and other blood-borne diseases (i.e. hepatitis B and C) (Bolvin et al., 2005). Cross-sectional data of street-based homeless youth in the U.S. suggest the prevalence of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) varies between 4.2 and 18% and 0.9 and 4.2%, respectively (Marsall, 2008). Street-based youth also report higher rates of sexual activity and

are more likely to engage in more high-risk sexual behaviors compared to their non-homeless counterparts. Between 84 and 98% report being sexually active, and among those, there is common reporting of inconsistent condom use (Marshall, 2008).

Among Homeless Women

Women who are homeless have complex physical and psychosocial needs (Speirs, Johnson & Jirojwong, 2013) and therefore, have different behavioral health issues and treatment needs than homeless men (Centers for Substance Abuse Treatment, 2013). Compared to their stably housed counterparts, homeless women face more psychiatric, physical and emotional issues and are at a greater risk of sexual abuse.

In a study conducted in Los Angeles, among a sample of homeless women, those of unsheltered status, defined as 15 or more nights of the prior 30 nights on the streets, had an increased risk of physical assault, poor physical and/or mental health status, increased alcohol and substance use, a decreased likelihood of receiving medical services, and increased likelihood of engaging in high-risk sexual risk behaviors compared to homeless women with their primary residence in a shelter (Nyamathi, Leake & Gelberg, 2000). Unsheltered homeless women, both among those women who are substance-using and among those women with poor mental health group, had greater than 1.5 times the odds of having a recent sexually transmitted infection compared to those living in shelters (Nyamathi, Leake & Gelberg, 2000).

Health Literacy

Literacy, in addition to its' connection with general population health outcomes, is a vulnerability associated with the homeless population and their access and utilization of health care services. Health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (US Department of Health and Human Services [DHHS], 2010).

This capacity requires a skillset that includes: 1) print literacy, the ability to read and write prose and to find and interpret the information on a document; 2) numeracy, the ability to use quantitative information for such tasks like adhering to treatment regimens; 3) oral literacy, the ability to speak and listen effectively (Berkman, Sheridan, Donahue, Kalpern & Crotty, 2011).

According to a National Assessment of Adult Literacy (NAAL), in 2003 a majority of adults in the U.S. have an intermediate health literacy level (53%) (Gutierrez, Kindratt, Pagels, Foster & Gimpel, 2014). The results from the 2003 NAAL also found that only 12% of adults in the U.S. have a proficient level of health literacy, and 36% have limited health literacy, defined as basic health literacy or below (Gutierrez, Kindratt, Pagels, Foster & Gimpel, 2014). Research has shown that rates of limited health literacy are higher among certain population subgroups (e.g. the elderly, minorities, persons with lower income levels, and those who have not completed high school) (Berkman, Sheridan, Donahue, Kalpern & Crotty, 2011). These groups therefore, tend to have greater difficulty understanding commonly used medical terminologies and appropriate medication regimens. This leads to poor control of their medical conditions and furthermore increases their risk for additional poor health outcomes. In addition to poor health outcomes, limited health literacy has been associated with greater use of emergency departments, longer hospital stays, and increased health care costs (Fetter, 2009).

Existing Interventions for the Homeless

In the United States, there are 208 sites at which homeless individuals can seek care and treatment from federally funded healthcare programs. These sites use active outreach to the homeless population, integrate case management, collaborate closely with community organizations that also provide services to homeless individuals, and receive guidance from community advisory boards (Hwang & Burns, 2014).

Hwang et al. conducted a systematic review of the literature with the primary goal to summarize the evidence for existing interventions that aim to improve the health of the homeless population (Hwang et al., 2005). Overall, the findings found from this analysis suggested that the most effective interventions provided coordinated treatment and support programs that were tailored to the specific needs of the homeless populations (e.g. mental health and/or substance abuse programs) (Hwang et al., 2005).

Other studies, not only aim to research interventions that positively impact the health outcome of homeless persons, but also focus on the effect of these interventions on individuals housing status. One review identified studies that found that structured educational modules were effective in reducing the high-risk behaviors in homeless youth living with HIV infection (Fitzpatrick-Lewis et al., 2011). These findings are consistent with data reported which found that attending educational program sessions aimed at reducing high risk sexual behaviors for HIV was associated with a decrease in the HIV-associated sexual risk behaviors of homeless youths when compared to standard care (Hwang et al., 2005). The intervention consisted of a small-group HIV-risk reduction program delivered over 20 educational sessions, which were designed to increase knowledge and develop social skills to promote safe sexual health behaviors (Hwang et al., 2005). Those given the intervention, when compared to the control group receiving only general counseling services that didn’t specifically address HIV prevention, had an increased likelihood of consistent condom use and other preventative health behaviors (Hwang et al., 2005).

In contrast, two other studies were also found, both of which reported that educational interventions had no effect on reducing the HIV risk behaviors among homeless women (Hwang et al., 2005). Specifically, in one study participants received culturally sensitive small-group

educational sessions over a period of 8 weeks; some women received only the education program, while others received either additional sessions dealing with coping strategies, or partners were included in the sessions, or partners were included plus additional sessions on coping strategies, for women and their partners (Hwang et al., 2005). Results showed that an educational program with additional coping strategy sessions were associated with reduced use of non-injection drugs, but there was no effect on mental health, injected drug use, or high risk sexual behaviors (Hwang et al., 2005).

Currently, there is a gap in the research which examines the effectiveness of interventions that specifically address the sexual health needs of homeless persons, especially homeless women, with the exception of research that identifies programs for reducing HIV-associated risk behaviors or programs for homeless individuals living with HIV/AIDS.

Summary

There are several factors that influence homeless women's decision-making in regards to high-risk sexual behaviors. Such vulnerabilities include physical health issues, both acute and chronic, mental health issues, issues with substance abuse and misuse, past and recent experiences of sexual or domestic violence (i.e. intimate partner violence), poverty, and the experience of homelessness overall. Additionally, it is the complex interactions of these risk factors that further place homeless women at a greater risk for continued homelessness and partaking in high-risk sexual behaviors. Consequently, this increases their risk for poor sexual health outcomes. Health literacy is also associated with poor health outcomes, and limited health literacy is linked to lower income individuals, such as those experiencing homelessness.

Several studies have looked at the effectiveness of interventions that target homeless populations. Many look at the effectiveness of interventions for mental health, substance abuse,

mental health and substance abuse, or HIV. With regards to the research surrounding HIV interventions, the majority of effective interventions target homeless youth, while the intervention targeted towards homeless women showed no effect.

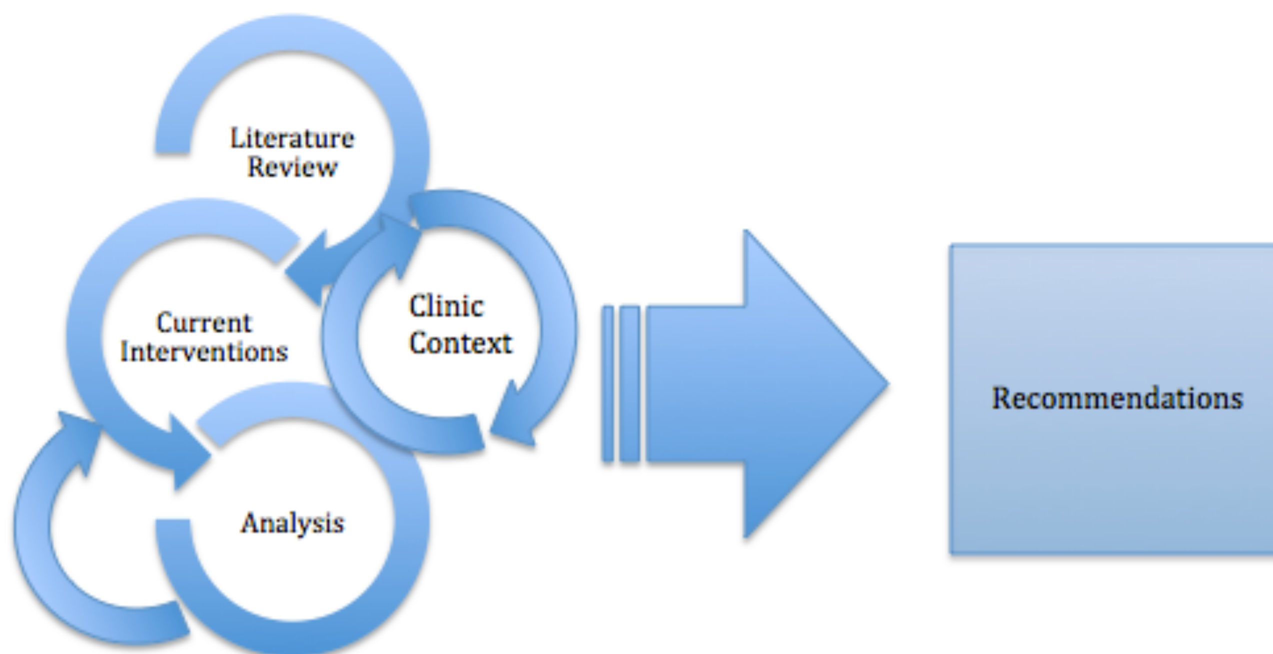
Findings from the literature, on vulnerabilities associated with homelessness and the effectiveness of interventions for homeless persons will be used to assess current interventions and to make recommendations based on this assessment.

Chapter 3. Project Content

Methods

The objective of this special studies project was to inform clinics that provide STI services to vulnerable women on the best practices for how to educate their clients about STI prevention and treatment. This was accomplished by an iterative process of information gathering and analysis from 1) the context of the project, clinics that target homeless individuals, 2) a comprehensive review of available literature, and 3) the educational practices and methodologies, which guided further investigation and was used to develop recommendations, as shown in the figure below.

Figure 1. Project Methodology



<u>Clinic Context</u>

In the United States, there are approximately 1,200 free clinics that serve 6 million patients yearly (National Association of Free and Charitable Clinics, n.d.), in addition to the 208 federally funded healthcare program sites. According to the United Way of Greater Atlanta,

within the state of Georgia, there are 100 free and reduced-fee clinics that are serving the uninsured / economically disadvantaged (n.d.). According to the National Association of Free and Charitable Clinics (NAFC, n.d.), free clinics can be defined as health care organizations that use a volunteer or staff model to provide a full range of medical, dental, pharmaceutical, vision and/or mental health services to individuals who are economically disadvantaged. Such organizations are exempt from paying taxes (NAFC, n.d.).

Over 790,000 people in the Atlanta area are not covered by any form of health insurance (United Way of Greater Atlanta, n.d.), and the majority live at or below the poverty level. Additionally, the use of emergency rooms by the uninsured of Atlanta increases the total cost of care by approximately $830 million each year for those living in the metro Atlanta area (United Way of Greater Atlanta, n.d.). As a safety net for health care visits, free clinics help to reduce the use of emergency departments. These clinics allow for the uninsured to receive preventative care services, subsequently reducing overall healthcare costs.

Community Advanced Practice Nurses (CAPN) is among these clinics, utilizing a nurse practitioner model of healthcare delivery. The services provided are holistic, individualized and client driven. The majority of CAPN's patients are homeless, African American females, children and youth. In 2013, CAPN served over 3,200 clients 67 percent of which were female compared to male clients representing only 33 percent (R. Moges, personal communication, February 2015). Additionally, in 2013, 82 percent of clients identified as Black/African American (R. Moges, personal communication, February 2015). CAPN's clients, who, due to circumstances such as domestic violence, unemployment, substance abuse, and chronic physical or mental disabilities, have been uprooted from their stable lives. These circumstances are among the various barriers that their clients face when trying to obtain healthcare services and

are also among the various vulnerabilities that place this population at greater risk for poorer health outcomes overall. Therefore, CAPN addresses these barriers by providing free health services at nine outreach sites (i.e. the main clinic is located at the Our House and Genesis shelter in Atlanta's Old Fourth Ward, the primary mental health outreach site is located at Grace Methodist Church, additional outreach is located at the Atlanta Women's Day Shelter, the Atlanta Children's Shelter, Nicholas House, Mary Hall Freedom House, Stand Up for Kids, Our House Children's Shelter and Covenant House) across the Atlanta metropolitan area, regardless of whether or not patients have the proper identification or insurance.

Literature Review

The primary goal of the literature review was to understand and assess the relationship between homelessness and risk factors associated with sexually transmitted infections and to analyze the existing evidence on interventions that aim to improve sexual health related outcomes for persons experiencing homelessness.

Relevant research concerning homelessness and risk of sexually transmitted diseases for women was identified through searching public health related databases such as PubMed, Ovid, and Google Scholar for primary literature. In order to be sure all relevant literature was included broad search terms were used such as "homeless AND health" or "women AND homeless". Articles were initially identified based on titles and abstract content. Selection criteria included discussion of vulnerable populations (i.e. the homeless) in the U.S. or Canada, sexual risk behaviors and STI rates among the homeless, and interventions related to addressing health among homeless populations. Literature with key content associated with the context of the research question included general information about specific subgroups within the homeless population (e.g. youth and women), vulnerabilities associated with homelessness and high-risk sexual behavior, and specific health education interventions that target this type of population.

Once specific vulnerabilities and barriers were identified, more specific literature searches were performed to further develop a more in depth understanding of each individual topic related to the project objectives.

Research related to interventions and models of care surrounding sexual health for homeless populations were selected based on the project's objective to understand the existing educational methods currently in use by organizations that provide services to the homeless and economically disadvantaged. Literature with specific information on methodologies pertaining to sexual health education was included.

Health Literacy Criteria

Literacy level of education materials were assessed using both a readability formula and also the Suitability Assessment of Materials (SAM) instrument to cover suitability factors that are otherwise not included in the readability formula (i.e. graphics, layout, and culture of the intended audience) (Doak, Doak & Root, 1996).

Health Education Methods/Practices

Educational materials and protocols available were obtained from Community Advanced Practice Nurses, Inc. (CAPN) in Atlanta, Georgia. Currently used health education materials by the nurses at the clinic and all the information disseminated on sexually transmitted infections and overall sexual health was requested. Specific terminology from these educational materials and methods were assessed based on the issues and vulnerabilities found during the literature review. For example, health literacy is considered a risk factor for lower-income and homeless populations and therefore, the fact sheets that CAPN uses for providing STI information were analyzed based on the health literacy needs of homeless women. Also, the protocol for education provided was assessed based on the effective interventions found in the literature, in

addition to the issues and vulnerabilities associated with the experience of homelessness for homeless women.

Other organizational resources that provide sexual health services to homeless women, more specifically organizations providing STD treatment and/or education, were obtained from communications with CAPN staff and from online searches. In addition, literature and online searches were performed in order to obtain publicly available educational methodologies and practices that are used at other organizations that target the homeless population, both in Atlanta, Georgia, as well as the United States overall.

Synthesis/Analysis

Information from the literature was synthesized and/or assessed based on the project's purpose and objectives. Based on this analysis of the literature findings, recommendations were made for organizations (i.e. Community Advanced Practice Nurses, Inc.) that provide health education programs and other health-related services to vulnerable populations, specifically homeless women, about how these programs can best address the gaps in knowledge and fidelity to lower risk behaviors for these women. These recommendations were documented in the form of a deliverable for the organization (Appendix). This deliverable provided a brief summary of the literature and the associated findings, as well as bulleted recommendations, and suggested resources for where to access more information on effective health education methodologies and materials.

Ethical Considerations

Since this project consisted of providing recommendations based on the literature to the host organization, Community Advanced Practice Nurses, Inc., and no human subjects were involved, it was not considered human subject research, and Emory IRB approval was not required.

Results

Objective 1: Barriers and Challenges

Key vulnerabilities which influence adherence to health education and treatment protocols are individual and structural risk factors associated with the experience of homelessness (i.e. physical health issues, mental health issues, and high risk sexual behaviors). These factors are usually co-existing and also influence each other, which poses and even greater challenge to homeless persons.

Barriers and challenges are influenced by subgroup within the homeless population. Youth, LGBT, substance users, and women, while some of their vulnerabilities are similar, how they interact differs between subgroups thereby influencing each group's level of risk. For example, data shows that youth, especially runaway or street-based youth, show inconsistent condom use and other high-risk sexual behaviors. On the other hand, the prevalence of mental health issues is not as significant within this population while psychological issues are common amongst homeless women. However, these higher risk sexual behaviors are still present among homeless women just within a different context.

Figure 2. Summary of Vulnerabilities

Objective 2: Effective Interventions in the Literature

Overall, research shows that the most effective method of care for homeless populations is a coordinated care model tailored specifically to the needs of each individual subgroup. This involves collaboration between different organizations and clinicians to identify needs of the population and to address them accordingly. For example, in a systematic review of the literature of effective interventions for the homeless, it was found that case management in conjunction with outreach support or drop-in center services showed an improvement in the participants' health outcomes (Fitzpatrick-Lewis et al., 2011).

Also, while educational sessions that promoted behaviors to reduce HIV risk among homeless and runaway youths were effective, an educational program developed for homeless women, which used a different programmatic design, was found to have no affect on the sexual health behaviors of the women involved.

Objective 3: Current Interventions

STI fact sheets from the Centers for Disease Control and Prevention (CDC) are used by Community Advanced Practice Nurses in tandem with an in person clinical consultation when providing sexual health information and education to their clients and an informational handout is requested (R. Moges, personal communication, September 2014). The most basic fact sheet provides information on what the STI itself is, how it is spread, how one can reduce their risk of contracting an infection, what factors put someone at risk, symptoms, and information surrounding treatment and curability (CDC, 2014). More detailed fact sheets included statistics within the same realms of knowledge. CAPN utilizes the guidelines set by the CDC when providing STD treatment and education to their clients. According to the CDC's 2015 Sexually Transmitted Diseases Guidelines, there are five main strategies to addressing STD prevention

and control in a clinical setting (Workowski & Bolan, 2015). These strategies are as follows: 1) "accurate risk assessment and education and counseling of persons at risk on ways to avoid STDs through changes in sexual behaviors and use of recommended prevention services" (Workowski & Bolan, 2015); 2) vaccination prior to exposure for persons at risk; 3) STD screening to identify both individuals who are asymptomatically infected and those with symptoms; 4) "effective diagnosis, treatment, counseling and follow up of infected persons; and [5)] evaluation, treatment, and counseling of sex partners of persons who are infected with and STD" (Workowski & Bolan, 2015). CAPN's nursing staff employs these guidelines when a client is seen for STI screening and possible treatment.

Communications with CAPN staff identified Planned Parenthood as an organization utilized by the homeless for sexual health services. In particular, Planned Parenthood's programs provide sexual health education through the use of group educational sessions and peer educators. However, these group sessions mainly focus on teens and their parents as opposed to homeless women and their sexual health educational needs (Planned Parenthood Southeast, Inc., n.d.). For example, the In School Health Education Program (INSHEP) includes interactive sessions about such topics as self-esteem, decision-making, pregnancy and STD prevention for middle school and high school students (Planned Parenthood Southeast, Inc., n.d.).

Another organization identified through online searches is SisterLove, Inc., a non-profit focused on providing sexual health prevention education and outreach services to African American women in the Atlanta area. SisterLove, Inc. provides the Healthy Love Workshop (HLW), as part of their Health Education, Advocacy and Prevention Program (HEAP), which is a group-level STD/HIV prevention intervention and includes bringing interactive workshops that last between two to three hours to settings per the participants' request via "house calls", creating

a more safe and engaging environment to discuss the obstacles and barriers to practicing safer sex (SisterLove, Inc., n.d.). More specifically, these "house calls" give participants the ability to remain in a setting that is familiar and comfortable thereby allowing them to be more open and engaged when discussing topics and issues that are not as familiar to them (SisterLove, Inc., n.d.). The topics covered during a single workshop include: 1) the modes of HIV transmission, 2) effective risk reduction strategies for contracting or transmitting HIV or other STDs, 3) building capacity for self-assessment of sexual health behavior risk and using safer sex practices; and 4) "how to develop an awareness of personal, community and social attitudes, beliefs and norms that influence women's relationships, sexual behavior, and decision-making" (SisterLove, Inc., n.d.).

Mercy Care, a patient-centered medical home (PCMH) providing health care to the poor and marginalized, is a Federally Qualified Health Center and is a member of Saint Joseph's Health System and Trinity Health. Mercy Care provides primary care services, pediatric services, dental and vision care, health education, behavioral health care, and HIV integrated treatment (Mercy Care, n.d.). They also collaborate with several partners that serve as referral sources for clients when additional services are determined to be necessary. Additionally, Mercy Care is a member of the Atlanta Safety Net collaborative, which helps to provide coordinated care for indigent patients, the Atlanta Regional Collaborative for Health Improvement, the Georgia Prisoner Reentry Initiative, the Mayor's Unsheltered No More Initiative, and the Atlanta Regional Commission on Homelessness (Mercy Care, n.d.). While the overall mission of Mercy care is to provide care to those most in need, different programs focus on different vulnerable populations (e.g. the Community Homeless Outreach Program (CHOP) targets homeless individuals who live on the street and the Family Health Promotion programs target the

immigrant Latino community) (Mercy Care, n.d.). In terms of their methodology, similar to other clinics, Mercy Care utilizes group educational sessions as well as in person consultation for the health education of their patients. In particular, the clinic's Health Promotion and Education program includes community classes, group classes and individual appointments thereby empowering patients to improve their wellness and reduce their risk of poor health outcomes (Mercy Care, n.d.).

Several other organizations that provide STI services to women, specifically homeless women, in the Atlanta area were identified through online searches (i.e. Atlanta Women/Children's Day Shelter, Jefferson Place Transition House, Mary Hall Freedom House), some of which overlap with CAPN's outreach sites. However, no information on their specific sexual health education methodologies was found.

Chapter 4. Discussion

Understanding the vulnerabilities associated with homelessness is necessary in order to effectively address their health and educational needs. The individual and structural barriers associated with homelessness need to be accounted for when developing models of care. The systematic disparities within society itself influence the individual factors that put persons at risk for homelessness. Additionally the experience of homelessness in itself continues to place those at risk for chronic homelessness due to lack of priority place on education or physical health and well being; rather homeless individuals focus on the immediate needs of food and shelter, an idea referred to as 'survival mode'.

Current Interventions and Health Literacy

As shown by the literature, limited health literacy is associated with poor health outcomes. Therefore, in regards to educational materials for vulnerable populations, such as the homeless, it is important that the documents provided to these individuals is at a level of literacy which they can comprehend and use effectively. The SAM instrument can be used to analyze these educational materials by looking at their suitability in terms of the "content, literacy demand, graphics, layout, learning stimulation/motivation, and culture of the intended audience" (Doak, Doak & Root, 1996).

For the purpose of this project the most basic CDC fact sheets were assessed based on a readability score and the suitability factors for the health literacy needs of homeless populations, specifically homeless women. Using the calculations provided by Doak, Doak & Root, the readability of the fact sheet is at a 10th grade reading level. In contrast, a majority of homeless individuals are at a 3rd grade reading level. Additionally, when looking at these fact sheets, literacy levels do not appear to be addressed when considering the "culture of the intended audience" (Doak, Doak & Root, 1996) (i.e. the transiency of the homeless). For example on the

fact sheet for Chlamydia, to address the question of how to reduce risk of contracting the infection, the response is "using latex condoms the right way every time you have sex" (CDC, 2014). This terminology lacks definition and for someone who is unfamiliar with safer sexual health practices and has not received this type of information through sexual education, this statement could be considered difficult to comprehend. The next logical question would be 'what does one mean by the right way?' This is an issue for consideration when understanding the educational needs of homeless women. Additionally, to whom would the reader ask this next logical question if they are no longer in a setting where a health care professional is present to assist them. This reinforces the issue of a lack of support, more specifically lacking the support of those with sexual health knowledge. A lack of support is considered a challenge or barrier for persons experiencing homelessness.

In another example, a response to the question of how to reduce risk on the Chlamydia fact sheet is stated as follows: "Being in a long-term mutually monogamous relationship with a partner who has been tested and has negative STD test results" (CDC, 2014). Again, definitions are needed for several terminologies that are used due to the length of the words themselves, which makes them difficult to not only define but pronounce.

The fact sheets themselves are also written with a plethora of information on the page. This can be overwhelming for someone who is trying to understand a condition that is unfamiliar and are possibly experiencing that condition at that moment.

When these educational materials are used alongside verbal educational sessions, then these fact sheets can be explained. However, alone these materials do not meet the needs of the target population for this project.

<u>Structured Education Sessions</u>

Interventions that use a model of structured education sessions have been shown to help reduce poor health outcomes among the homeless, specifically among homeless teens. Among homeless women, educational sessions along with additional follow-up, although overall had little no effect, did show an impact on certain poor health outcomes. Therefore, it is this model of education that is needed to help reduce the high-risk sexual health behaviors among homeless women. Specifically, these educational models should focus on modes of transmission for STIs and effective methods for reducing transmission, while also implementing capacity building and creating an environment for empowerment. This methodology provides the women with knowledge to be aware and in control of their own bodies thereby allowing these women to have a sense of agency. With agency, women are more willing to negotiate safer sex practices with their partners, are more likely to feel comfortable seeking a support system in order to address their sexual health concerns and are also more inclined to prioritize their health and therefore ensures fidelity to prescribed treatment. This strategy of empowerment is seen in SisterLove, Inc.'s current Healthy Love Workshop (HLW). Organizations that do not have these structured education sessions could collaborate with SisterLove in order to utilize their workshops, while modifying the subject matter to fit the needs of the target population. Additionally, CAPN can utilize the current education sessions that are conducted with homeless adolescents and expand this program to also include sessions with homeless women as well.

Limitations

Several limitations need to be considered due to the project design. Since most of the information regarding the practices and methodologies that are currently used by other organizations was only retrieved by online searches, the effectiveness of these interventions was

assumed to be effective. Further research involving qualitative interviews with key informants from these organizations and those they serve would provide more insight into the programs themselves and their effectiveness. Additionally, more organizations could have been contacted in order to understand a more broad range of services that are provided to the homeless population and if partnerships for collaboration already exist and therefore, could be built upon.

Recommendations

Several studies provide insight into the barriers and challenges associated with homelessness and homeless women's lower utilization of women's health services. However, there is a need for more research that aims to understand homeless women's continued high-risk health behaviors even though they access and receive sexual and reproductive health services. Future research should seek to investigate a qualitative understanding of the reasons why homeless women who access care at these clinics do not adhere to treatment protocols or safe sex practices even though they receive sexual health education at each sexual health related clinic visit. Conducting in-depth interviews with these women in order to gain their perspective on this issue would provide a greater evidence base for the effectiveness of certain health education practices and methodologies and also why certain methods lack in effectiveness.

Additionally, educational materials that meet the literacy levels of the target population could be created and be handed out at each health related visit, regardless if it is specifically related to sexual health or not.

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Recommendations
For STI Prevention Education
For Homeless Women

Project Goal

To identify the best practices for STI education among homeless women to assist clinics who provide free STI services to this population to better address the educational needs of the women they serve

Summary of Findings

There are several factors that influence homeless women's decision-making in regards to high-risk sexual behaviors. Such vulnerabilities include physical health issues, mental health issues, issues with substance abuse and misuse, as well as past and recent experiences of sexual or domestic violence. Additionally, it is the complex interactions of these risk factors that further place homeless women at a greater risk for continued homelessness and partaking in high-risk sexual behaviors. Consequently, this increases their risk for poor sexual health outcomes.

Recommendations

- Low-literacy pamphlets and/or handouts that can be given out at each clinic visit
  - Currently the materials used are at a high school reading level, while the patient population remains at about a third grade reading level. Therefore, educational materials that are considered low-literacy level are needed to provide sexual health information to CAPN patients so materials can be utilized even in the absence of a practitioner's explanation.

- Structured education sessions that reinforce the information provided during clinic visits (i.e. safer sex practices, consequences of recurrent infection, etc.)
  - Collaborating with organizations such as SisterLove Inc., who implement empowerment and capacity building into their HIV/STI education, would provide CAPN with more resources that help to engage their patient population while also creating a safe space for their clients to access more information and awareness surrounding their own sexual health practices so as to learn how to change them for the better.
  - Data showing the effectiveness of structured education sessions could be utilized to ensure grant funding in order to allow for this expansion.