IMPACT OF HOUSING ON MENTALLY ILL UNHOUSED VETERANS' READMISSIONS TO VETERANS AFFAIRS (VA) INPATIENT PSYCHIATRIC SERVICES

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Abstract

Unhouseness, also known as homelessness, coupled with mental illness, causes health problems for some veterans; financial difficulties, unemployment, and lack of affordable housing are factors contributing to veteran unhouseness (Tsai & Rosenheck, 2015). Approximately nine percent of the entire unhoused population in the United States are veterans (United States Interagency Council on Homelessness, 2020). Unhoused veterans experience negative health outcomes impacted by environmental and socioeconomic harshness, which are also factors of subsequent psychiatric hospital readmissions (Mascayano et al., 2022). The average cost per United States Veterans Affairs (VA) hospitalization was $30,282 in FY 2019 and $40,763 in FY 2020 (Wagner, Chow, Su, & Barnett, 2023). The 2023 federal budget for VA mental health care is $13.9 billion, with $2.7 billion allocated for housing for unhoused veterans (Yarmuth, 2022). This project aims to evaluate whether housing provision upon discharge affects readmission to psychiatric hospitals for unhoused veterans with mental illness.

The purpose of this project is to evaluate if post-discharge housing affects readmission rates to a VA psychiatric hospital/unit among unhoused veterans with mental illness. Studies have shown that unhoused veterans have had higher VA hospital usage for nonurgent purposes than housed veterans (Gundlapalli et al., 2017; Mascayano et al., 2022; Sfetcu et al., 2017). This project proposes the following patient, intervention, comparison, outcome, and time (PICOT) question: For unhoused veterans who have mental illness (P), does the provision of housing (I), compared to housed mentally ill veterans (C), impact readmission rates (O) during the 20-month timeframe January 2022 to August 2023(T)?

The objective of this project is to review and analyze hospital data to answer the previous mentioned PICOT question and provide clinical evidence to support future interventions to improve the lives of unhoused veterans with mental illness. This project will follow Lewin's change model with secondary data analysis. Data will be collected from electronic health records to capture data of unhoused veterans diagnosed with mental illness admitted to this hospital from January 1, 2022, to August 31, 2023, at an acute adult psychiatric unit in California. The variables to be examined include unhoused veterans diagnosed with mental illness admitted to a psychiatric unit during this time, any readmissions occurring within six months of the first admission, and any evidence of housing assistance received. Statistical data analysis will be accomplished to determine whether differences among those discharged with coordinated housing impacted readmissions.

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My son Pierre-Louis is my life's purpose, and we both will graduate this year. I went back to school in a community college when he was 9 months old. I am glad that we both achieved success.

Table of Contents

List of Tables

Chapter One

Introduction: Unhouseness

Unhouseness includes a person or a family who does not have a residence to live in, resides in places that are not for people to sleep, and/or is at risk of losing their residence (US Code, 2022). In the United States, as of January 2023, the number of unhoused reached a total of 653,104 (NAEH, 2023). In 2021, the federal government spent $51 billion on housing the unhoused, and the federal budget in FY 2023 for the unhoused is $71.9 billion (McDonough, 2022). States and cities are also experiencing increased spending when the unhoused population increases. For example, California has spent about $17.5 billion from 2018 to 2022, providing services such as housing, shelters, food, and medical care to control the increasing unhoused population (Watt, 2023). At the same time, the total unhoused population in California increased from 129,972 in 2018 to 181,399 in 2023 (Associated Press, 2023). National Alliance to End Homelessness, a non-profit organization with a mission to improve the unhouseness situation, has been providing annual reports on unhoused status since 2007, collected data as shown in Table 1 (National Alliance to End Homelessness, 2023).

Background

Unhousedness impacts the healthcare system due to more frequent visits, admissions, and hospital discharges. In 2017 alone, there were 100,000 hospital visits in California by unhoused people, an increase of 28% compared to 2015 and 2016, with over 30% of those admitted being diagnosed with a mental illness (Reese, 2019). Los Angeles County in California topped all counties with 35,234 total hospital visits and discharges by unhoused people in 2017 (Reese, 2019). Mental illness, which includes various substance use disorders (O'Brien & Crowley, 2013) contributes significantly to unhouseness and hospitalization. According to a report from the Centers for Disease Control and Prevention (CDC), the average number of ER daily visits

among housed was 45 visits per 100 people versus 203 visits per 100 unhoused people from 2015 to 2018 (Schappert, Santo, & Ashman, 2020).

Currie et al. (2018) found that about 73% of unhoused people with mental illness had at least one admission to hospitals in five years with an average stay of 14 days. They suggest that providing housing assistance at discharge could potentially prevent readmission (Currie, Patterson, Monriruzzaman, McCandless, & Somers, 2018). An analysis to the medical records of 1269 hospitalizations among Medicaid unhoused people between 2013 and 2014 found that the 30-day readmission rate was 27% (Racine, Munson, Gaeta, & Baggett, 2020).

Bravo et al. (2022) conducted international studies in several countries, including the United States (U.S.) reported that about 25% to 33% of the unhoused population in the U.S. had severe psychiatric illness or a diagnosis of mental illness, and used emergency room (ER) services and psychiatric hospitals more often than housed population, thus being described as a "revolving door phenomenon" (Bravo, Buta, Talina, & Silva-dos-Santos, 2022, p. 3). To mitigate the phenomenon, the authors suggest providing transitional care immediately following discharge, including providing housing and social support (Bravo, Buta, Talina, & Silva-dos-Santos, 2022). Supportive findings and evidence are found in studies from Ding, Slate, and Yang (2018), Fetcu et al. (2017), and Mascyano et al. (2022) .

Problem of Interest

In 2020, there were about 18 million veterans in the United States, less than the 26.4 million reported between 2000 and 2018 (Vesper, 2020). It is estimated that about 9% of all unhoused population in the United States are veterans as of 2017 (United States Interagency Council on Homeless, 2018), which means approximately 40,000 veterans meet the definition of unhouseness. Unhoused veterans are more vulnerable to mental illness, including exposure to

traumas, such as post-traumatic stress disorder (PTSD) and substance use disorder (Evans, Kroeger, Palmer, & Pohl, 2019). A cohort study involving 253 unhoused veterans in a transitional housing program from July 2015 to September 2017 found that 194 (76.7%) were diagnosed with at least one mental illness (Ding, Slate, & Yang, 2018). Other research showed that some of the leading causes of veterans' unhouseness include:

- Mental illness: Compared to other populations, US veterans are at higher risk of mental illness, such as Post-Traumatic Stress Disorder (PTSD), depression, and anxiety; veterans also have a high prevalence of suicide and substance use (Inoue, Shawler, Jordan, & Jackson, 2022). Veterans who experienced "shock" when dealing with the difference between military and civilian life tend to be more isolative, have trust issues, and avoid social events, and therefore leads to their reluctance to seek assistance or treatment for their mental condition (Grenawalt, Lu, Hamner, Gill, & Umucu, 2021).
- Substance use: Teeters et al. (2017) stated that veterans have a high prevalence of substance use: 56.6% alcohol use, 24% opioid use, 3.5% used marijuana, 27% tobacco use, and 1.7% other illicit drug use.
- Unemployment: according to the Bureau of Labor Statistics, in 2021, the unemployment rate for veterans was 4.4 percent and about 27% had service-related disabilities (Bureau of Labor Statistics, 2022). Looking for employment could be more challenging for veterans, such as these: military training and specialties do not match civilian job requests; difficulty adjusting to civilian jobs; and military traumas can cause social isolation and trust issues (Employment issues facing returning veterans, 2022).
- Unaffordable or lack of housing: with the higher unemployment rate, hardship transitioning from the military to civilian life and traumatic experiences, veterans with

mental illness and substance use disorder are more commonly seen to be unhoused and in need of housing assistance (Rosenheck & Stefanovics, 2021).

Tsai and Rosenheck (2015) published their systematic review on risk factors for US veterans' unhouseness. After reviewing 32 carefully selected and examined studies, -this review identified that substance use and mental illness are the highest risk factors for unhoused veterans (Tsai & Rosenheck, 2015). Other risk factors include combat-related traumas, limited income and unemployment, lack of social and family support, difficulty transitioning to civilian social settings, and "incarceration and adverse childhood experiences" (Tsai & Rosenheck, 2015, p. 189). There were no significant differences in risk factors among unhoused veterans and unhoused non-veterans (Tsai & Rosenheck, 2015).

This DNP project focuses on the problem of unhoused veterans with mental illness who are admitted to a psychiatric hospital/unit. The goal is to determine how discharge interventions such as housing provision can affect this population's readmission rate.

The Population of Interest: Unhoused Veterans Admitted to Psychiatric Hospitals

Studies found that the unhoused population, including unhoused veterans, have a higher risk for frequent use of psychiatric hospitals/units (Bravo, Buta, Talina, & Silva-dos-Santos, 2022; Manuel et al., 2022). Unhoused veterans with mental illness are admitted to psychiatric hospitals more often than housed mentally ill veterans. A national survey of 9,108 hospitalized veterans in 1995 demonstrated that about 35% were unhoused. A study of 43,868 hospitalizations from national data of hospitalized unhoused veterans concluded that about 79.9% were admitted for mental illness, of which only 29.1% of admissions were among housed veterans (Adams, Rosenheck, Gee, Seibyl, & Kushel, 2007). A report released by the VA in 2023 indicated: "In FY2019, the VA provided 600,076 inpatient discharges (complete

discharges) … In FY2020, the VA provided 495,529 inpatient discharges, a decrease of 17%. Additionally, the average cost per discharge increased dramatically from $30,282 in FY2019 to $40,763 in FY2020" (Wagner, Chow, Su, & Barnett, 2023, p. 2). A study confirmed that healthcare cost for unhoused veterans was about $2,449 per person per month on average (Nelson, 2021). The 2023 federal budget for the VA in mental health is $13.9 billion and $2.7 billion in housing unhoused veterans, a $409 million increase compared with that of the 2022 budget (McDonough, 2022; Yarmuth, 2022), and the budget is set to increase to 16.6 billion for mental health and $3.1 billion to house unhoused veterans for FY 2024 (U. S. Department of Veterans Affairs, 2023). These data and literature indicate that providing housing to unhoused veterans who have mental illness may pose a challenge, and therefore this DNP project proposes to determine whether a gap exists between availability of resources and the ability of mentally ill veterans to access and/or utilize them.

By the end of 2022, the VA was able to house 40,401 unhoused veterans, exceeding the goal of 38,000 for 2022 (Office of Public and Intergovernmental Affairs, 2023). The Point-In-Time Count (PITC) in 2022 showed that there were 33,136 veterans experiencing unhouseness, an 11% decline compared to PITC in 2020 (U.S Department of Housing and Urban Development, 2022). Formal Secretary of the U.S. Department of Housing and Urban Development Shaun Donovan stated in 2012 that it cost about $40,000 a year for each unhoused individual with mental illness, and the cost of being unhoused ranges between $35,000 to $150,000 (Moorhead, 2012). The VA spent about $ 2.2 billion in housing programs for unhoused veterans in 2022, a 16% increase compared to FY 2021, and it seems that there is still an urgent need to have more funding to house more unhoused veterans in the future (Wentling, 2022). Comparing the funding for housing and total unhoused veterans housed in 2022, there was a

discrepancy of 16% funding increase and 11% unhouseness decrease. In 2023, with the VA housing budget of $2.7 billion, 46,552 veterans were permanently housed (United States Interangency Council on Homelessness, 2024).

In 2008, the VA established a goal to end unhouseness among veterans (U.S. Department of Veterans Affairs, 2021), and reported there were 33,136 unhoused veterans as of January 2022, a decrease from 37,252 in 2020 (Office of Public and Intergovernmental Affairs, 2022) and 60,988 unhoused veterans in 2007 (National Alliance to End Homelessness, 2023). Besides providing various housing assistance programs and mental health services to unhoused veterans with mental illness, the VA also established research and other supportive programs targeted to veterans' needs, including peer-reviewed research, intramural grants, studies, national educational sessions, podcast, webinars, and pilot programs (Veterans Health Administration Homeless Programs Office, 2022). The VA, along with federal and state governments, has contributed great effort and financial support to end unhouseness among veterans, and yet there are still a great number of veterans who remain unhoused or at risk of unhouseness (United States Interagency Council on Homelessness, 2020). Comparing to the increased VA's spending on housing the unhoused veterans, the government funding seems ineffective in eliminating unhouseness among veterans and more funding are requested by policymakers (Wentling, 2022). The question raised is: can simply increasing funding for housing and mental health services effectively address the problem of veteran unhouseness, or is there a need for additional interventions? This DNP project intends to bring awareness of these factors, identify any gaps between available services/resources versus utilization. It may provide data that will inform future evidence-based initiatives to better address the revolving door health disparity experienced by unhoused veterans, diagnosed with mental illness. Unhoused veterans with mental illness

tend to obtain care from VA psychiatric services, then return to unhouseness upon discharge and subsequently repeat the cycle. Based on the concepts of primary and secondary prevention, VA mental health providers need to work towards bridging the gap between VA housing and mental health treatment resources and unhoused veterans' access to these resources.

Relevant Definitions

Unhoused

Unhoused, also known as homeless, is a term used to refer to a person or a family who has no "fixed, regular, and adequate nighttime residence, " and resides in places that are not for people to sleep, "including a car, park, abandoned building, bus or train station, airport, or camping ground, " sleeps in places that are "temporary living arrangements, " and are at risk of losing their residence (US Code, 2022, para. 2). Using this definition will provide a clear description of the target population of this project.

Mental Illness

Mental illness is a treatable health condition involving mood change, emotion regulation, behavior changes, thinking process, and substance use, which can be related to family history, environmental influence, work or life-related stress, and other social factors (Njoku, 2022). Veterans with mental illness contribute highly to the unhoused population, psychiatric hospitalization, and readmissions (Shafer, 2019; Tsai & Rosenheck, 2015).

Psychiatric Hospital/Unit

Also referred to as a mental health hospital/unit or psychiatric ward, a psychiatric hospital/unit is one in which residing patients suffer from mental illness and are in need of treatment, such as crisis stabilization (Centers for Medicare and Medicaid Services, 2021). This project will use the term psychiatric unit and intends to collect data on unhoused veterans with

mental illness who have received treatment in a specific VA psychiatric unit. It is important to distinguish different hospital settings that provide mental health services.

Readmission

Readmission in a hospital refers to the occasion when a patient returns to the hospital for the same condition within 30, 60, or 90 days after a previous admission; readmission rates are frequently used to evaluate the quality of care and efficacy of treatment discharge plan(s) related to the hospitalization and discharge (Healthcare, 2023). This DNP project examines readmission rates during one month after being discharged and any multiple admissions during six months among unhoused veterans with mental illness to a specific psychiatric unit to determine whether housing assistance at discharge impacts readmissions.

U.S. Department of Veterans Affairs (VA)

The U.S. Department of Veterans Affairs (VA) is a government entity established in 1930 with the approval of Congress as the Veterans Administration. Now serves about 25 million Veterans, the VA provides services and benefits in "pension, education, disability compensation, home loans, life insurance, vocational rehabilitation, survivor support, medical care, and burial benefits." (Federal Register). The VA is comprised of three organizations: the Veterans Health Administration (VHA), the Veterans Benefits Administration (VBA), and the National Cemetery Administration (NCA) (U. S. Department of Veterans Affairs, n.d.). The VA is the largest government agent providing health care services, including mental health services, to veterans; it also plays an important role in providing housing assistance to unhoused veterans (Nelson et al., 2018).

Veterans

Veterans are military members who are discharged from any military service branch (Air Force, Army, Coast Guard, Marine Corps, and Navy) with any discharge other than dishonorable (U.S. Department of Veterans Affairs, 2019). Reservists or members of the National Guard who have served on active duty also qualify (U.S. Department of Veterans Affairs, 2019). Identifying veterans' status clearly and accurately is essential for this project, as veterans are the target population of interest.

The above-mentioned definitions will be used throughout the DNP project. Providing these definitions helps ensure an understanding of the targeted population and project elements.

Project Methodology

To establish strategic agendas and methodology, this DNP project will follow the recommendations from the American Association of Colleges of Nursing (AACN), including selecting a project that will identify a targeted population in a healthcare system to offer positive changes and outcomes, benefit nursing practice, conducting systematic reviews, establishing a DNP project team (committee), carrying on disseminations, and contributing for publishing (American Association of Colleges of Nursing, 2015). The first step is to identify the risk factors related to mental illness and unhouseness among veterans. Then, verify the needs of these unhoused veterans admitted to psychiatric hospitals. The next step is to collect information about VA resources for unhoused veterans through interdepartmental collaboration within the facility, including the eligibility criteria, resource availability, and available funding. The last step is to evaluate the project outcomes and plan for next steps if needed. This project will focus on bringing awareness to the problem of unhoused veterans' readmission to the psychiatric hospital/unit and evaluating the degree to which known factors are contributing to the problem

for one VA facility selected for the DNP project. The project will assist the facility in determining unhoused mentally ill veterans' needs and the efficacy of housing provisions/resources provided to this population.

Policies Related to the Problem

Since the late 1860s, the federal government and VA have been aiding veterans with their needs to include housing assistance (VA Programs for Homeless Veterans, 2021). The VA has various housing assistance programs for unhoused veterans, with the U.S. Department of Housing and Urban Development-VA Supportive Housing *(*HUDVASH) the most utilized with an annual budget of $735 million for housing assistance (Wentling, 2022) and which offered 87,864 vouchers costing $675 million in FY 2017 to end veterans' unhouseness (Evans, Kroeger, Palmer, & Pohl, 2019). Other housing assistance programs, such as Homeless Providers Grant and Per Diem (GPD) Program, Enhanced-Use Lease (EUL) Program, and Supportive Services for Veteran Families (SSVF) are not as well-known to veterans who need housing assistance, which may contribute to continued unhouseness (U. S. Department of Veterans Affairs, 2023). Although the number of unhoused veterans dropped significantly since 2007, with increasing VA budget for housing and mental health service, unhoused veterans remain above 30,000 in the United States (Evans, Kroeger, Palmer, & Pohl, 2019).

Psychiatric hospitalizations provide tertiary treatments to unhoused veterans with mental illness that do not eliminate risk factors as identified by literature listed by this project. The goal of these VA programs is to have unhoused veterans with mental illness receive housing assistance to reduce psychiatric inpatient readmissions which will lead to improved primary and secondary prevention.

Problem Statement

Approximately nine percent of the unhoused population in the United States are veterans (United States Interagency Council on Homeless, 2018). Unhoused veterans experience negative health outcomes impacted by environmental and socioeconomic harshness, which are also factors of subsequent psychiatric hospital readmissions (Evans, Kroeger, Palmer, & Pohl, 2019). In 1995, the average cost of caring for an unhoused veteran was about $3,196 higher than non-unhoused veterans, reaching $27,206 per admission (Rosenheck & Seibyl, 1998). The total VA spending for unhoused veterans at inpatient units was about $404 million in 1995 (Rosenheck & Seibyl, 1998). The estimated cost of inpatient care from 2006 to 2010 for a VA hospital was $4,157 per unhoused veterans who also stayed for longer than housed veterans (Nelson et al. 2018). The average cost per United States Veterans Affairs (VA) hospitalization was $30,282 in FY2019 and $40,763 in FY2020. The 2023 federal budget for VA mental health care is $13.9 billion, with $2.7 billion allocated for housing for unhoused veterans.

Purpose Statement

The purpose of this project is to evaluate whether housing provision upon discharge affects readmission to psychiatric hospitals for unhoused veterans with mental illness.

Chapter Two

Review of the Literature

A systematic search for literature was conducted in the following databases: CINAHL, PubMed, Cochrane, and APA PsychInfo. The search terms used included “homeless veterans,” “mental illness,” “psychiatric hospitals,” “discharge,” “housing,” and “readmission.” The initial search of the selected four databases resulted in a retrieval of 5,969 records (See Figure 1: PRISMA Diagram for Literature Search). The initial scan resulted in the removal of 3,154 duplicated records. The second scan applied the exclusion criteria, resulting in the removal of 2,721 records. Exclusion criteria comprised the following: (1) language other than English, (2) population was not unhoused or veterans, (3) no diagnosis of mental illness, (4) not admitted to psychiatric hospitals or units, and (5) study conducted outside the United States (with few exceptions), and (6) articles published before 2015. Application of exclusion criteria yielded 94 records for the final scan, which involved a full abstract review. Following the full abstract review, 18 articles remained for final article review and narrative synthesis. These 18 articles offered various levels of evidence about unhoused people or unhoused veterans with mental illness, risk factors for psychiatric hospital admissions and readmissions, and suggestions for interventions regarding housing. The articles include three systematic reviews, two randomized controlled trials, five cohort studies, seven uncontrolled cohort studies, and two expert opinions. Twelve articles involved non-veteran unhoused populations and were selected based on one report of there being no significant differences in risk factors between unhoused veterans and unhoused non-veterans (Tsai & Rosenheck, 2015). One article compared the cost of hospitalizations among unhoused veterans and housed veterans at VA medical centers and clinics (Nelson et al., 2018).

Risk Factors for Unhouseness

Veterans have a higher risk for unhouseness with similar risk factors as those associated with non-veteran unhoused people. Risk factors reported in the literature include low income, unemployment, mental illness (including substance use), and lack of social support. However, unhoused veterans also have unique risk factors due to their military service and combat-related traumas (Tsai & Rosenheck, 2015). A retrospective cross-sectional secondary data analysis involving 43,733 unhoused veterans admitted to psychiatric hospitals in 141 VA medical centers from 1996 to 1998 concluded that unhoused veterans were more likely to be admitted in psychiatric hospitals for mental illness compared with housed veterans (Kushel, 2018). Tsai et al. (2017) reviewed 306,351 veterans' data referred to mental health clinics and their one-year unhoused status, and identified that Veterans with substance use disorders, being single, African American, and with income lower than $25,000 have one and half times to twice higher risk of being unhoused (Tsai, Hoff, & Harpaz-Rotem, 2017).

Unhoused Veterans with Psychiatric Hospitalizations and Readmissions

In 2018, Kushel (2018) offered his opinions about high-risk factors and prevalence among the unhoused population with mental illness regarding acute psychiatric hospital admission and readmission. Unhouseness was reported as the major risk factor contributing to hospital readmission in veterans although there were various resources for housing and shelters provided to unhoused veterans (Nelson et al., 2018). A national longitudinal cohort study of 35,527 veterans that were discharged from VA inpatient psychiatric units during FY 1998, found that 73% (22,230) were readmitted for psychiatric care; additionally, veterans with mental illness had the highest rate for readmission (Imiter, McCarthy, Barry, Soliman, & Blow, 2007). A more recent cohort study of 19,104 participants who were admitted to psychiatric hospitals in New

York between 2012 to 2013 found that 15.4% participants were readmitted to psychiatric hospitals within 30 days, due to unhouseness, mental illness, as well as other medical conditions (Mascayano et al., 2022). Hermer et al. (2022) used Mental Health Treatment Episode Data Set (MH-TED) data to conduct a 6-month study of 44,761 participants with schizophrenic disorders, 45,413 participants with bipolar disorders, and 74,995 participants with depressive disorders that were hospitalized in psychiatric hospitals between 2014 and 2018 with at least one outpatient treatment and readmission within 30 days post-discharge. Their findings include 13.3% of the participants with schizophrenia were readmitted within 31-180 days, 15.7% needed readmission within the first 180 days and 9.6% needed to be re-hospitalized within 30 days (Hermer, Nephew, & K., 2022). A two-parallel longitudinal randomized controlled trial with 433 unhoused participants with mental illness found that 73% had at least one admission to hospitals in 5 years, with a mean stay of 14 days and 46.4% for psychiatric treatments with over 53% being readmitted within one year (Currie, Patterson, Monriruzzaman, McCandless, & Somers, 2018).

Impact of Housing Assistance to Readmissions

Unhouseness can be both financially costly to the veterans and the healthcare system and requires changes to the VA healthcare system and joint efforts to decrease unhouseness among veterans (Kushel, 2018). A population-based cohort study suggested that housing assistance is needed at discharge to prevent rapid readmissions to the psychiatric hospitals among any unhoused population, veterans, or non-veterans (Laliberte, Stergiopoulos, Jacob, & Kurdyak, 2019). Bravo et al. (2022) echoed the latter, and suggested that early follow-up, discharge education, medication compliance and post-discharge support may improve discharge outcomes and lead to less frequent readmission, stating that housing and financial support are important to

improving the unhoused situation. Post-discharge care and follow-up are also important, but not sufficient to prevent readmission, if housing and other types of assistance are not provided to unhoused people with mental illness (Currie, Patterson, Monriruzzaman, McCandless, & Somers, 2018).

A cohort study which focused on rapid admission in Nevada state psychiatric hospitals concluded that factors such as age, divorced/separated/never married, living alone, staying at a unhoused shelter/on the street, history of legal problems, no adherence with medications, lack of support family/support, no stable housing, having financial problems, diagnosis of mental illness or substance use all significantly contribute to rapid readmission to psychiatric hospitals ($P<0.05$) (Moore, Moonie, & Anderson, 2018). Another cohort study on thirty-day readmission in Massachusetts unhoused patients with Medicaid found 27.4% readmission rate for 30-day readmission and 21.2% for 90-day readmission, more than double the readmission rates among housed patients (Racine, Munson, Gaeta, & Baggett, 2020). Cheung et al. (2015) conducted a randomized control trial that found no significant association between substance use, ED visits, and hospitalizations. But hospitalizations were associated with severe mental illness, suggesting that management of mental illness may reduce hospitalization, but this is difficult among unhoused persons with mental illness (Cheung et al., 2015). They also suggest that providing housing and social support may be helpful to reduce readmissions (Cheung et al., 2015). A retrospective analysis on all hospitalizations in Florida, Massachusetts, and New York from October 2015 to January 2020 identified 515,737 hospitalized patients were unhoused at discharge, and their 30-day and 90-day readmission rates were significantly higher than housed population in all three states: Florida 30.4% vs. 19.3%, Massachusetts 23.5% vs. 15.2%, and New York 15.7% vs. 13.4% (Khatana et al., 2020).

A systematic review of the literature (Sfetcu et al., 2017) of 80 articles involving adults discharged from psychiatric hospitals, from January 1990 to June 2014, found that readmissions of both unhoused veterans and non-veterans are related to housing and post-discharge conditions, along with the suggestion that consistent and long-term post-discharge follow-up are protective factors for rehospitalization. Peng et al. (2020) conducted their systematic review of 26 studies of 65 published articles involving 17,182 participants and found that housing can decrease unhoused rate and improve health outcomes, decrease hospitalizations and readmissions, and demonstrated positive effects on mental illness (Peng et al., 2020).

Cost of Unhouseness

An observational study published in December 2018 analyzed longitudinal data of veterans from the VA healthcare system (Nelson et al., 2018). After examining data between 2002 and 2014 from 150 VA medical centers and over 1,000 outpatient clinics, the study found that unhoused veterans had more VA outpatient visits, higher VA outpatient cost than housed veterans, higher mean inpatient costs, more inpatient stays, and higher ER cost as compared to non-unhoused veterans as shown in Table 2 (Nelson et al., 2018).

Needs Assessments and Description of the Project

A need assessment is a systematic process used to identify an organization's need for change or improvement by gathering information (Office of Migrant Eduation: 2001 New Directors Orientation, 2001). After identifying the target organization, a need assessment can be conducted through data collection and analysis to identify the needs and desired outcomes as a result of the change or improvement (Team Asana, 2022). This DNP project will determine the targeted population, identify needs for change or improvement through data collection and analyses to generate evidence that can inform organizational decision making.

Population Identification

The population for this DNP project will include those identified within the VA electronic health record as unhoused veterans with mental illness admitted to the Acute Psychiatric unit of a California VA Medical Center between January 1, 2022, and August 31, 2023.

Project Sponsor and Key Stakeholders

This project is not sponsored or financially funded by any facility or entity. Key stakeholders include: the California VA Medical Center, mental healthcare providers within the VA health system (psychiatrists, nurse practitioners, register nurses, and social workers), and unhoused U.S. veterans diagnosed with mental illness and their families.

Organizational Assessment

The VA is the largest healthcare system in the United States that provides housing and mental health services to unhoused veterans; in 2008 the VA set the goal of ending veteran unhouseness (Nelson et al., 2018). In 2022 alone, the VA has housed 40,401 unhoused veterans, exceeding the year's goal of housing 38,000 unhoused veterans (Office of Public and Intergovernmental Affairs, 2022). The federal budget of 325.1 billion for FY 2024 (U.S. Department of Veterans Affairs, 2023) will cover the operation expenses of the 172 VA Medical Centers and 1,138 outpatient clinics nationwide to provide treatments and care to the enrolled veterans, including unhoused veterans (Veterans Health Administration, 2023). California has 105 VA facilities, including hospitals, outpatient clinics, community-based outpatient clinics, and vet centers (Locations, 2021). The U.S. Congress approved the FY2023 budget, which includes $ 2.7 billion for VA housing programs that would fund more housing resources for unhoused veterans with mental illness (McDonough, 2022). The proposed FY 2024 budget is

$325.1 billion for VA, including $16.6 billion for mental health (U.S. Department of Veterans Affairs, 2023). One acute psychiatric unit at a VA facility in California will provide data for this DNP project.

Assessment of Available Resources

This DNP project will obtain access to data retrieved from the California VA Medical Center's Computerized Patient Record System (CPRS). The data analysis occurred within the author's office in the VA facility during off-duty time. Project completion was estimated to require 20 visits to the facility for 200 hours for data collection, analysis, and staff/departmental meetings.

Team Selection and Formation

The project lead for this effort is the author of this paper. Additionally, several VA Medical Center employees made up the project team. A social worker, who is also a veteran, provided input to the project. She has over ten years of experience helping unhoused veterans and is familiar with VA housing resources and policies. A VA nurse scientist assisted with coordination with facility departments including the Institutional Review Board (IRB) committee, for approval to conduct the project and the facility data center to gain access to data resources and ensure the project compliance with facility policies. As the scholarly project committee members, three university faculty members provided input and guidance. Data analysis was conducted with the assistance of the university biostatistician. No direct contact with VA patients occurred during this project.

Project Economic Analysis

Limited costs were anticipated to accomplish this project. This is described in detail in Appendix C: Preliminary Budget for DNP Project. Funding was not sought from the VA facility nor the School of Nursing, University of Nevada Las Vegas.

Scope of the Project

The scope of this DNP project included: (1) identifying all unhoused veterans who were admitted to an acute psychiatric unit in a VA Medical Center in California between January 1 2022 to August 31, 2023; (2) analyzing information on housing assistance distribution; (3) data regarding readmissions during a one-month period post discharge and any multiple admissions during a six-month period; and (4) determining whether a difference in readmissions between housed and unhoused veterans exists.

Mission, Quadruple Aims and Value

Mission

The mission of this DNP project is to identify whether post-discharge housing assistance impacts the readmission of unhoused veterans diagnosed with mental illness.

Quadruple Aim

The Quadruple Aim, with its policy of reducing healthcare costs while improving patients' health and experience with the healthcare system, is used as a guidance and roadmap to deliver healthcare to targeted populations (Bradshaw & Vitale, 2021). The four key elements of this framework assist healthcare facilities in focusing on quality and outcomes, as the main goals are illustrated in Figure 2: Quadruple Aim (Bradshaw & Vitale, 2021; Sketch Bubble, 2023).

Aim One: Reducing Costs to the Healthcare Facility and the Patients' Financial Stress

Delivery of cost-effective health care to veterans will maximize the quality of VA services with housing resources for unhoused veterans; at the same time, it will benefit veterans who are facing unhouses. For example, unhoused veterans have had higher VA hospital and Emergency Room (ER) usage for nonurgent purposes than non-unhoused veterans, which may potentially increase VA healthcare costs (Gundlapalli et al., 2017; Mascayano et al., 2022; Sfetcu et al., 2017). Hospital readmissions can cost about $17 billion annually in the U.S. (Bravo, Buta, Talina, & Silva-dos-Santos, 2022). A study reported that consistent treatment of mental illness resulted in decreased costs in psychiatric hospitalization (Peng, Haya, Faries, & Conley, 2010). This DNP project will focus on the impact of readmission of unhoused veterans, which is directly related to the cost of VA healthcare mental health services. It, therefore, may provide evidence related to this aim.

Aim Two: Improving the Health of the Selected Population

Veterans have a higher risk of being unhoused, having a mental illness, and being admitted to hospitals (Tsai & Rosenheck, 2015). They have more trauma-related disorders such as PTSD, depression, substance use, and a higher rate of suicide (Ding, Slate, & Yang, 2018). The VA healthcare mental health services provide care and treatment to unhoused veterans with mental illness, including housing assistance (VA Programs for Homeless Veterans, 2021). This DNP project intends to offer both literature review and data analysis to support the VA's goal to end veterans' unhouseness and improve the veterans' health.

Aim Three: Improving the Patient Experience

As the major healthcare system providing mental health services to veterans, the VA intends to offer more assistance in permanent housing, easy access to healthcare treatment,

adequate food and clothing supplies, and increased financial resources to unhoused veterans (U.S. Department of Veterans Affairs, 2021). The VA provides various housing programs to assist unhoused veterans in securing permanent housing (U.S. Department of Veterans Affairs, 2021). Based on their systemic review, Tsai and Rosenheck (2015) suggested that providing housing assistance to unhoused veterans and preventing future unhouses is equally important. This DNP project will use data analysis and literature review to determine the impact on unhoused veterans' readmission status when housing assistance is provided upon discharge, including veterans' utilizations of the program, outcomes of housing placement, and the period of time they are housed.

Aim Four: Improving Providers' Experience

Providers may experience more work-related stress by providing services to the unhoused population (Kerman, Ecker, Tiderington, Aykanian, & Stergiopoulos, 2022). Mental health providers may deal with repeated psychiatric readmissions among unhoused veterans without seeing improvement in their mental health conditions, a situation described as a "revolving door" (Bravo, Buta, Talina, & Silva-dos-Santos, 2022, p. 3). This DNP project attempts to identify factors associated with the readmission of unhoused veterans with mental illness discharged from a psychiatric unit with a treatment plan. Results will provide evidence to improve access to housing programs, which may decrease unhouseness and lead to reduced provider work-related stress, increase job satisfaction, and improve work-life balance.

Value

Impact on Patients, Family, and Community

The VA identifies that "being unhoused, or being at risk of unhouseness, is one of the most difficult problems any Veteran can face" (Office of Research & Developement, 2021, para.

1). Unhoused veterans have a higher risk for mental illness (including substance use) and other health conditions, and being hospitalized (Mascayano et al., 2022; Tsai & Rosenheck, 2015). Being unhoused can also affect families, causing problems in nutrition, mental health, and medical conditions, and with children's education and behavioral problems (Morris & Strong, 2004). The impact of unhouseness to the community can also be negative: it may cost more to the public health system and the community if unhoused persons have severe mental illness, are not treated, and continue to be hospitalized (Fowler, Hovmand, Marcal, & Das, 2019). In addition to cost, other community concerns include substance use, violence, crime rate, loss of business and property values, and increased financial burden to taxpayers (DRC, n.d.). California has the highest unhoused population in the U.S., with the total number of unhouseness still about 160,000 despite efforts of the state government and local communities (Streeter, 2022). This DNP project may provide evidence that unhoused veterans discharged from a psychiatric unit had higher readmission rate, comparing to the housed veterans, to both the California state and federal government in the efforts to provide housing assistance to unhoused veterans with various programs.

Impact on Healthcare Systems and Organizations

Unhouseness can affect the healthcare system significantly: in 2017 alone, there were 100,000 hospital visits in California by unhoused people, an increase of 28% compared to that of 2015 and 2016, over 30% of the hospital visits had a diagnosis of mental illness (Reese, 2019). Los Angeles County in California topped all counties with 35,234 hospital visits and discharges by the unhoused in 2017 (Reese, 2019). Mental illness and substance abuse contribute greatly to unhouseness and hospitalization. A report released by Stanford University reported that about 25 to 51 percent of unhoused persons had mental illness, and about 14 to 46 percent had substance

use disorder (Streeter, 2022). Boston Health Care for the Homeless Program (BHCHP) spent around $18,764 per person annually for enrolled unhoused clients from 2013-2015, higher than the $7,561 for each client enrolled under Medicaid (Koh et al., 2020). Mental health professionals need to determine the causes of admissions and readmissions and methods of providing adequate resources to unhoused veterans with mental illness and, therefore, reduce the total number of unhoused veterans and their potential admissions and readmissions to psychiatric hospitals.

Goals and Objectives

Goals

The goal of this DNP project is to conduct a secondary data analysis of electronic health record data related to unhoused veterans' readmission to a VA acute psychiatric unit in California to determine whether a relationship exists between post-discharge housing assistance and readmissions, which may then offer evidence to support policy change to improve utilization of housing resources by unhoused veterans diagnosed with mental illness.

Objective

The objective of this DNP project is to identify factors that impact acute psychiatric unit readmission among unhoused veterans with mental illnesses. One factor cited in the literature includes post-discharge housing assistance (Adams, Rosenheck, Gee, Seibyl, & Kushel, 2007; Bravo, Buta, Talina, & Silva-dos-Santos, 2022; Hermes & Rosenheck, 2016).

Summary

The cited literature provides strong evidence that mental illness is a high-risk factor for unhouseness (Tsai & Rosenheck, 2015; Kushel, 2018), that unhoused people or unhoused veterans with mental illness are at greater risk for psychiatric hospitalizations and readmissions

(Cheung et al., 2015; Tyler, Wright, & Waring, 2019; Mascayano et al., 2022). Furthermore, readmissions of the unhoused population with mental illness are related to housing (Barnett et al., 2018; Bravo, Buta, Talina, & Silva-dos-Santos, 2022), and the cost of hospitalizations and outpatient visits are higher for unhoused veterans than housed veterans (Nelson et al., 2018). This evidence furnishes a supportive foundation for this DNP project. The purpose of this project is to determine the impact of housing assistance on the readmission of unhoused veterans with mental illness after being discharged from a psychiatric hospital/unit.

Chapter Three

The Theoretical Framework

The purpose of this DNP project is to determine if evidence exists for change or implementation in the future on the housing assistance provided to unhoused veterans discharged from the psychiatric unit or hospital. The literature review suggested several factors that increase the risk of unhouseness among veterans and a need to address the co-relationships among unhouseness, mental illness, psychiatric hospitalization, and readmissions. There is evidence that supports the need for changes in treating unhoused veterans with mental illness based on the reviewed literature, as discussed in Chapter 2 of this DNP project. Table 3 (Change Theories Comparison) shows that several change theories can be adapted in a DNP project. However, Kurt Lewin's three-stage change model best fits this project. The theoretical framework selected to guide this DNP project is Kurt Lewin's three-stage change model.

Change Theory

Kurt Lewin is considered the pioneer in developing change theory when he first developed the three stages of change. His change model is recognized as the foundation for organizations to make changes (Hussain et al., 2018). According to Lewin (1951), the three stages to change are:

1. Unfreezing: identify if there is a problem and if a need for change exists.
2. Moving: start the change process.
3. Refreezing: the change and the problem are resolved. (Lewin, 1951)

Using Lewin's three-stage change of change, the VA can follow the three stages from (1) identifying the problems, (2) recognizing the need for changes, (3) implementing the changes gradually, and maintaining the flexibility for changes. Each stage will provide fundamental

information, evidence, and guidance to the leaders for the current stage and what to expect for the next stages (Hussain et al., 2018). The DNP project uses the data and data analysis to identify if housing at the discharge of unhoused veterans with mental illness impacts their readmission. Based on the result of data analysis that discharge housing is significantly related to readmissions of unhoused veterans with mental illness, the unfreezing stage of this project will identify if there is a problem with current VA housing programs and any need for changes. The VA leadership may then decide if they will start the changes based on the evidence provided by this DNP project at the moving stage and state the changes to resolve the problem identified by the unfreezing stage. The VA leadership can also modify the details of each stage to identify the problem, establish plans for changes, initiate problem-solving implementation, evaluate the outcomes of the change problems, and determine if further actions or changes are needed (Lewin, 1951). This DNP project will serve as a supportive factor with objective views from the literature review and measurable data to evaluate the outcomes of any subsequent organizational change.

Chapter Four

Setting

The setting for the DNP project is an acute psychiatric unit (L1) within a California VA Medical Center. This hospital unit provides treatment to veterans with mental illness, including unhoused veterans. The unit has 15 beds treating high acuity veterans with severe mental illness. There are 12 registered nurses (RN), nine licensed vocational nurses (LVN), one nurse manager, and one nurse educator. The estimated patient turnover rate is 20%, and the discharge rate is 14%. The average length of stay is eight days.

Implementation Science

Implementation science applies the results of scientific studies into practice for positive outcomes (Canada Communicable Disease Report, 2016). This DNP project will apply the findings from the secondary data analysis to identify the impact of VA housing assistance on the readmissions of unhoused veterans with mental illness discharged from a psychiatric unit at a VA Medical Center in California.

Sample

The sample for this project will consist of all veterans diagnosed with mental illness and identified as unhoused when admitted between January 1, 2022, and August 31, 2023, at the psychiatric unit at a VA Medical Center in California.

- Sample inclusion criteria are unhoused veterans, aged between 18 to 65 years old, diagnosed with mental illness, admitted to the psychiatric unit, and discharged with or without housing between January 1, 2022, to August 31, 2023.
- Sample exclusion criteria are non-veterans, those older than 65, and those who were not unhoused at the time of admission.

- Recruitment: samples are selected from electronic health records that include all patients meeting the inclusion criteria from January 1, 2022, to August 31, 2023. No personal contact or interview is involved.

Comparison (PICOT)

The DNP project will compare the readmission rate among the following three groups based on the veterans' housing status at discharge:

Group 1: Veterans diagnosed with mental illness, identified as unhoused, admitted to the unit (L1), and discharged with VA housing assistance.

Group 2: Veterans diagnosed with mental illness, identified as unhoused and admitted to the unit (L1), and discharged without VA housing assistance but to live with their family or friends.

Group 3: Veterans diagnosed with mental illness, identified as unhoused and admitted to the unit (L1), discharged without VA housing assistance, and do not live with their family or friends.

Measures and Instruments

The data are measured by hospital readmission among the three groups mentioned above. IBM SPSS (Statistical Package for the Social Sciences) Statistic 28 software is the tool for this measurement.

Data Collection, Security, and Management Plan

Data will be acquired from the VA electronic health records system (CPRS) with permission of the facility IRB and the Department of Education. The requested data will include the following data points: (also shown in Table 5 titled, Data Points and Sources) the total number of unhoused veterans with mental health diagnoses admitted to the unit from January 1, 2022, to August 31, 2023; length of stay; admission dates; discharge dates; mental health

diagnoses; discharge plan data; and readmission data. The data will be de-identified, coded, and kept within a password-protected file on a password-protected computer. Only the student, the committee chair, and the faculty can access the file. No patient identifiable information will be included in the coded de-identified data set.

Analytic Plan

A Chi-square test was conducted for secondary data analysis to determine whether a difference exists between the three groups.

Compare readmissions during up to a six-month period following initial admission between January 1, 2022, and August 31, 2023. Data analysis will provide the number of total admissions of mentally ill unhoused veterans, total discharges, and readmissions of identified unhoused mentally ill veterans. Descriptive statistics and correlations were calculated to reveal sample characteristics and relationships among the data.

Timeline of Tasks Assigned - GANTT Chart

The timeline for completion of this DNP project will span the final four semesters of the program. During the Spring 2023 semester, the project proposal was developed. The project proposal was successfully defended in April 2023. During the Summer 2023 semester, the DNP student focused on data collection and collaboration with the facility and Institutional Review Board (IRB). In the Fall 2023 semester, the project moved forward with the completion of data collection and data analysis. During Spring 2024, the DNP student prepares the final report of the DNP project, and the final defense is scheduled for March 2024. Table 4 GANTT Chart for DNP Project provides more details of the timeline for this DNP project completion.

Monitoring and Evaluation Plan

The data points collected from the VA Medical Center are shown in Table 5, and other data was obtained by chart review from the Computerized Patient Record System (CPRS). This data was retrieved from the CPRS, and chart review from CPRS was approved by the facility's Department of Education with an Affiliation Contract. IRB determined this was a non-research project. The DNP student assigns unique patient identifiers and reviews the data obtained until all information and data obtained are ready for analysis. The DNP student meets with the project committee monthly or quarterly to report the process for comments and feedback. The VA nurse scientist and Mental Health Department Nursing Chief receives progress reports and briefings for needed support and guidance. The DNP student will evaluate the applicability of the outcome by presenting it to the leadership of mental health or any department involved in the VA regarding housing utilization, readmission rates, and discharge plan outcomes to inform organizational decision-making. The current project intends to provide evidence for future potential process improvement projects.

Resources and Supports

A facility agreement between the VA Medical Center and the School of Nursing, University of Nevada, Las Vegas (UNLV), enabled project execution. The Department of Education, Research, Data Resources, and the Department of Mental Health in the VA Medical Center supported the project by allowing access to electronic health records per the facility's protocol. All data for this project was obtained from the VA electronic health record; no patient interviews occurred.

Risks and Threats

There are no known or identified threats associated with this DNP project.

Dissemination Plan

Dissemination is a requirement of the DNP project and includes the public defense of the completed scholarly project and other opportunities to disseminate the project results. The project literature review and synthesis results were shared via poster presentation at the Western Institute of Nursing (WIN) research conference in April 2023. Local dissemination was provided to the VA Advance Practice Nurse (APRN) committee in May 2023. The final DNP project defense was conducted in March 2024. Dissemination of project results is planned for abstract submission to the 2024 American Association of Nurse Practitioners (AANP) annual conference, to the WIN 2024 conference, to the 2024 Tri-Service Nursing Research Programs (TSNRP) Research and Evidence-Based Practice Dissemination Course, and the 2024 VA National APRN committee for Nurses' Week poster presentation. The podium presentation is at the 2024 Southwest Region Chi Eta Phi Sorority 55th Annual Conference. Upon project completion, a final report of project results will be presented to the VA medical center leadership and related departments.

Financial Plan

This DNP project has limited direct and indirect expenses, as indicated in Appendix 5, Preliminary Budget for the DNP Project. The School of Nursing, University of Nevada, Las Vegas (UNLV), and the VA Medical Center sought grant funds to cover the proposed budget.

IRB Approval

According to 45 CFR 46.104 (d) (4) (ii), this secondary data analysis and evidence-based practice project applied for and received an exemption from Institutional Review Board (IRB) full board review. This project met the criteria of "Information, which may include information about biospecimens, recorded by the investigator in such a manner that the identity of the human

subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects" (Code of Federal Regulations, 2023, para. 21). To protect the subjects' privacy, information obtained with potential risk to link to or identify the human subjects was kept separately and, in a password-protected file. All results will be reported in aggregate. This evidence-based practice project was approved for IRB exemptions at UNLV and VA Medical Center (Appendices A and B).

Chapter Five

Project Summary

Adherence to Plan

This project follows the intended data collection plan from the facility's Electronic Health Records. During the data collection, admission, readmission, and discharge information were obtained through chart review, and no patients were contacted or interviewed. All identifiable information, such as names, was protected with coding procedures.

Sample Description

If they fit the inclusion criteria, all patients admitted to and discharged from the selected psychiatric unit from January 1, 2022, to August 31, 2023, are included in the sample.
A total of 171 admissions and 109 patients fit the inclusion criteria, and most of them were identified as male. Categories of housing status upon discharge include social worker-coordinated VA-funded housing (n = 61), family and/or friends-assisted housing (n = 22), and unhoused discharges (n = 88).

Results of Analysis

A total of 587 admissions of 406 patients during these 20 months occurred, of which 177 admissions and 114 patients were identified as unhoused veterans. A total of 171 admissions and 109 patients fit the inclusion criteria. Among the 109 unhoused veterans, 12% (n = 21) were female, and 88% (n = 150) were male; 49% (n = 84) ranged from 22 to 50 years old; 51% (n = 87) aged 51 to 64; 66 discharges involved the social worker coordinated VA-funded housing, 22 were discharged with family and/or friends assisted housing, and 88 were discharged unhoused. The readmission rate among unhoused veterans discharged with VA-funded housing assistance readmission was 29.5% (n=18); for discharged to family and friends 18.2% (n=4); and 56.8%

(n=50) in unhoused veterans discharged unhoused. IBM SPSS Statistic 28 version was used for descriptive analysis. The alpha level was set at .05 for all statistical analyses. A chi-square test of independence was performed to evaluate the relationship between housing at discharge and readmissions. The relationship between readmission and housing aspect of discharge planning variables was significant, X^2 (2, N = 171) = 16.951, p < .001.

Economic Evaluation

Literature shows that the cost of hospitalization among unhoused veterans is higher than among housed veterans (Nelson et al., 2018). This DNP project data analysis found that unhoused veterans with mental illness discharged without housing had more readmissions and, therefore, potentially increased the cost of healthcare in the VA. Decreasing the readmission rates of unhoused veterans by providing housing assistance upon discharge could be more cost-effective. According to Nelson (2018), the average hospitalization cost was $4157 for unhoused veterans and $1251 for housed veterans during 2006 and 2010. According to VA (2022), the total budget for housing (HUD-VASH) was $94.4 million, and 40,401 unhoused veterans were permanently housed in 2022; the estimated average annual cost for housing an unhoused veteran in 2022 was under $24,000. Keeping unhoused veterans housed instead of frequent hospitalization is more cost-effective: for example, in Southern California, it costs about $100,759 a year to provide hospitalization and healthcare to a chronically unhoused person, and conversely, it costs $51,587 annually to provide housing and needed services to an unhoused individual (Jamboree Housing Corporation). According to the VA Medical Cost Accounting (MCA) report, the average cost per bed per day for this California VA hospital is $4,961, which means the cost of an average hospital stay of 14 days among unhoused veterans was $69,454 ($4,961 x 14), the total cost of the 171 hospitalizations with the unhoused veterans was

$11,876,634 ($69,454 x 171), and each of the 109 unhoused veterans cost $108,960 ($11,876,634/109) for their hospitalizations. Because this report did not separate the cost for housed and unhoused veterans, based on the data from Nelson's 2018 study, the actual cost for unhoused veterans with mental illness might be higher. If the housing resources can be used sufficiently to avoid psychiatric hospitalizations and frequent readmissions, the hospital operation cost can be lowered.

Project Evaluation

With the mission of identifying whether post-discharge housing assistance can impact the readmission of unhoused veterans diagnosed with mental illness, this DNP project was able to collect needed data for analysis, which showed that housing assistance at discharge can impact the readmission of unhoused veterans with mental illness. To evaluate the project, the project team members reviewed the data analysis to determine whether the PICOT question originally posed was effectively addressed. The project results address the PICOT question and provide valuable information to inform future VA housing provision processes. The project will be evaluated by the facility stakeholders for its outcomes.

Lessons Learned

The initial plan for data collection for this DNP project was to obtain data from the facility data center. The data center informed us that their system could not provide data regarding unhoused veterans admitted to the psychiatric unit. With the permission of the Education Department and exemption from the facility IRB as a non-research project, the student could retrieve all the needed data via chart review of the electronic health records, which is time-consuming. One lesson learned from the data collection process was that the DNP project may experience unexpected complications and barriers. The student did not know such complications

and barriers existed until applying for access to the database. To avoid the same situation, the student can contact the supervisor from the data center to determine the availability of the needed data. A discussion on how to create the information for the future should be held between the data center employees and the DNP student. This experience also suggests that the data center should consider having data to identify if veterans admitted and discharged from the VA medical center as unhoused or housed veterans, as well as their discharge status as housed or unhoused. Another lesson learned is obtaining approval and exemption from the facility IRB. It took more than three months from the date when the student initiated the project for IRB reviewing till it was approved for exemption and confirmed the DNP project as a non-research project. This student did not know about the mandated IRB review from the facility till informed by the facility employee. It is a lesson learned that the DNP student should reach out to the facility employees from related departments, such as nursing, education, and research, to obtain valuable information before initiating the project. To make the data collection process accessible, the DNP student must establish collaborative relationships to obtain useful information and resources; this is another lesson learned.

Discussion of Project

Summary

The results of this DNP project show that unhoused veterans discharged with social worker-coordinated housing were less likely to be readmitted than those discharged without housing arrangements. These results can inform future facility decision-making regarding housing resource distribution for unhoused veterans. Evaluating the impact of housing provision for unhoused veterans provides significant evidence of benefits to the healthcare, housing, and other assistance programs provided to our country's veteran population and aids in sustaining the

provision of services to those who have served our great nation. With multiple housing resources provided to unhoused veterans, the VA may use the result of this DNP project to evaluate the process for housing resources distribution to determine if any improvement can be identified and, therefore, improve the unhoused veterans' housing situation in the future.

Interpretation and Integration with the Literature

Results of this project indicate that 109 unhoused veterans with 171 admissions to the psychiatric unit between January 1, 2022 and August 31, 2023 experienced more frequent trauma-related diagnoses, such as PTSD (n = 90, 40.9%), depression (n = 58, 33.9%), and substance use (n = 121, 70.7%); had higher readmission rates: PTSD (n = 48, 66.7%), depression (n = 33, 45.8%), and substance use (n = 50, 69.4%). Similarly, Cheung et al. (2015) reported that hospitalizations were associated with severe mental illness, suggesting that management of mental illness may reduce hospitalization. However, management of unhoused persons with mental illness is difficult. Tsai et al. (2017) found that 5.6% of veterans in need of mental illness referral or treatment-experienced unhouse ness within 1 year of the referred care. A study conducted in 2007 also found that unhoused veterans were more likely to have been admitted for psychiatric and substance abuse diagnosis (79.9%) compared with housed veterans (Adams, Rosenheck, Gee, Seibyl, & Kushel, 2007). These studies concluded, also as evidenced by this DNP project, that although there are many resources available to unhoused people, being unhoused and having mental illness poses challenges to the utilization of these resources.

The average length of stay of the unhoused veterans in this psychiatric unit was 14 days, which aligns with the information cited in the literature. Currie et al. (2018) found that 73% of their participants were unhoused people with mental illness who had at least one admission to hospitals in 5 years, with a mean stay of 14 days; over 53% were readmitted within one year. In

comparing with the average stay in the psychiatric units or hospitals in non-unhoused patients with mental illness, the average length of stay among unhoused patients with mental illness was almost three times longer (Abdul-Hamid, Bhan-Kotwal, Kovvuri, & Stansfeld, 2017).

One thing that needs to be clarified is that the social workers attempted to provide housing assistance to all veterans if they were identified as unhoused or at risk of being unhoused upon admission. This information can be retrieved from the social workers' progress notes when a veteran is admitted and discharged through the facility's electronic health records. Among the 171 admissions of unhoused veterans, there were 35.7% (n=61) discharged with social worker-coordinated VA-funded housing, 12.9% (n=22) discharged to families or friends that are coordinated by social workers, and 51.5% (n=88) discharged unhoused who declined housing assistance offered by the social workers. Unhoused veterans discharged with VA-funded housing assistance had readmission of 29.5% (n=18), the readmission rate for unhoused veterans discharged to family and friends was 18.2% (n=4), and the readmission rate was 56.8% (n=50) among unhoused veterans discharged unhoused. During this period, 14 patients had two admissions; four patients had three admissions; two had eight admissions; one had ten admissions; and one had 16 admissions. The remaining 87 patients had one admission, which means no readmissions to this psychiatric unit. Still, they might be admitted to other units of this hospital, other VA hospitals, or community hospitals. Although all discharges involved social workers' assistance or coordination with housing, the outcomes were different, and so did the readmission rates. Similarly, a study conducted on samples from Florida, New York, and Massachusetts found that the unhoused population had significantly higher readmission rates (Khatana et al., 2020). Munson (2020) and team found that 30-day readmission among unhoused and Medicaid patients with unstable housing was 27.4%, the 90-day readmission rate was 21.2%,

and 40% of readmissions occurred within 7 days upon discharge (Racine, Munson, Gaeta, & Baggett, 2020).

The results of this DNP project and cited literature indicate that unhoused veterans admitted to a psychiatric unit have higher rates of diagnoses of depression, PTSD, and substance use, have longer average length of stay as compared to housed mentally ill veterans, and higher readmission rates if no housing is provided upon discharge.

Implications for Nursing Practice

The nurse is the largest professional workforce in the United States who provides care to those who are sick and in need of assistance (American Association of Colleges of Nursing, 2023). Nursing ethical principles of autonomy, beneficence, justice, and non-maleficence (Haddad & Geiger, 2023) and the nursing process of assessment, diagnosis, planning, implementation, and evaluation (Toney-Butler & Thayer, 2023) are the most important contents in nursing practice. Autonomy refers to patients' right to make decisions for themselves; beneficence is followed by providing the right treatments that will benefit patients instead of doing harm; justice is the principle of patients being treated equally and fairly; and non-maleficence means that nurses should not harm the patients (Haddad & Geiger, 2023). Nursing practice starts with (1) assessing patients by collecting subjective and objective data from the patients; (2) getting nursing diagnoses of the patients' conditions using critical thinking; (3) setting up a treatment plan for the patients based on their diagnoses; (4) carrying on the treatment plans; and (5) evaluating the outcomes of the treatment and make modifications if needed for desirable positive results (Toney-Butler & Thayer, 2023). Nurses encounter the conflict of providing professional care for their patients and any ethical issues that may require nurses to take priority while practicing nursing principles (Nasman & Nyholm, 2021) in working on

admissions and readmissions with unhoused veterans. Nurses working in a psychiatric unit or hospital may face ethical and moral challenges to care for unhoused veterans with barriers such as limited housing resources, discrimination, mental illness and substance use, and treatment nonadherence (Morris G., 2023). Applying nursing ethical principles and nursing process, nurses can play an important role in caring for and assisting unhoused veterans by (1) engaging thoroughly with this population to establish trust and eliminate discrimination; (2) assessing, understanding and advocating for their needs, including food, housing, and social support; (3) providing needed care and treatments in mental health, including substance use; (4) being aware of the VA resources to housing assistance and collaborating with social workers to offer appropriate housing; and (5) evaluating the outcomes of the interventions to reduce unhoused veterans' admission and readmission, improve housing situation, and promoting their wellness in mental health.

Potential for Sustainability

The result of this DNP project and literature review indicates that providing housing resources to unhoused veterans with mental illness can impact their readmissions to psychiatric hospitals/units. The VA medical centers should continue to evaluate the unhoused veterans' needs and the protocols in which housing assistance resources are offered/provided to keep mentally ill veterans permanently housed with continued congressional allocated funds. To provide enough housing resources to unhoused veterans, the VA should continue coordinating with the state government and the communities to locate and fund available housing programs, such as the CALVET program in California (CALVET, 2022). At the same time, offering resources to assist veterans with needed job training, education, and employment resources to decrease their financial difficulties. Programs provided at the VA for substance abuse treatment

and other specialty treatments for mental illness can reduce the risks of being unhoused. It is essential to make unhoused veterans aware of the availability of VA housing programs and ensure that all the programs elicit a return on investment.

Dissemination and Utilization of Results

After the project defense, the DNP project's results will be disseminated in 2024. The project results abstract has been or will be submitted for presentation at the American Association of Nurse Practitioners (AANP) annual conference (June 2025), the VA National APRN committee for Nurses' Week poster presentation (May 2024), the Western Institute of Nursing conference (April 2024), the TriService Nursing Research Programs (TSNRP) Research and Evidence-Based Practice Dissemination Course (April 2024), and the Southwest Region Chi Eta Phi Sorority 55th Annual Conference (March 2024). As part of the dissemination and utilization of the project results, a final report will be presented to the VA medical center leadership and collaboration partner departments upon project completion.

Appendix A: IRB Review from UNLV

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UNLV

School if Nursing

DNP Project Human Subject Safety and Protection Review

Notice of Excluded Activity

DATE: August 14, 2023

TO: Maryse Noelle Nguyen
FROM: School of Nursing DNP Project Course Committee

PROTOCOL TITLE:
Impact of Housing or Treatment Adherence on Mentally Ill Homeless Veterans' Readmission to a Psychiatric Hospital

SUBMISSION TYPE: Initial

ACTION: No Human Subjects Research
REVIEW DATE: June 27, 2023
REVIEW TYPE: ADMINISTRATIVE REVIEW

Thank you for your submission of materials for this proposal. This memorandum is notification that the proposal referenced above has been reviewed as indicated in Federal regulatory statutes 45 CFR 46.

In accordance with the UNLV IRB and Human Subject Safety and Protection considerations, the review of the DNP project as a review process has been approved by the UNLV IRB. This process includes a review by Graduate Faculty in the School of Nursing and the DNP Program Director with Human Subjects Safety and Protection training prior to approval for implementation. This process is carried out as an additional review given DNP projects are typically Quality Improvement (QI) or meet the clarification of an exempt IRB status.

The School of Nursing DNP Project Review Committee has determined this request does not meet the definition of 'research with human subjects' according to federal

regulations, and there is no further requirement for IRB review. As such, the School of Nursing provides a level of review and consideration for human subject safety and protection through this course associated review. As a formal IRB submission is not required, the following guidance is applicable and must be followed to ensure ongoing transparency and oversight of the proposed project.

Any changes to this excluded activity may cause this request to require a different level of review, so please contact our office to discuss any anticipated changes.

If you have questions, please contact the DNP Program Director and your course faculty. Please include your project title in all correspondence.

Proposal Reviewed and Approved by:

Kathleen Theissen DNP
DNP Project Course Faculty

August 14, 2023
Date

Leslie Jeter
DNP Project Course Faculty

8/16/2023
Date

Candace W Burton
DNP Program Director

8-16-23
Date

Appendix B: IRB Approval from LBVA

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DEPARTMENT OF VETERANS AFFAIRS
VALBHS IRB
VA Long Beach Healthcare System, Research Service (09/151)

Date:	**July 6, 2023**
From:	**VALBHS IRB Office**
To:	**Maryse-Noelle Nguyen**
Protocol Title:	**Impact of Housing or Treatment Adherence on Mentally Ill Homeless Veterans' Readmission to a Psychiatric Hospital**
Submission Type:	**Research – Non-Research Operations Evaluation**
Determination:	**Non-Research Operations**

Dear Maryse-Noelle Nguyen,

Thank you for your request of Research – Non-Research Operations Evaluation.

The VALB IRB Office has determined that based on the responses in the attached document and the proposed project description approval by an IRB or other review committee is not needed.

The project is considered to be a non-research VHA operations activity. If the results of this project are presented or published, they cannot be presented as research, nor does it have research approval.

- Any change made before, during, or after implementation that results in an intent to expand the knowledge base of a scientific discipline or scholarly field of study, or otherwise contribute to generalizable knowledge, constitutes research and must be submitted to an IRB or other pertinent review committee.
- Please note it is the responsibility of this individual and/or each VA author and coauthor (in cases of publication) to retain a copy of this form for a minimum of 6 years after publication and in accordance with any applicable records retention schedules. A copy of this review document will also be retained by Research Service.
- Publications or presentations of findings from non-Research activities should be documented, prior to publication or presentation by the project lead to the Facility Director or other

individual designated in writing by the Facility Director. (Sample document provided in the attached evaluation form)

The attached form also has a link to some guidance on what constitutes research PROGRAM GUIDE: 1200.21 VHA Operations Activities That May Constitute Research (va.gov)

Thank you,

Best,

Robert H. Lee, MD, MAS,

IRB Chair

VA Long Beach Healthcare System

5901 E. 7th Street

Long Beach, CA 90822

Appendix C: Preliminary Budget for DNP Project

Maryse-Noelle Nguyen

University of Nevada, Las Vegas

March 5, 2023

Description of project: Using existing electronic data from an acute psychiatric hospital in VA Long Beach Medical Center, this project will evaluate if post-discharge housing affect readmission rates among unhoused veterans with mental illness who want to end their unhousedness. The DNP student will get data from the hospital electronic medical records and not participate in any interviews or surveys of patients. The data collection process will happen at the contracted facility (VA Long Beach Medical Center). The estimated time for data retrieval and analysis will be about 200 hours.

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	Itemized cost	Project	Ongoing	Note
Direct Cost	Direct labor	$0.00		N/A
	Direct materials	$0.00		absorbed
	Manufactural supplies	$0.00		N/A
	Wages for the production staff	$0.00		N/A
	Dissemination at WIN, AANP and other conferences	$6000.00		May be partially covered
	Gas and mileage	$460.00		
Subtotal:		$6460.00		
Indirect Cost	**Itemized cost**	**Project**	**Ongoing**	**Note**
	Utilities	$0.00		Absorbed
	Office Supplies	$50.00		Paper, ink

	Office technologies	$90.00		Office 365, Grammarly
	Campaign marketing	$0.00		N/A
	Employee benefit and perk programs	$0.00		N/A
	Insurance cost	$0.00		N/A
	Poster printing for presentation	$200.00		
Subtotal:		$340.00		
Total:		$6800.00		

Source: Dr. Karen Perez's YouTube Video "DNP Project Budget" at

https://www.youtube.com/watch?v=c93XdlhztZM&t=11s

Appendix D: Tables and Figures

Table 1: Unhoused in the United States: 2007-2023

Year	Overall	Individuals	People in Families	Chronic Homeless	Veterans	Unaccompanied Youth
2007	647,258	412,700	234,558	119,813	60,988	null
2008	639,784	404,525	235,259	120,115	62,223	null
2009	630,227	392,131	238,096	107,212	73,367	null
2010	637,077	395,140	241,937	106,062	74,087	null
2011	623,788	387,613	236,175	103,522	65,455	null
2012	621,533	382,156	239,397	96,268	60,579	null
2013	590,364	368,174	222,190	86,289	55,619	null
2014	576,450	360,189	216,261	83,989	49,689	null
2015	564,708	358,422	206,286	83,170	47,725	36,907
2016	549,928	355,212	194,716	77,486	39,471	35,686
2017	550,996	366,585	184,411	86,705	40,020	38,303
2018	552,830	372,417	180,413	88,640	37,878	36,361
2019	567,715	396,045	171,670	96,141	37,085	35,038
2020	580,466	408,891	171,575	110,528	37,252	34,210
2021	380,630	236,483	137,509	64,278	22,030	17,935
2022	580,462	421,392	161,070	127,768	33,129	30,090
2023	653,104	467,020	186,084	154,313	35,574	34,703

Note: data are from National Alliance to End Homelessness as of January 2024 (National Alliance to End Homelessness, 2023)

Table 2: Comparison of Healthcare Related Costs for Unhoused and Housed Veterans

	Unhoused Veterans	Housed Veterans
Outpatient Visits	81.1%	68.3%
Outpatient Costs	$2759.00	$1397.00
Mean Inpatient Costs	$4157.00	$1251.00
Number of Inpatient Stays	3.4	0.8
ER Costs	$175.00	$46.00

Note: data from Nelson, et al., 2018.

Table 3: Change Theories Comparison

Lewin	Rogers	Lippitt	Kotter	Duck
Unfreezing: identify if there is a problem and if a need for change.	**Knowledge:** educate and inform employees about the need for change. **Persuasion:** communicate employees to encourage involvement and readiness. **Decision:** decision about if a change will be initiated or accepted.	**Phase 1:** identify the problem and be aware of the need for change. **Phase 2:** develop a plan to assess the motivation and readiness for change. **Phase 3:** identify the facility's resource and motivation for change.	1. Create urgency for change. 2. Form a team to guide the change. 3. Create a plan for change. 4. Communicate with stakeholders regarding change.	**Stagnation:** recognize that problems exist and agree that changes are needed **Preparation:** announce the decision for changes and evaluate the details and specific changes.
Moving: start the change process.	**Implementation:** start the change.	**Phase 4:** Set up goals and plans for change. **Phase 5:** Implement the change. **Phase 6:** employees accept the change and maintain the change for stabilization.	5. Identify and remove change barriers. 6. Provide short-term wins.	**Implementation:** initiate the changes based on data collection and analysis. **Determination:** understand and realized the necessity and importance of having the change.
Refreezing: the change is done, and the problem resolved.	**Confirmation:** employees accept the benefits of change and will maintain the change.	**Phase 7:** change is established.	7. Build up progress in change. 8. Stick the change in the organization's culture	**Fruition:** evaluate the outcomes and feedbacks of the change to determine of the change is beneficial.

Resources: Lewin, 1951; Rogers, 2003; Lippitt, 1958; Kotter, 1996; Duck, 2001

Table 4: GANTT Chart for DNP Project

DNP Project Timeline Spring 2023 By Semester

Month	**January**				**February**				**March**						**April**				**May**	
Task Week	SB *	1	2	3	4	5	6	7	8	9	S	10	11	12	13	14	15	16	17	SB
Meetings with Full Committee					x			x				x								
DNP Proposal Paper Chapter 1 draft to Chair for feedback			x																	
DNP Proposal Paper Chapter 1 draft to committee members for feedback						x														
DNP Proposal Paper Chapters 2-4 draft to Chair for feedback								x			x									
DNP Proposal Paper Chapters 2-4 draft to committee members for feedback									x											
Facility Agreement Letter																				
Committee Form submitted to Graduate College			x																	
Regular VA Project Team meetings scheduled							x							x				x		

NOTE: SB=Spring Break; SB*=Semester Break

DNP Project Timeline Summer 2023 By Semester

Month	May				June				July					August					
Task Week	SB *	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	SB
Meetings with Full Committee			x				x				x			x					
Meetings with Chair			x		x		x		x		x		x		x				
Regular VA Project Team meetings scheduled		x			x				x					x					
Update ROL –Update Study Flow Diagram				x				x					x				x		
Facility Agreement Letter		x																	

NOTE: SB=Spring Break; SB*=Semester Break

DNP Project Timeline Fall 2023 By Semester

Month	September				October				November					December					
Task Week	SB *	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	SB
Meetings with Full Committee				x			x				x				x				
Meetings with Chair		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Secondary data collection																			
Data analysis		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Submit write-ups to Chair for comments and review				x				x				x							
Submit write-up to Committee for comments and review					x				x				x						
Final draft to Chair for comments and review														x					
Final draft to Committee for review																x			
Regular VA Project Team meetings scheduled		x			x				x					x					

NOTE: SB=Spring Break; SB*=Semester Break

DNP Project Timeline Spring 2024 By Semester

Month	January				February				March					April				May	
Task Week	SB *	1	2	3	4	5	6	7	8	9	S	10	11	13	14	15	16	17	SB
Meetings with Chair		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Meetings with Full Committee				x				x				x				x			
Final write-ups							x	x	x										
Submit write-ups to Chair for comments and review										x									
Submit write-up to Committee for comments and review											x								
Final draft to Chair for comments and review												x							
Final draft to Committee for comments and review													x						
Draft PPT for defense submitted to Chair for comments and review													x						
Draft PPT for defense submitted to Committee for comments and review														x					
Final PPT for defense submitted to Chair for comments and review														x					
Final PPT for defense submitted to Committee for comments and review															x				
Final defense												x							

NOTE: SB=Spring Break; SB*=Semester Break

Table 5: Data Points and Sources

		Source
1	Total number of unhoused veterans with mental health diagnosis admitted to L1 from January 1, 2022 to August 31, 2023 (only count of initial admissions for veterans; not to include any readmissions)	Medical Record Review
2	Veterans' length of stay for the period from January 1, 2022 to August 31, 2023 (initial admission date and discharge date)	Medical Record Review
3	Mental health diagnosis (list of diagnoses, DMS-5 or ICD codes) for the veterans diagnosed with mental health issues identified as unhoused and admitted to L1	Medical Record Review
4	Identified as receiving housing in Social Work note	Medical Record Review
5	Identified as not receiving housing in discharge note	Medical Record Review
6	Obtain a list of veterans from #1 and #2 above to find any duplicate admissions during the six-month period following the initial admission of	Medical Record Review
7	Request data for specific veterans initially admitted February through December and any readmissions within six months of the initial admission.	Medical Record Review
8	Once the list of subsequent readmission(s) is obtained, additional data points for this smaller list of patients will be requested of the LBVA Data Center.	Medical Record Review

Table 6: Evidence Table

No	Citation	Sample/Setting	Research Design	Data Analysis	Findings	Level of Evidence	Comments
1	Mascayano, F., Haselden, M. , Corbeil, T. , Wall, M. , Tang, F. , Essock, S. , Frimpong, E. , Goldman, M. , Radigan, M. , Schneider, M. , Wang, R. , Dixon, L. , Olfson, M. & Smith, T. (2022). Patient-, hospital-, and system-level factors associated with 30-day readmission after a psychiatric post hospitalization. The Journal of Nervous and Mental Disease, 210 (10), 741-746. doi: 10.1097/NMD.0000000000001529	Patients under 65 years old admitted to psychiatric hospitals in New York state between 2012 to 2013 qualified for the study. n=19104	Cohort study	All patients, hospitals, and related systems were evaluated with 99% CI (confidence intervals) for adjusted and unadjusted ratios. For repeated data collected (readmissions), generalized estimate equations were used. SAS 9.4 was used for data analysis.	15.4% (2941) were readmitted to psychiatric hospital within 30 days after discharge between 2012-2013. Their readmissions were related to unhoused, mental illness, and other medical conditions. Unhoused reported as associated with the highest risk for readmission.	5	Identified unhousedness as being highest risk factor for readmission.
2	Bravo, J., Buta, F.L., Talina, M., & Silva-dos-Santos, A. (2022, September 26). Avoiding revolving doors and homelessness: The need to improve care transition interventions in psychiatry and mental health. Frontiers in Psychiatry, 13, 1021926. https://doi.org/10.3389/fpsyt.2022.1021926	Authors composed of members of psychiatric hospital providers and a medical school in Europe offered their opinion about reducing rapid readmission of unhoused person with mental illness into psychiatric hospitals.	Expert opinion	Discusses research show adapting transitional interventions on discharge to reduce rapid readmission known as revolving door phenomenon among unhoused persons with mental illness.	Recommendations include Early follow-up, education, medications, and post-discharge support may improve discharge outcomes. Housing and social support are important for unhousedness.	7	Current, offer important supportive information in housing, medication, housing, and follow-up for unhoused.
3	Fleury, M.J., Gentil, L., Grenier, G., & Rahme, E. (2022, November). The impact of 90-day physician follow-up care on the risk of readmission following a psychiatric hospitalization. Administration and policy in mental health, 49(6), 1047-1059. https://doi.org/10.1007/s10488-022-01216-z	Collected data from 12,000 patients who had ER visits or psychiatric hospitalizations in Quebec from April 1, 2012, to March 31, 2017.	Nonrandomi-zed controlled cohort study	Comparing psychiatric readmission within six months of discharge and after 90-day period of follow-up care interventions include: 1. Consultation within 90 days of discharge; 2. No consultation; 3. At least 1 consultation within 90 days; 4. At least 1 consultation within the first 30 days; 5. At least one consultation during other periods.	Final 3,311 patients with psychiatric hospitalization were included in this study, 7% were readmitted in the 6 months after the 90-day follow-up period. Patients with schizophrenia and other psychotic disorders had a 52% higher risk for rehospitalization. Patients with suicidal attempts had 2.2 timer higher risk for readmission. Other mental illness, such as personality disorder had lower risk for readmission of 43%.	3	Study conducted in Canada, but findings can be applicable. It did not study unhoused vs. non-unhoused.

No	Citation	Sample/Setting	Research Design	Data Analysis	Findings	Level of Evidence	Comments
4	Hermer L, Nephew T, Southwell K. Follow-up psychiatric care and risk of readmission in patients with serious mental illness in state funded or operated facilities. Psychiatr Q. 2022 Jun;93(2):499-511. doi: 10.1007/s11126-021-09957-0. Epub 2021 Oct 25. PMID: 34694533; PMCID: PMC9046324.	Using MH-TED data, a 6-month study with 44,761 patients with schizophrenic disorders, 45,413 patients with bipolar disorders, and 74,995 patients with depressive disorders hospitalized between 2014 and 2018 with least one outpatient treatment and readmission within 30 days post-discharge	retrospective longitudinal cohort study	A potential confounder analysis conducted to find out if patients had admission within 30 days post-discharge. Wald chi-square tests used to determine differences between two exposure groups. For continuous covariates tested for their equality. Independent samples t-tests with pooled variance.	13.3% patients with schizophrenia were readmitted within 31-180 days. 15.7% needed readmission for the first 180 days. 9.6% needed re-hospitalized within 30 days.	5	Addressed risk of mental illness for readmission but no categorized if patients were unhoused or non-unhoused.
5	Laliberté, V., Stergiopoulos, V., Jacob, B., & Kurdyak, P. (2019). Homelessness at discharge and its impact on psychiatric readmission and physician follow-up: A population-based cohort study. Epidemiology and psychiatric sciences, 29, e21. https://doi.org/10.1017/S2045796019000052	All patients discharged from a Canadian (Ontario) psychiatric hospital from April 1, 2011, to March 31, 2014, categorized as unhoused and non-unhoused were included. n=91028	Population-based cohort study, uncontrolled	t-tests for continuous variables, X2 for dichotomous or categorial variables. Cox Proportional Hazard models were used.	Unhoused people are less likely to have follow up visits to outpatient providers, more likely to use acute healthcare service such as hospitals and ER, less likely to have access to healthcare post discharge, and more likely to be readmitted to a psychiatric unit. Housing assistance are needed at discharge.	5	Study was done in Canada but the population of the study, its design, can provide useful reference and information.
6	Peng, Y., Hahn, R. A., Finnie, R. K., Cobb, J., Williams, S. P., Fielding, J. E., . . . Truman, B. I. (2020). Permanent supportive housing with Housing First to reduce homelessness and promote health amoung homeless populations with disability: A community guide systematic review. Journal of Public Health Management and Practice, 404-411. doi: 10.1097/PHH.0000000000001219	2590 citations screened, selected 26 studies in 65 publications with a total of 17,182 participants	Systemic review	Calculated medians and interquartile intervals for outcomes of > 4 data points.	Housing First program can decrease unhousedness by providing more stable housing.	1	Provided evidence of correlation between housing stability and unhousedness.
7	Khatana, S. A., Wadhera, R. K., Choi, E., Groeneveld, P. W., Culhane, D. P., Lushel, M., . . . Shen, C. (2020). Association of homelessness with hospital readmissions--An analysis of three large states. The Journal of General Internal Medicine, 2576-2583. https://doi.org/10.1007/s11606-020-05946-4	Selected 515,737 identified unhoused patients from 23,103,125 hospitalizations from January 1, 2010, to September 30, 2015 in three states: Florida, New York, and Massachusetts. Compared 30-day and 90-day readmission rates to non-unhoused populations	Retrospec-tive cohort study	Compared demographics, health insurance, hospitalizations, clinical conditions, and readmissions, comparing to unhoused and non-unhoused groups. Using SAS to perform the analysis and consider statistically significant if p values < 0.05.	In all three states, unhoused population had significantly higher readmission rates. Florida has the highest difference and New York the lowest.	3	Great evidence supported with large data sample.

No	Citation	Sample/Setting	Research Design	Data Analysis	Findings	Level of Evidence	Comments
8	Moore, C.O., Moonie, S., & Anderson, J. (2018, August 9). Factors associated with rapid readmission among Nevada state psychiatric hospital patients. Community mental health journal, 55(5), 804-810. https://doi.org/10.1007/s10597-018-0316-y	All patients admitted to Rawson-Neal Psychiatric Hospital in Las Vegas from May 1, 2012, to April 30, 2014. Total 7177 patients with 12068 admissions during this period	Uncontrolled cohort study	Various statistical analyses and models were used for association between several factors to rapid readmissions.	Factors such as age, divorced/separated/never married, living alone, staying at a unhoused shelter/on the street, history of legal problems, not adherence with medications, lack of support family/support, no stable housing, having financial problems, and diagnosed with mental illness or substance use contribute to rapid readmission to psychiatric hospitals significantly.	5	Can provide some similarities to populations using government-funded psychiatric hospitals.
9	Currie, L.B., Patterson, M.L., Moniruzzaman, A., McCandless, L.C., & Somers, J.M. (2018, October). Continuity of care among people experiencing homelessness and mental illness: Does community follow-up reduce rehospitalization?. Health Services Research, 53(5), 3400-3415. https://doi.org/10.1111/1475-6773.12992	n=433 participants were all unhoused with mental illness	Two parallel Longitudinal randomized controlled trial	Categorial or nominal variables were used along with counts, percentage, and continuous variables. Standard deviation or median were included as well. Independent t-test and Pearson chi-square used to compare continuous variables and categorical variables respectively.	73% had at least one admission to hospitals in 5 years, with mean stay of 14 days; n=201 for psychiatric treatments. Over 53% readmitted within one year. 7-days post discharge community follow-up did not have significant connection with readmissions of participants who were unhoused and had mental illness. Post-discharge care and follow-up are important but not sufficient to prevent readmission if housing and other assistance are not provided to unhoused people with mental illness.	2	Study conducted samples in Canada, but the findings are applicable to unhoused, mental illness, and readmission to psychiatric hospitals.
10	Kushel, M. (2018). Homelessness. Medical Care, 56 (6), 457-459. doi: 10.1097/MLR.0000000000000920.	Editorial narrative discussing about ow unhoused population with mental illness and substance have higher risk for hospitalization	Expert opinion	n/a	Unhoused have higher prevalence of risk factors for acute healthcare utilization, including mental illness and substance use disorder. Even with various resources provided, unhoused is still the major risk factor for readmission. High cost of unhousedness both financially and emotionally retire changes.	7	Expert opinion that provided support.
11	Nelson, R. E., Suo, Y., Pettey, W., Vanneman, M., Montgomery, A. E., Byrne, T., . . . Gundlapalli, a. A. (2018). Costs associated with health care services accessed through VA and in the community through medicare for veterans experiencing homelessness. Hearth Services Research, 5352-5374.	Longitudinal data from VA healthcare systems involving veterans enrolled and treated from 2002-2014	Observational study using longitudinal data	Used multivariable GEE with two-part models with healthcare cost as an independent variable.	Unhoused veterans had more outpatient visits, had higher costs in outpatient visits, longer inpatient stays, and higher ER visit costs.	3	Great information about unhoused veterans and cost compared to non-unhoused veterans.

No	Citation	Sample/Setting	Research Design	Data Analysis	Findings	Level of Evidence	Comments
12	Sfetcu, R., Musat, S., Haaramo, P. et al. Overview of post-discharge predictors for psychiatric re-hospitalizations: A systematic review of the literature. BMC Psychiatry 17, 227 (2017). https://doi.org/10.1186/s12888-017-1386-z	Review articles from Ovid Medline, PsycINFO, ProQuest Health Management, OpenGrey, and Google Scholar related to readmission and post-discharge. Articles were published from January 1990 to June 2014. 80 articles selected	A systemic review of the literature	A software developed by CEPHOS-LINK was used to translate into English if not published with English. A system review software DistillerSR was used for data analysis. Due to large variability from the studies, meta-analysis was not used.	Readmissions are related to housing, treatment compliance, post-discharge conditions. Consistent and long-term post-discharge follow-up are protecting factors for rehospitalization.	1	Offer information on factors that can affect readmission.
13	Racine, M. W., Munson, D., Gaeta, J. M., & Baggett, T. P. (2020). Thirty-day hospital readmission among homeless individuals with Medicaid in Massachusetts. Medical Care, 27-32.	1269 Medicaid patients admitted in Massachusetts hospitals from 2013 to 2014	Retrospective Cohort study	Used Generalized Estimating Equations (GEE) for the 30-day readmission and looked for multiple admissions. Multivariable GEE models to analyze age, sex, race, and chronic medical conditions. SAS 9.4 statistical software was used for all analyses.	30-day readmission among unhoused and Medicaid patients with unstable housing counted 27.4%; 90-days readmission rate was 21.2%; 40% of readmissions occurred within 7 days upon discharge.	3	By comparison of unhoused to non-unhoused, findings are useful for PICOT question in related to C.
14	Jack Tsai, Robert A. Rosenheck, Risk factors for homelessness among US veterans, Epidemiologic Reviews, Volume 37, Issue 1, 2015, Pages 177–195, https://doi.org/10.1093/epirev/mxu004	Literature search of English articles between 1900 to July 2014 via PubMed, PsycINFO, Google Scholar, Academic Search Premier, and Web of Science. 32 studies were selected.	Systematic review	Used Preferred Reporting Items for Systematic Reviews and Meta-Analysis as guidelines. Categorized studies as rigorous, less rigorous, and comparative studies for comparison.	Veterans have higher risk for unhousedness with similar risk factors with non-veteran unhoused person, such as low income, unemployment, mental illness, substance use, and lack of social support. They also have unique risk factors due to their military service and combat.	1	Helpful information from literature review.
15	Cheung, A., Somers, J.M., Moniruzzaman, A., Patterson, M., Frankish, C.J., Krausz, M., & Palepu, A. (2015, August 5). Emergency department use and hospitalizations among homeless adults with substance dependence and mental disorders. Addiction Science & Clinical Practice, 10(1), 17. https://doi.org/10.1186/s13722-015-0038-1	two randomized controlled studies using survey data from October 2009 to June 2011, and administrative data from ER and hospitalization from April 2007 to September 2012. n=381	two randomized controlled studies	Parametric (Student's t-test or one-way ANOVA for continuous variables) and nonparametric (Pearson's Chi square test for categorical variables) tests were used for comparison. 381 participants had total of 550 hospitalization within 2-year period. The highest number of admissions was 15. 61% admissions happened during the first year. 81% of the total 550 admissions were in psychiatric units by 137 unhoused persons.	There is no significant association between substance use and ED visits and hospitalizations. Hospitalizations were associated with severe mental illness, suggesting that management to mental illness may reduce hospitalization, but is difficult among unhoused person with mental illness. Providing housing and social support may be helpful.	2	Interesting information about no association between substance use and ED visit.

No	Citation	Sample/Setting	Research Design	Data Analysis	Findings	Level of Evidence	Comments
16	Tsai, J., Hoff, R. A., & Harpaz-Rotem, I. (2017). One-year incidence and predictors of homelessness among 300,000 U.S. Veterans seen in specialty mental health care. Community Mental Health Journal, 203-207. http:/dx.doi.org/10.1037/ser0000083	306,351 veterans treated at mental health clinics in 130 VA facilities from October 1, 2008, to September 21, 2012	Retrospective cohort study	Descriptive statistics to find 1-year unhousedness in different genders and ages. Bivariate comparisons unhoused veterans in different conditions. Cohen's d was used to compare different variables. Logistic regression analyses were used for predictive factors in unhousedness.	5.6% veterans in need of mental illness referral or treatment experienced unhousedness within 1 year of the referred care.	3	Supporitive evidence of correlation between unhousedness and mental illness.
17	Adams, J., Rosenheck, R., Gee, L., Seibyl, C.L., & Kushel, M. (2007, February 3). Hospitalized younger: A comparison of a national sample of homeless and housed inpatient veterans. Journal of Health Care for the Poor and Underserved, 18(1), 173-184. https://doi.org/10.1353/hpu.2007.0000	Data analysis on psychiatric inpatient unhoused veterans at 141 VA medical centers, range from 1996 to 1998. Data collected related to housing information at admissions to medical-surgical, psychiatric, and substance abuse units. n=43733	Uncontrolled cohort study Retrospective cross-sectional secondary data analysis	Chi-square test used to compare unhoused and non-unhoused data, Fisher's exact test with a Bonferroni correction for multiple comparisons, and Kruskal-Wallis test used as well. 11.8% of all 43733 patients were unhoused. More unhoused patients (37.7%) than non-unhoused veterans (22.2%) had mental illness diagnosis or substance use. 12.1% of total patients admitted to hospitals were unhoused, 42.3% had substance use disorder and 20.2% had mental illness.	Unhoused veterans were more likely to have been admitted for psychiatric and substance abuse diagnosis (79.9%) compared with housed veterans. Should act early to prevent hospitalization of unhoused veterans with severe illnesses that can be potentially fatal.	5	Published in 2007; study design and results were useful.
18	Irmiter, C., McCarthy, J.F., Barry, K.L., Soliman, S., & Blow, F.C. (2007, October 24). Reinstitutionalization following psychiatric discharge among VA patients with serious mental illness: A national longitudinal study. Psychiatric Quarterly, 78(4), 279-286. https://doi.org/10.1007/s11126-007-9046-y	Patient discharged from VA inpatient psychiatric units during FY 1998 to evaluate readmissions. n=35,527	National longitudinal cohort study	Multivariable Cox proportional hazards regression, two separate analyses, and Charlson score were used for this study by following this population from FY 98 to FY 05 for their readmissions to psychiatric units. Covariance sandwich estimators were used for patients discharged from the same facility.	72% of patients were readmitted for psychiatric care within 2 years. Veterans with mental illness count highest rate for readmission.	5	Key words: veterans, inpatient psychiatric admission, readmission, only missing unhoused.

Table 7: Synthesis Table

The following articles were selected because they offer answers to PICOT question: Do unhoused veterans with mental illness who were admitted to an acute psychiatric hospital (P), and who are provided housing provision following discharge, compared to those unhoused veterans (I), had no housing provision (C), have a difference in the number of readmissions post-discharge (O) within six months of initial admission occurring between January 1, 2022 to August 31, 2023 (T)?. Keywords include unhoused veterans, mental illness, psychiatric hospital, housing, and readmission. Some studies did not specifically focus on unhoused veterans due to evidence reporting there is no significant difference between unhoused non-veterans and unhoused veterans in terms of mental illness, risk factors, psychiatric hospitalization, and readmissions (Tsai & Rosenheck, 2015).

First author/year	Sample	Sample Characteristics	Study Design	Interventions	Findings	Comment
Mascayano 2022	19,104	Patients under 65 years old admitted to psychiatric hospitals in New York state 2012 to 2013.	Cohort study	15.4% readmitted within 30 days with higher rate among patients with diagnosis of schizoaffective disorder (20.8%), schizophrenia (17.3%), and bipolar disorder (15.1%). Individual-, hospital- and system-level factors were also studied.	15.4% (2941) were readmitted to psychiatric hospital within 30 days after discharge between 2012-2013. Their readmissions were related to homeless, mental illness, and other medical conditions. Unhoused has the highest risk.	Support PICOT question: unhoused with mental illness are related to readmission; missing unhoused veterans.
Bravo 2022	n/a	opinion about reducing rapid readmission of unhoused person with mental illness into psychiatric hospitals.	Expert opinion	Research showed adapting transitional interventions on discharge to reduce rapid readmission known as revolving door phenomenon among unhoused person with mental illness.	Early follow-up, education, medications, and post-discharge support may improve discharge outcomes. Housing and social support are important for unhousedness.	Support PICOT question: housing and post-discharge adherence are important for unhousedness and reduce readmission; missing unhoused veterans
Hermer 2022	44,761 45,413 74,995 Total: 165,169	Patients were hospitalized between 2014 and 2018 with least one outpatient treatment and readmission within 30 days post-discharge.	retrospective longitudinal cohort study	A potential confounder analysis conducted to find out if patients had admission within 30 days post-discharge. Wald chi-square tests used to determine differences between two exposure groups. For continuous covariates tested for their equality. Independent samples t-tests with pooled variance.	13.3% patients with schizophrenia were readmitted within 31-180 days. 15.7% needed readmission for the first 180 days. 9.6% needed re-hospitalized within 30 days.	Support PICOT question: gives answers related to mental illness and readmission; missing unhousedness and housing, and if they will decrease readmission rate.

First author/year	Sample	Sample Characteristics	Study Design	Interventions	Findings	Comment
Hermer 2022	44,761 45,413 74,995 Total: 165,169	Patients were hospitalized between 2014 and 2018 with least one outpatient treatment and readmission within 30 days post-discharge.	retrospective longitudinal cohort study	A potential confounder analysis conducted to find out if patients had admission within 30 days post-discharge. Wald chi-square tests used to determine differences between two exposure groups. For continuous covariates tested for their equality. Independent samples t-tests with pooled variance.	13.3% patients with schizophrenia were readmitted within 31-180 days. 15.7% needed readmission for the first 180 days. 9.6% needed re-hospitalized within 30 days.	Support PICOT question: gives answers related to mental illness and readmission; missing unhousedness and housing, and if they will decrease readmission rate.
Fleury 2022	12,000	patients who had ER visits or psychiatric hospitalizations at Quebec from April 1, 2012 to March 31, 2017.	Cohort study	Comparing psychiatric readmission within six months of discharge and after 90-day period of follow-up care interventions include: 1. Consultation within 90 days of discharge; 2. No consultation; 3. At least 1 consultation per within 90 days; 4. At least 1 consultation within first 30 days; 5. At least one consultation during other periods.	Final 3,311 patients with psychiatric hospitalization were included in this study, 7% were readmitted in the 6 months after the 90-day follow-up period. Patients with schizophrenia and other psychotic disorders had a 52% higher risk for rehospitalization. Patients with suicidal attempts had 2.2 timer higher risk for readmission. Other mental illness, such as personality disorder had lower risk for readmission of 43%.	Support PICOT question: mental illness and rehospitalization; missing unhousedness and discharge plans such as housing and other post-discharge follow up.
Peng 2020	65	Articles published between by February 2018	Systemic review	Screened 2590 citations; selected 26 studies with 65 publications; total 17,182 participates; studies were randomized controlled trials or pre/posttest studies with control groups.	Housing First program can decrease unhousedness by providing more stable housing.	Support PICOT question: stable housing can reduce unhousedness with Housing First program.
Laliberté 2019	91,028	All patients discharged from a Canadian (Ontario) psychiatric hospital from April 1, 2011 to March 31, 2014	Population-based cohort study	2.3% patients were discharged unhoused, who had higher risk of being admitted involuntarily, along with mental illness. Readmission to a psychiatric hospital for unhoused patients within 30 days were 17.1% and 9.8% for non-unhoused patients. 56.5% unhoused patients with mental illness had no outpatient follow-up within 30 days post-discharge.	Unhoused people are less likely to have follow up visits to outpatient providers, more likely to use acute healthcare service such as hospitals and ER, less likely to have access to healthcare post discharge, and more likely to be readmitted to a psychiatric unit. Housing assistance are needed at discharge.	Support PICOT question: housing and post-discharge are needed to assist unhoused population since they are less likely to follow up; missing U.S. unhoused veterans.
Currie 2018	433	unhoused with mental illness	Two parallel Longitudinal randomized controlled trial	Post-discharge care and follow-up are important but not sufficient to prevent readmission if housing and other assistance are not provided to unhoused people with mental illness.	73% had at least one admission to hospitals in 5 years, with mean stay of 14 days; n=201 for psychiatric treatments. Over 53% readmitted within one year. 7-days post discharge community follow-up did not have significant connection with readmissions of participants who were unhoused and had mental illness.	Support PICOT question: housing has important association in unhoused population with mental illness readmission; missing unhoused veterans.

First author/year	Sample	Sample Characteristics	Study Design	Interventions	Findings	Comment
Moore 2018	7,177	All patients admitted to Rawson-Neal Psychiatric Hospital in Las Vegas from May 1, 2012 to April 30, 2014.	Cohort study	Analyze risk factors contributed to rapid readmission to psychiatric hospitals.	Factors such as age, divorced/separated/never married, living alone, staying at a unhoused shelter/on the street, history of legal problems, not adherence with medications, lack of support family/support, no stable housing, having financial problems, and diagnosed with mental illness or substance use contribute to rapid readmission to psychiatric hospitals significantly.	Support PICOT question: identifies risk factors in rapid readmission to psychiatric hospitals among unhoused population, including housing; missing unhoused veterans.
Kushel 2018	n/a	unhoused population with mental illness and substance use	Expert opinion	unhoused population with mental illness and substance use have higher risk for hospitalization	Unhoused have higher prevalence of risk factors for acute healthcare utilization, including mental illness and substance use disorder. Even with various resourced provided, unhoused is still the major risk factor for readmission. High cost of unhousedness both financially and emotionally retire changes.	Support PICOT question: unhoused with mental illness had higher hospitalizations; missing how housing can reduce readmission.
Khatana 2020	515,737	30-day and 90-day readmission of unhoused population comparing to non-unhoused	Retrospective cohort study	Summary statistics to find the difference of 30-day and 90-day readmissions in unhoused population, comparing to non-unhoused population, in New York, Florida, and Massachusetts.	In all three states, the unhoused population had significantly higher readmission rates. Florida has the highest difference and New York the lowest.	Strong evidence to support PICOT question: unhoused population had higher readmission rate.
Nelson 2018	111,535	Observational study with longitudinal data analyses	Observational cohort study	Analyzed 16,961 unhoused veterans vs. total 111,535 enrolled veterans. Data analysis focuses on healthcare cost as an independent variable to find out the relationship between unhoused status and healthcare treatment	Unhoused veterans had more outpatient visits, had higher costs in outpatient visits, longer inpatient stays, and higher ER visit costs.	Provide supporting evidence for PICOT question: identifies unhoused veterans with more healthcare system use with higher cost.
Sfetcus 2017	80	Review articles published from January 1990 to June 2014 related to readmission and post-discharge.	Systemic review of the literature	Multiple factors related to post-discharge readmission were studied. Several factors can affect readmission based on different categories: individual factors, post-discharge aftercare related factors, community care and system responsiveness factors, contextual factors, and social support post discharge.	Readmissions are related to housing, treatment compliance, post-discharge conditions. Consistent and long-term post-discharge follow-up are protecting factors for rehospitalization.	Support PICOT question: housing can affect readmission; although missing homeliness, the factor of housing may indicate it is related with unhoused population.

First author/year	Sample	Sample Characteristics	Study Design	Interventions	Findings	Comment
Racine 2020	1269	Unhoused Medicaid patients admitted to Massachusetts hospitals from 2013-2014	Retrospective Cohort study	Study compared unhoused Medicaid patients admitted to hospitals and their readmission rates in 30-days and 90-days	30-day readmission among unhoused and Medicaid patients with unstable housing counted 27.4%; 90-days readmission rate was 21.2%; 40% of readmissions occurred within 7 days upon discharge service, outpatient psychiatry, and substance abuse treatment.	Support PICOT question: identified unhoused population and their readmission rates.
Cheung 2015,	381	using survey data from October 2009 to June 2011, and administrative data from ER and hospitalization from April 2007 to September 2012.	two randomized controlled studies	381 participants had total of 550 hospitalization within 2-year period. The highest number of admissions was 15. 61% admissions happened during the first year. 81% of the total 550 admissions were in psychiatric units by 137 unhoused persons.	There is no significant association between substance use and ED visits and hospitalizations. Hospitalizations were associated with severe mental illness, suggesting that management to mental illness may reduce hospitalization, but is difficult among unhoused person with mental illness. Providing housing and social support may be helpful.	Support PICOT question: offering housing and other support may reduce psychiatric rehospitalization among unhoused patients with mental illness.
Tsai 2015	32	Literature search of English articles between 1900 to July 2014.	Systematic review	7 "rigorous" studies identified that substance use and mental illness as the highest risk factor for unhousedness in veterans. 3 less rigorous studies identified substance use and mental illness increased risk for unhoused. Mental illness and substance abuse contribute unhousedness in both unhoused veterans and unhoused non-veterans.	Veterans have higher risk for unhousedness with similar risk factors with non-veteran unhoused person, such as low income, unemployment, mental illness, substance use, and lack of social support. They also have unique risk factors due to their military service and combat.	Support PICOT question: mental illness contributes high risk for unhousedness in veterans; missing psychiatric hospitalization, readmission, and housing. This is a weak support.
Tsai 2017	306,351	Veterans referred for mental health treatment from 2008-2012	Retrospective cohort study	Comparing unhoused rate in veterans who were referred to one of the 130 VA facilities for mental health conditions, such as anxiety and PTSD.	5.6% veterans in need of mental illness referral or treatment experienced unhousedness within 1 year of the referred care.	Support the DNP Project's topic and risk factor of being unhoused among veterans with mental illness.
Adams 2007	43,733	psychiatric inpatient unhoused veterans at 141 VA medical centers, range from 1996 to 1998.	Cohort study Retrospective cross-sectional secondary data analysis	Data collected related to housing information at admissions to medical-surgical, psychiatric, and substance abuse units.	Unhoused veterans were more likely to have been admitted for psychiatric and substance abuse diagnosis (79.9%) compared with housed veterans. Should act early to prevent hospitalization of unhoused veterans with severe illness that can be potentially fatal.	Support PICOT question: unhoused veterans with mental illness with readmission to psychiatric hospital can improve with housing.
Irmiter 2007	35,527	Patient discharged from VA inpatient psychiatric units during FY 1998 to FY 2005	National longitudinal cohort study	Data of patients admitted to psychiatric hospitals from FY 1998 to FY 2005 were evaluated for associations between mental illness and readmission.	72% patients were readmitted for psychiatric care within 2 years. Veterans with mental illness count highest rate for readmission.	Support PICOT question: unhoused veterans with mental illness have higher readmission rate; missing interventions as housing.

Table 8: Outcome Table

Articles Cited Outcomes Reported	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Mental illness is a high-risk factor for unhousedness.	x							x		x	x	x	x	x		x	x	
Unhoused veterans impact readmission rates.	x				x			x	x		x		x			x	x	x
Unhoused veterans with mental illness are admitted to the psychiatric hospital.	x				x				x	x	x		x		x	x	x	x
Unhoused veterans with follow-up clinic visits					x	x	x	x	x			x	x		x			
Provide housing to unhoused veterans at discharge		x			x	x	x	x	x	x		x	x		x			
Mental illness has higher risk for readmission			x	x	x	x		x	x	x	x	x	x			x	x	x
Cost of unhousedness										x	x							

Note: Cited numbered articles:

1. Mascayano et al (2022). Patient-, hospital-, and system-level factors associated with 30-day readmission after a psychiatric hospitalization.

2. Bravo et al (2022). Avoiding revolving door and homelessness: The need to improve care transition interventions in psychiatry and mental health.

3. Fleury et al (2022). The impact of 90-day physician follow-up care on the risk of readmission following a psychiatric hospitalization.

4. Hermer et al (2022). Follow-up psychiatric care and risk of readmission in patients with serious mental illness in state-funded or operated facilities.

5. Laliberté et al (2019). Homelessness at discharge and its impact on psychiatric readmission and physician follow-up: A population-based cohort study.

6. Peng et al (2020). Permanent supportive housing with Housing First to reduce homelessness and promote health among homeless populations with disability: A community guide systematic review.

7. Khatana et al (2020). Association of homelessness with hospital readmissions--An analysis of three large states.

8. Moore et al. (2018). Factors associated with rapid readmission among Nevada state psychiatric hospital patients.

9. Currie et al. (2018). Continuity of care among people experiencing homelessness and mental illness: Does community follow-up reduce rehospitalization.

10. Kushel, M. (2018). Homelessness.

11. Nelson et al. (2018). Costs associated with health care services accessed through VA and in the community through Medicare for veterans experiencing homelessness.

12. Sfetcu et al. (2017). Overview of post-discharge predictors for psychiatric re-hospitalizations: A systematic literature review.

13. Racine et al. (2020). Thirty-day hospital readmission among homeless individuals with Medicaid in Massachusetts.

14. Tsai & Rosenheck (2015), Risk factors for homelessness among US veterans

15. Cheung et al (2015). Emergency department use and hospitalizations among homeless adults with substance dependence and mental disorders.

16. Tsai et al (2017). One-year incidence and predictors of homelessness among 300,000 U.S. Veterans seen in specialty mental health care.

17. Adams et al. (2007). Hospitalized younger: A comparison of a national sample of homeless and housed inpatient veterans.

18. Irmiter et al. (2007). Re-institutionalization following psychiatric discharge among VA patients with serious mental illness: A national longitudinal study.

Figure 1: PRISMA diagram

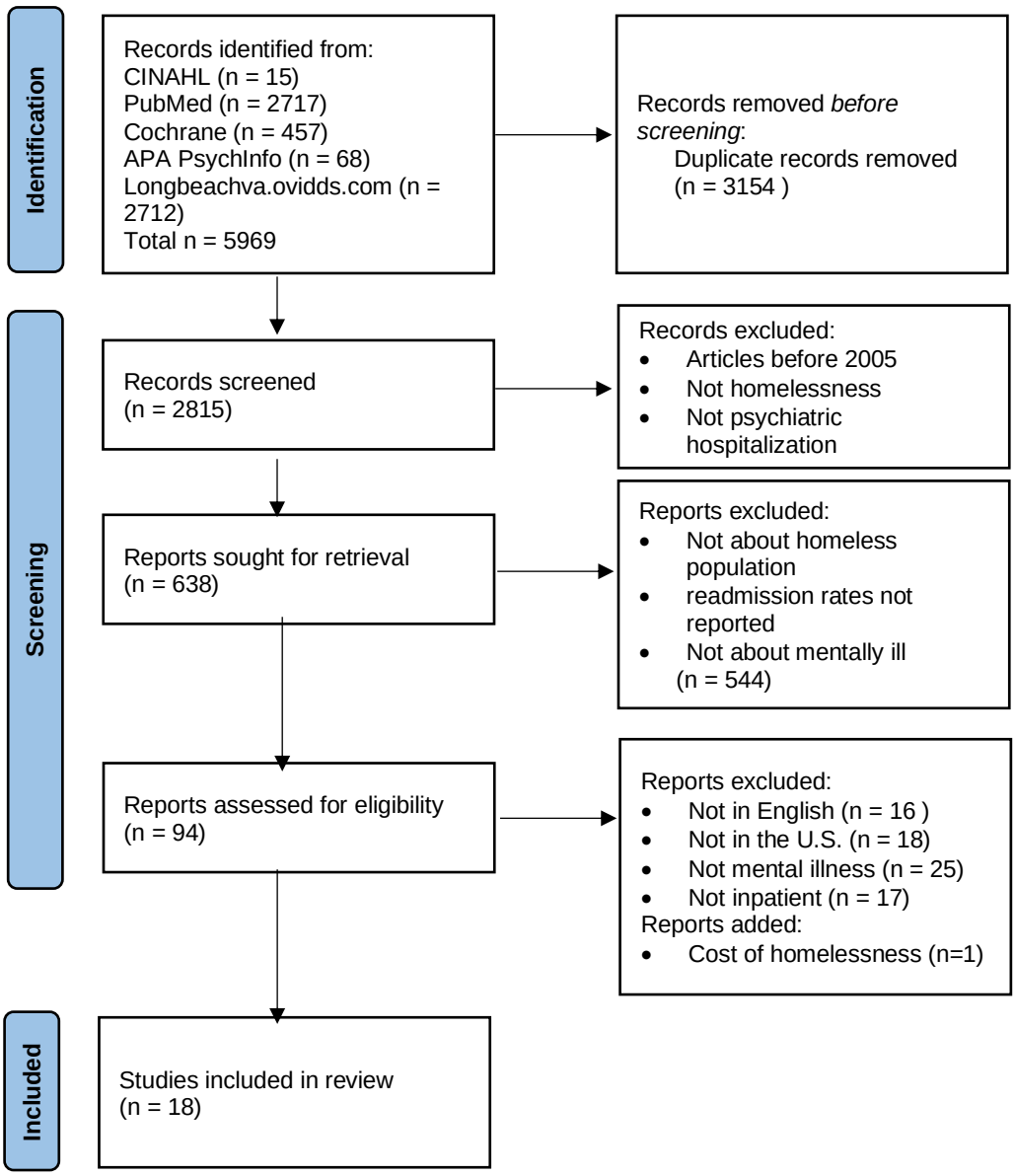

Figure 2: Quadruple Aim

Image obtained from: https://www.collidu.com/presentation-quadruple-aim

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Curriculum Vitae

Maryse-Noelle Nguyen RN, PMHNP-BC, CNS
e-mail: marysenoelle66@gmail.com

A psychiatric nurse practitioner has passion of using knowledge and evidence-based practice and therapeutic approach to provide care and treatment to fit each client's needs. ANCC certified and currently employed as a full-time Psychiatric Nurse Practitioner.

EDUCATION

Doctoral in Nursing Practice
University of Nevada, Las Vegas
September 2022, project to graduate in May 2024, passed defense on March 20, 2024

Post Master's Certificate in Psychiatric Nurse Practitioner
Azusa Pacific University, School of Nursing
September 2017 to May 2019

Master of Science in Nursing, with a specialty in Clinical Nurse Specialist
Azusa Pacific University, School of Nursing
September 2011 to July 2014

Bachelor of Science in Nursing
Azusa Pacific University, School of Nursing
May 2010 to July 2011

WORK EXPERIENCE

Clinical Preceptor for PMHNPs
California
May 2022, to present: preceptors for PMHNP students both in person and in telehealth.

Adjunct nursing instructor—Arizona College of Nursing
Ontario, California
December 2022, to December 2023 clinical instructor to BSN students at psychiatric units.

Psychiatric Nurse Practitioner--Psych Serves
Downton Los Angeles, New Port Beach, working remotely 2-5 hours weekly
January 11, 2020 to present: treat clients with mental illness, with age group across lifespan

Psychiatric Nurse Practitioner—VA Long Beach Medical Center
Mental Health Outpatient psychiatry and Urgent Mental Health Clinic
February 16, 2020 to present: treating veterans with mental illness, working with a team of nurses, social workers, psychologists, and other healthcare professionals

RN Staff Nurse, charge nurse in Acute Psychiatric unit
VA Long Beach Healthcare System - Long Beach, CA
December 2014 to February 15, 2020: provide inpatient care to veterans with acute mental illness who need to be treated in hospital.

RN Charge Nurse/Staff Nurse in Geriatric psychiatric inpatient
VA Los Angeles Health System, - Los Angeles, CA
May 2012 to December 2014: provide inpatient care to veterans over 60 years old and/or veterans with acute mental illness and medical conditions

Graduate Student Intern
Clinical rotations in the following psychiatric clinics from 2017-2019 (PMHNP certificate):
Emergency Room, St. Joseph Hospital – Orange, CA
San Bernardino County Mesa Clinic—San Bernardino, CA
OC Psychiatry clinic—Santa Ana, CA
Sunset Psychiatry Clinic—Covina, CA

preceptorship in MICU, St Joseph Hospital - Orange, CA
Training for Clinical Nurse Specialist
September 2013 to March 2014

Volunteer
VA Long Beach Health System
Emergency Department 12 hours per week
March 2011 to September 2011

Student Nurse / Clinical Rotations
Kaiser Permanente--Riverside, CA
Loma Linda Medical Center—Loma Linda, CA
Canyon Ridge Hospital—Chino, CA
May 2010 to July 2011

NURSING LICENSES

RN
Expiration Date: November 30, 2024
State: CA

CNP/Furnishing CS II-V
Expiration Date: November 30, 2024
State: CA

CNP/Furnishing CS II-V

Expiration Date: January 31, 2026
State: UT

DEA
Expiration Date: October 31, 2025

ANCC
Expiration Date: Sept 10, 2024

PROFESSIONAL ORGANIZATION/ACHIEVEMENT

American Psychiatric Nurses Association
California Association for Nurse Practitioners
poster presentation at the Western Institute of Nursing 2023 conference
poster presentation at VA Long Beach Nurse's Week 2023
Podium presentation at Southwest Region Chi Eta Phi Sorority Research and Education Conference March 2024
poster presentation at the Western Institute of Nursing 2024 conference
1st Place Graduate Poster at the 2nd Annual School of Nursing Research Forum, UNLV